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**AN ASSESSMENT OF THE EFFECTIVENESS OF THE ACADEMIC  
LIBRARY ONLINE PUBLIC ACCESS CATALOGUE (OPAC) BY  
STUDENTS : A CASE OF UNIVERSITY OF VENDA LIBRARY**

I, Tshilo Violet Nematili, hereby declare that the declare that the mini-dissertation for the  
Master of Public Management at the University of Venda, hereby has never been submitted  
previously for a degree purpose at this or any other university and that is my own work in  
design and in execution, and that all references material contained therein has been duly  
acknowledged.

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29-04-2014  
Date

**A MINI-DISSERTATION IN PARTIAL FULFILMENT OF THE  
REQUIREMENT FOR THE DEGREE OF MASTERS OF PUBLIC  
MANAGEMENT (MPM)**

**SCHOOL OF MANAGEMENT SCIENCES**

**UNIVERSITY OF VENDA**

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ACKNOWLEDGEMENT

DECLARATION

Firstly I would like to thank God Almighty my Heavenly Father who through His Grace I was able to complete this research. Today I can say that His Grace is sufficient for me.

I, Tshililo Violet Nematili, hereby declare that the declare that the mini-dissertation for the Master of Public Management at the University of Venda, hereby has never been submitted previously for a degree purpose at this or any other university and that is my own work in design and in execution, and that all reference material contained therein has been duly acknowledged.

Nematili

**Signature**

29-04-2014

**Date**

## ACKNOWLEDGEMENT

### DEDICATION

Firstly I would like to thank God Almighty my Heavenly Father who through His Grace I was able to complete this research. Today I can say that His Grace is sufficient for me.

I also extend my gratitude to my supervisor Prof. M.P. Khwashaba and my co-supervisor Mr E. Mahole who tirelessly encouraged and guided me to ensure that this can be a success.

Lastly I also thank my children and family who supported and encouraged me throughout this study.

## ABSTRACT

## DEDICATION

Academic libraries share a common mandate of supporting the core business of their parent institutions which is teaching, learning and research. There is still a common mandatory This mini-dissertation is dedicated to my late father, Mr Thikhathali William and my mother Mrs Ndiafhi Munzhedzi Nematili and to my children Fulufhelo, Mukundi and Mutondwa Malabi who gave me support during my studies.

It is important that for OPAC to be more effective it should encompass the current trends and features of advancement to meet the current user's expectations. The study was based on the Assessment of the effectiveness of the academic library Online Public Access (OPAC) by students to fulfill its mandate of supporting the core business of their mother institutions like teaching, learning and research.

This can only be possible through OPAC training to new students during library Orientation programmes to teach them effective strategies to access locate and retrieve library collection, also taking into consideration the changing of user behaviour and preferences about OPAC interface features as compared to the internet Google search engines.

Both qualitative and quantitative research methods are used in this study and for data analysis, Statistical Package for Social Science for cross-sectional analysis (SPSS) and inductive interpretation was used. The findings will help University of Venda managers, OPAC interface developers and the library user to explore new ways of making the OPAC interface to more effective and stay relevant to its users.

At the end of the study the researcher recommended the revisiting of the current OPAC interface for the total changing of OPAC interface to be at the level of its competitor the internet Google search engines which students like the most whenever they need information in the library.

## ABSTRACT

Academic libraries share a common mandate of supporting the core business of their parent institutions which is teaching, learning and research. There is again a common mandatory understanding that the evolution of Online Public Access Catalogue (OPAC) should be in line with the evolution of technology and its services to maintain its effectiveness in academic libraries. Therefore OPAC should be a complex matrix for users, for users to be more effective it is important that for OPAC to be more effective it should encompass the current trends and features of advancement to meet the current user's expectations. The study was based on the Assessment of the effectiveness of the academic library Online Public Access (OPAC) by students to fulfill its mandate of supporting the core business of their mother institutions like teaching, learning and research.

This can only be possible through OPAC training to new students during library Orientation programmers to teach them effective strategies to access locate and retrieve library collection, also taking into consideration the changing of user behaviour and preferences about OPAC interface features as compared to the internet Google search engines.

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At the end of the study the researcher recommended the revisiting of the current OPAC interface for the total changing of OPAC interface to be at the level of its competitor the Internet Google search engines which students likes the most whenever the need information in the library.

# LIST OF ACRONYMS

<b>INFOLIT</b>	Information Literacy	
<b>NCG</b>	NEXT Generation Catalogue	36
<b>OPAC</b>	Online Public Access	36
<b>RSS</b>	Really Simple Syndication	37
<b>SPS</b>	Statistical Package for Social Science	37
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## CHAPTER 1: ORIENTATION OF THE STUDY

### 1.1 INTRODUCTION

Academic libraries share a common mandate of supporting the core business of their parent institutions which is teaching, learning and research Fidzani (1995:1). In this regard every academic library has to devise its own means and ways to maintain a strong support to this core business through connecting new students with the massive library collection. This can only be possible through training new students on how to access, locate and retrieve relevant resources through the use of Online Public Access Catalogue (OPAC). OPAC as defined by Fidzani (1995:1) is a computerized catalogue which replaced the traditional card catalogue. It is also regarded as a useful tool whenever students or any library user want to know what the library has. It is therefore a major role and relevant project for all academic libraries to make it a point that each year they embark on Library Orientation Project for all new entering students to train them on how to use OPAC effectively.

There are various discussions around OPAC training during library orientation and the challenges related to the training. Librarians are faced with a challenge about OPAC features which are no longer user friendly as compare to Google search engines which students prefer the most when searching for information in the library. Even though that OPAC training is simple to teach new students of this generation, today's students still believe that it is complicated as compared to Google search engines which are simple to understand the outcome.

The study will discuss the introduction and background of the study, problem statement, aim of the study, specific objectives and research questions. The researcher will also outline the significance of the study, delimitation of the study and limitation of the study. Definition of major terms and brief literature review as well as organizational of the study will be discussed.

## 1.2 BACKGROUND OF THE STUDY

Today almost 99% of academic libraries are using OPAC system as a tool to access their collection. University of Venda like all other most of these libraries is also using the OPAC system for its users to access its massive collection. This Library of University of Venda houses more than 130 000 (thousand) collection volumes of books, periodicals both single and bound volumes theses or dissertations, newspapers, rare books and other materials. The library is also equipped with computers for both internet searches and OPAC searches which is the only tool to access the local library catalogue. OPAC as described by Thanuskodi (2012:70) is an information retrieval system characterized by short bibliographic records, mainly of books, journals and audio-visual materials available in a particular library. Kumar and Vohra (2011) on the other hand contends that OPAC has revolutionised access to bibliographic information through search capabilities like keywords searching, Boolean searching, truncation, proximity searching and item identity number searching.

For University of Venda Library to be able to achieve its main goal of connecting new students with its collection, it uses OPAC system tool as the only means for users to can access the collection. This is possible through a thorough OPAC training which is always a major project beginning of every year. The main aim of these OPAC training is to develop independent library information searching skills and users who are able to access any required resources from the library without a librarian. OPAC training is the only process which can connect new students with library collection. Students who do not receive this OPAC training during library orientation tend to use the library less than those who were trained and know all OPAC searching strategies. The other group of students mostly depend on internet Google whenever they need information for their studies. Unlike in the olden days were librarians were regarded as care takers of books and expected to locate books for users, these days the main role of academic librarians has totally shifted from care takers to user trainers. After OPAC training students are expected to know how to retrieve, locate and find relevant resources from the shelf on their own through the computer OPAC in the library without any assistant.

### 1.3 PROBLEM STATEMENT

For the University of Venda library to be relevant and supportive to its users it has established a fixed and continuous Library Orientation Programme Project every beginning of the year. This is regarded as the only strategy to train new students and raise awareness about the importance of OPAC use when new students need books for their studies from the library. The programme is compulsory to all new students and takes about two weeks or more before the commence of classes. Each school is allocated a day or two days depending on the number of admitted students. Programme always starts with a library tour to all library sections so that students should know all the sections in the library and how they function. At the end of the tour students are then taken for a thorough OPAC training where experts' librarians spend more time training them on how to find books on their own in the library. The training starts with computer hardware before focusing on OPAC search options. There is always a follow up programme to assist those students who can be admitted after the formal orientation programme as a strategy to accommodate all new students in this important training.

Despite all the above efforts by the library team to train students on how to use OPAC when searching for books in the library and the increasing percentage of students who attend both formal and informal Library Orientation programme every beginning of each year, the library still experience the problem of students fail to attend due to different reasons.

This are those who whenever the need information in the library prefers to use internet Google searches. According to (2013/14) Orientation reports statistics were as follows: In 2013, 2235 students were admitted and 2036 attended orientation which is 91%. Early 2014, 4035 students were admitted and about 3943 attended orientation which is 98% of students but the problem still exist (Orientation Report, 2013/14). Therefore this study intends to assess the effectiveness of the library OPAC system when used by University of Venda students when they search for books from the library collection after receiving OPAC training.

## 1.4 AIM OF THE STUDY

The main aim of the study is to assess the effectiveness of the library Online Public Access Catalogue (OPAC) system when used by University of Venda students to maximize the effective access to the library collection.

## 1.5 SPECIFIC OBJECTIVES

The objectives of the study are:

- To assess the effectiveness of OPAC use by Univen students.
- To understand user preferences about the OPAC system interface.
- To describe user changing behaviour about OPAC interface versus the Google search engines.
- To explore advanced features of OPAC interface to suit the new generation preferences.

## 1.6 RESEARCH QUESTIONS

For the achievement of the aim of the study, the following research questions were asked:

- How effective is OPAC when used by Univen students?
- What are the preferences by users when using OPAC system interface?
- How is the user changing behaviour about OPAC interface versus the Google search engines?
- What are the advanced features of OPAC interface to suit the new generation preferences?

## 1.7 SIGNIFICANCE OF THE STUDY

The study will help University of Venda managers, OPAC interface developers and the library team and practitioners to explore new ways to make OPAC to be more effective and relevant to this generation library users (students) when they search for books in the library. It will again help academics to form a strong partnership with the library in the campaign of OPAC training during Library Orientation of new students. Recommendations made in this study would be an eye opener to improve OPAC training and interface to suit the changing behaviour of the next generation.

## 1.8 DELIMITATION OF THE STUDY

This study was conducted at University of Venda Community the area which is located at Thohoyandou in the scenic region of Vhembe District in the vast Limpopo Province of South Africa. It is situated in the South of Venda, on the main road between Louis Trichardt and Kruger National Park and it is a home of University of Venda.

## 1.9 LIMITATION OF THE STUDY

Funding in this study was a serious challenge considering the fact that the researcher had to apply for funds for stationaries to prepare this document, printing questionnaires, binding of the final copies of this documents as well as the editing of the document which also required some funds as well.

## 1.10 DEFINITION OF MAJOR TERMS

In this section, the researcher will define the major concepts of the study.

- **Information Literacy**

Information Literacy as defined by Richard Lloyed and McBryde-Wilding Heather (2009:2) refers to the ability to locate access, evaluate and use of information from a variety of sources to meet an information need.

- **Librarian**

World Book Dictionary (1987:1206) defines the word librarian as a person who is in charge of a library. It further explains that it is a trained for work in a library. In practice the term librarian is from librarianship which is the study of Library Science. A librarian can also be defined as a trained specialist who holds a university undergraduate degree and a Masters of Library and Information Science Degree (<http://.lib.ask.ca/aboutlibraries/careers/whatlib.htm>).

- **Library Orientation**

Library Orientation is a programme which offers first year students an introduction to the library's resources and services, as well as information on study skills and academic integrity to help make the first students experience successful. The program can also include a short research designed to provide immediate immersion in the art of database searching. Once a student completes all three Library Orientation sessions, the student can easily access or use all library material with a clear understanding ([www.oglethorpe.edu/service/orientation-plan.pdf](http://www.oglethorpe.edu/service/orientation-plan.pdf)).

- **Online Public Access (OPAC)**

Online Public Access Catalogue (OPAC) is a computer-based catalogue that can be accessed through computer terminals in a library. OPAC entails searching of library collection online and regarded as the basic key with which every library user can open up the library's collection (Morupisi and Mooko, 2006:198). OPAC is also a part of user education and the basic part of Information literacy training. OPAC is an information retrieval system characterized by short bibliographic records, mainly of books, journals and audio-visual materials available in a particular library (Thanuskodi, 2012:70).

- **University of Venda**

University of Venda is an educational; Institution of Higher learning, which was established in terms of Section 20(1) of the Higher Education Act, 1997 (Act No. 101 of 1997).

- **User Education**

Edem (2009:323) defined user education as instructions given to users to help them make the best use of the bibliographic instructions, as well as general familiarization with the organization of these resources. Edem (2009:323) further explained that user education programmes should aimed at sensitizing users to the value of OPAC. (Tiefel, 1995:3) also added that user education teaches users how to use the library system effectively when looking for library books.

## 1.11 ORGANISATIONAL OF THE STUDY

The Outline of the study will be organised as follows:

**Chapter 1: Orientation of the study** - Beside the introduction and topic of the study, this chapter also includes the overall background of the study, problem statement, purpose of the study, objectives of the study, research hypothesis, research questions, significance of study, delimitation, Limitations definition of terms and organisational of the study.

**Chapter 2: Literature Review** - This is Literature Review chapter presents a conceptual overview of literature review in connection to the given topic as: Conceptual framework of the study, history of Online Public Access Catalogue, evolution of user behavior, user perception on the use of Online Public Access Catalogue, user preferences and the challenges of the current OPAC interface. The overview of the next generation OPAC interface and its features will also be discussed in this chapter and different sources about OPAC System in academic libraries will be referred to in support of the objective about the topic.

**Chapter 3: Research Design and Methodology** - This chapter contains the method and techniques used to collect and analyse data in detail. This will be about the research designs; research settings research instruments and the population sampling. With regard to the

methodology, the researcher will embark on both qualitative and quantitative research methods. This is because qualitative will be the best because action can be best understood by the researcher and quantitative is rational, logical, planned and systematic.

**Chapter 4: Data Presentation, analysis and Interpretation** - The Chapter will be about the findings and much of the research findings including the analysis of the findings will be discussed here. Furthermore, data will be interpreted and analysed so that rational decisions, conclusions and recommendations can be made by the researcher. The analysing process will start once the process of data collection will be completed although the two processes can run simultaneously.

**Chapter 5: Findings, Conclusion and Recommendations** - This last chapter will be about the summary of the whole findings of the study. It will cover the conclusion, recommendations from the research findings based on Chapter 4 findings. It should be noted that the recommendations will be the gaps that exist between the existing literature and the findings.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 INTRODUCTION

Chapter 2 presents literature study on the effectiveness of the library OPAC system for the purpose accessing library collection by students. The discussion will also include conceptual framework of the study, history of OPAC, evolution of user behavior, user perception on the use of OPAC, user preferences and the challenges of the current OPAC interface. The overview of the next generation OPAC interface and its features will also be discussed in this chapter and different sources will be consulted about the topic.

### 2.2 CONCEPTUAL FRAMEWORK OF THE STUDY

Information Literacy training embraces all types of training acquired for the better access and evaluation of the relevancy of information resources. It is an expansion of instruction to objectives, materials, and methods. It starts with basic library orientation into bibliographic instruction. Information literacy also extends its objectives to teaching information seeking skills at all times. The similarity between Information literacy and user education is that they all teaches users how to make the most effective use of the library system. User education also encompasses all activity undertaken to help students become efficient users of information. It also aims at sensitizing users about the value of Online Public Access Catalogue (OPAC) so that they can learn to appreciate and use the online system (Tiefel, 1995:3). Information literacy is part of user education but with specific focus to internet searches and library databases.

Fidzani (1995:1) define user education as various programmes of instruction, education and exploration provided by libraries to users to enable them to make more effective, efficient and independent use of information sources and services which these libraries provide access. This term user education has been broadened to include the concept of Information literacy. On that note OPAC training is part of Information literacy which is mainly about training users how to use the library's computerize catalogue when looking for library materials. In most academic

libraries the training is specifically based on the identification, location and the availability of items from a specific shelf. The discussion will focus on the assessment of the effectiveness of the OPAC library when used by student at University of Venda when searching for books in the library.

### 2.3 EVOLUTION OF USER BEHAVIOUR

According to Jia Mi and Weng (2008:6) the behaviour of academic library students has drastically changed in recent years. Internet search engines have become the most preferred tool over the library Online Public Access Catalogue (OPAC) for finding information. One main question of all academic libraries can be what can be the best search engines to serve users whenever they need information from the library and how can academic libraries sustain the relevancy of OPAC use to today users. Technology and the rising of user expectations as stated by Jia Mi and Weng (2008:6) is contributing a lot to the changes of user behaviour because our users are living in a highly interactive, networked world which turn to Web search engines to satisfy their information needs. They continued and mentioned that OCLC identified three major trends in the needs of today's information consumers as self-service, satisfaction and seamless.

Sridevi, John, Jain and Hopkinson (2011:1) stated that the 4 Law of Ranganathan's five Law of Library Science is that "save the time of the reader" which is a big question to ask whether the current OPAC catalogue precisely do this for its users. Sridevi et al (2011:1) further added that there is a common understanding that the evolution of OPAC should be in line with the evolution of technology and its services if academic libraries want to remain relevant to today users. They further added that the current OPAC have to be designed in such a way that users should be able to find what they are looking for in a timely manner and then they will be satisfied, and more likely to feel their needs have been met. While it is mandatory that OPAC should not be a complex matrix for users, it is also important that it should encompass the current trend and features of advancements. The best design of the next generation OPACs should be by amalgamating Web 2.0 tools and the social networking aspects to the traditional catalogue which offer interacting options to the patrons. Sridev, et al (2011:1).

Today users embrace information provided by Google wholeheartedly than using OPAC because of its easy way to use and quick delivery of good and relevant enough results. With Google searches users are not worried about forgetting important information or instructions when searching for information. Secondly Google search results are ranked according to their relevance about the searched topic and it is regarded as the most user-friendly system than the current employed academic library OPAC. In addition Google contains user-friendly features unlike OPAC which needs a formal and intensive training during library orientation. Therefore Google searches do not require any special training because its instructions are easy to follow and always provides alternative advices during the process.

#### **2.4 HISTORY OF ONLINE PUBLIC ACCESS CATALOGUE (OPAC)**

The word OPAC as defined by Morupa and Mooko (2006:198) is a computer-based catalogue that can be accessed through computer terminals in the library. It first emerged in the 1980s with the purpose to create a database of library holdings which provides an online catalogue to help users to easily identify and locate resources, (Wallis, 2009:4). Further, Wallis (2009:4) continued and pointed out that when OPAC was introduced most libraries around the world started to abandon the old traditional card catalogue and adopted the use of OPAC. That was because students started to be able to access OPAC at from their computers from anywhere whenever they want to confirm if a book by a certain author or title is available in the library.

Mulla and Chandrashekara (2009:31) also confirmed that OPAC brought enormous changes in the library practice because it has made the library collection, easily accessible to everyone by breaking the physical boundaries of the library. In addition OPAC is regarded as a very important service for any library system because of its help to users in their information seeking. It is a reality that the OPAC search process remained the same with the old tradition card catalogue and only differs with it by more access points.

Mulla and Chandrashekara (2009:31) further added that it is necessary to access OPAC usage from time to time so that some necessary measures can always be taken for better improvement and utilization of the OPAC service by students. OPAC end-users are not only expected to

acquire technical searching skills but also conceptual and semantic knowledge relating to the query especially on subject searching in order to articulate the query. The OPACs of different organisations can be used as a union catalogue for better utilization of the resources in a region by different libraries (Mullar and Chandrashekara, 2009:40). This can be possible through the use of Inter-library loans wherein libraries of the same region or other regions can share their resources by exchanging books to meet their user's needs.

From 1990 the OPAC system has increasingly migrated to Web-based interfaces and form part of an integrated library system. The relevancy of OPAC is now being challenged by the emerging social Web 2.0 technologies hence the need of assessment in order to improve the interfaces important... The only way for OPAC to stay relevant to users it needs to keep up with Web 2.0 technologies to attract the next generation who are very obsessed about this new social technology (Mulla and Chandrashekara, 2009:31).

## **2.5 MAIN FUNCTIONS OF ONLINE PUBLIC ACCESS CATALOGUE (OPAC)**

OPAC is a bibliographic database, an electronic version of the card catalogue. An OPAC in some cases may also include links to electronic resources, thus reducing the need for users to locate items physically on library shelves. The main functions of OPAC as defined by Wells (2007:387) are its promotional role by advertising the contents of the collection and the services it provide. It can be convenient for remote users to see and check the library's collection from the University's website before visiting the library. Among the above two main functions of the University library OPAC the focus of this study will be the assessment of the effectiveness of this OPAC to library users. The main concern will be to assess if OPAC is reliable and relevant to access library resources by trained users.

## **2.6 ADVANTAGES OF USER-CENTERED DESIGN ONLINE PUBLIC ACCESS CATALOGUE (OPAC) TRAINING**

Miller (1997:17-23) had a concern and asked the basic questions about why some library users find it easier to access library resources than others. The answer to his question depends on the

type of awareness or training received by users from the library training staff. Teaching methods or training can play a big role on how students can utilize library resources. A good training can be easily detected by the high statistics of loans in the library on daily basis.

Among the other advantages (Miller, 1997:17) mentioned the advantages of trained library users as follows:

- Students who are OPAC literate can access library information efficiently and effectively to accomplish a specific purpose,
- Students can evaluate information resources for relevance according to their educational needs through checking of the index and table of contents,
- They can use the available information resources accurately and creatively to the benefit of their studies, and
- They can be able to determine the nature and extent of the information resources needed to answer a specific question.
- Well trained students visit the library more than untrained students.

## **2.7 USER PERCEPTION ON THE USE OF ONLINE PUBLIC ACCESS CATALOGUE (OPAC)**

In their study (Kumar and Vohra, 2011:36) focused on the investigation of the manner and purpose in which users search on (OPAC). Within the same study they also described OPAC as a tool for accessing only library stored documents since 1970's as it was developed to provide an easy access to bibliographic information by using graphical user interfaces like Windows. OPAC is also capable to provide links to external full-text indexes, databases and e-journals on the internet.

Moreover the two (Kumar and Vohra, 2011:37) also elaborated that OPAC offer a vast capacities and capabilities for searching like Advanced search, Keyword search, Boolean search and Truncation search as compared to the traditional card-based catalogue search options. As a result of all this different flexibility options to use whenever in need of information users turn to

spend more time in searching for information by combing two or more bibliographic access points which create problems and time wasting to users. Sometimes users experiences difficulties in using OPACs because in most cases they lack basic skills and creativity thinking which is always required to search an OPAC.

Markey (2007:3) stated that OPAC is faced with a great challenge because today's users generally prefer the Google search engines for information more than to use OPAC. As a results OPAC is being only regarded as the last option and only important when users need to locate library resources and as such its usage is decreasing everyday among today's users. In his studies (Kumar and Vhra, 2011:38) reported that users on the use of OPAC users preferred the Keyword approach for unknown item and the Author (name) approach for well-known item searches. Therefore the other options like advanced features beyond the Boolean operators turn to be underutilized as the only learn them through personal exploration in most cases.

In agreement Kumar and Vohra,(2011:37) also added that the other problem with OPAC features is that users expected it to function as internet search engines where they have to only type words in the box and get instant ready results which are listed according to their relevancy. In reality OPAC was supposed to be the most users friendly and easy with positive effects on user search but users tend to make more mistakes and takes more time when searching on OPAC than on internet because it is easy to use and guide users with relevancy ranking of the searched information.

## **2.8 USER'S PREFERENCES OF ONLINE PUBLIC ACCESS CATALOGUE (OPAC) INTERFACE**

According to Hartley, R.J, Keen.E.M, Large, J.A and Tedd, L.A they quoted that Cutter, C. A, (1874) in his book that he introduced the main principles of the library catalogue which is still useful as a guide to the development of a modern OPAC. They also mentioned that the library catalogue exist primarily to indicate the books available in a particular library or library system. Cutter identified the following options when searching for a book in the library which users preferred the most when looking for books in the library:

### 2.8.1 To enable a person to find a book by either

- The author,
- The title, and
- The subject.

### 2.8.2 To show what the library has

- By a given author,
- By a given subject, and
- By a given kind of literature.

### 2.8.3 To assist in a choice of a book

- Using its edition, and
- As to its character – literacy or topical
- Using ISBN number.

Some users have different preferences on the library OPAC interface. According to Kani-Zabihi et al., (2008:499), most users prefer less information on the screen for easier searching, and easy buttons and instructions to follow. To most of library users the ability to use an OPAC easily without too much effort is an important requirement to be facilitated by library instructors. There is a need for an OPAC training module to help users quickly to become familiar with the most important features of the OPAC interface. Therefore the OPAC interface should be easily adapted for users. Librarians often hear users complaining about forgetting what they have learned at the OPAC training room during the training. This is an indication that users prefer easy instructions and guides with relevancy ranking outcome, (MiJia, 2008:3).

Miller (1997:17) also stated the following user's preferences as the most crucial to the majority of library users:

- They prefer the OPAC to be easy to use, with functionality requirements of OPAC users like to see all services available in a physical library to be also available in OPAC,
- Users also like to see the content of all books from OPAC to avoid taking a wrong book because of its title, and

- Lastly users according to Miller they also prefer that OPAC should contain a variety of media like pictures, music clips and videos.

## 2.9 UNIVEN LIBRARY ONLINE PUBLIC ACCESS CATALOGUE (OPAC)

This section outline the current OPAC Search options at University of Venda (Univen) Library, title search option, author search option, subject search option, It will also show the process of how students are trained on the use of OPAC when searching for books in the library.

- **Current OPAC Search Options at Univen Library:**

There are three common search strategies which are popular to most of the students. These are options like: Title Search, Author Search, Subject Search and keywords Search.

<b><u>Mission</u></b>	<b>Search the University's Catalogue</b>	
<b><u>Membership</u></b>		
<b><u>User Education</u></b>	<b>Search also by</b>	<b>Suggestions for the library</b>
	<a href="#">By Keyword</a>	<a href="#">General suggestion for us</a>
	<a href="#">By Course</a>	<a href="#">Books we should acquire</a>
<b><u>e-Resources</u></b>	<a href="#">By Lecturer</a>	
	<a href="#">By Author / Title</a>	
<b><u>Catalogue</u></b>		
<b><u>Services</u></b>		
<b><u>Staff</u></b>		
<b><u>Requisition for purchasing library material</u></b>		

- **Title Search Option:**

TITLES (1-2 of 2)													
2	<p><u>Long walk to freedom / the autobiography of Nelson Mandela.</u> Mandela, Nelson, 1918-Randburg, South Africa : Macdonald Purnell, 1994.  <b>10 copies available at Main Open Shelf, Special Collection Open and Reserve Open Shelf</b></p>												
	<table border="1"> <thead> <tr> <th>LOCATION</th> <th>CALL NO</th> <th>STATUS</th> </tr> </thead> <tbody> <tr> <td>Main Open Shelf</td> <td><a href="#">322.4092 MAN</a></td> <td>ON SHELF</td> </tr> <tr> <td>Special Collection Open</td> <td><a href="#">322.4092 MAN</a></td> <td>ON SHELF</td> </tr> <tr> <td>Reserve Open Shelf</td> <td><a href="#">322.4092 MAN</a></td> <td>ON SHELF</td> </tr> </tbody> </table>		LOCATION	CALL NO	STATUS	Main Open Shelf	<a href="#">322.4092 MAN</a>	ON SHELF	Special Collection Open	<a href="#">322.4092 MAN</a>	ON SHELF	Reserve Open Shelf	<a href="#">322.4092 MAN</a>
LOCATION	CALL NO	STATUS											
Main Open Shelf	<a href="#">322.4092 MAN</a>	ON SHELF											
Special Collection Open	<a href="#">322.4092 MAN</a>	ON SHELF											
Reserve Open Shelf	<a href="#">322.4092 MAN</a>	ON SHELF											
There are additional copies/volumes of this item													

After the user typed the Title of the book the above titles will appear on the screen. This will include the status of the book and the Call No of the book. With the Call No the user will be able to retrieve the book from the relevant shelf.



- **Author Search Option:**

AUTHORS (1-12 of 14)														
Mandela, Nelson, 1918-														
1	<p><u>How far we slaves come! : South Africa and Cuba in today's world</u> Mandela, Nelson, 1918-New York : Pathfinder, c1991.  <b>3 copies available at Main Open Shelf and Main Serials</b></p>													
	<table border="1"> <thead> <tr> <th>LOCATION</th> <th>CALL NO</th> <th>STATUS</th> </tr> </thead> <tbody> <tr> <td>Main Open Shelf</td> <td></td> <td>ON SHELF</td> </tr> <tr> <td>Main Serials</td> <td><a href="#">322.420968097291 MAN/C</a></td> <td>ON SHELF</td> </tr> <tr> <td>Main Open Shelf</td> <td><a href="#">322.420968097291 MAN/C</a></td> <td>ON SHELF</td> </tr> </tbody> </table>		LOCATION	CALL NO	STATUS	Main Open Shelf		ON SHELF	Main Serials	<a href="#">322.420968097291 MAN/C</a>	ON SHELF	Main Open Shelf	<a href="#">322.420968097291 MAN/C</a>	ON SHELF
	LOCATION	CALL NO	STATUS											
	Main Open Shelf		ON SHELF											
Main Serials	<a href="#">322.420968097291 MAN/C</a>	ON SHELF												
Main Open Shelf	<a href="#">322.420968097291 MAN/C</a>	ON SHELF												
<p><u>Long walk to freedom</u> Mandela, Nelson, 1918-Randburg, South Africa : Macdonald Purnell, 1994.  <b>10 copies available at Main Open Shelf, Special Collection Open and Reserve Open Shelf</b></p>														
2	<table border="1"> <thead> <tr> <th>LOCATION</th> <th>CALL NO</th> <th>STATUS</th> </tr> </thead> <tbody> <tr> <td>Main Open Shelf</td> <td><a href="#">322.4092 MAN</a></td> <td>ON SHELF</td> </tr> <tr> <td>Special Collection Open</td> <td><a href="#">322.4092 MAN</a></td> <td>MISSING</td> </tr> <tr> <td>Reserve Open Shelf</td> <td><a href="#">322.4092 MAN</a></td> <td>DUE ON 07-04-2014</td> </tr> </tbody> </table>		LOCATION	CALL NO	STATUS	Main Open Shelf	<a href="#">322.4092 MAN</a>	ON SHELF	Special Collection Open	<a href="#">322.4092 MAN</a>	MISSING	Reserve Open Shelf	<a href="#">322.4092 MAN</a>	DUE ON 07-04-2014
	LOCATION	CALL NO	STATUS											
	Main Open Shelf	<a href="#">322.4092 MAN</a>	ON SHELF											
	Special Collection Open	<a href="#">322.4092 MAN</a>	MISSING											
Reserve Open Shelf	<a href="#">322.4092 MAN</a>	DUE ON 07-04-2014												
There are additional copies/volumes of this item														
3	<p><u>Mandela : Nelson Mandela by himself.</u> Mandela, Nelson, 1918-Auckland, N.Z. : Penguin, 2011.  <b>No copies available</b></p>													

• **Subject Search Option:**

Num	Save	SUBJECTS (1-2 of 2)	Year	Entries 3 Found
1		<a href="#">Mental Illness Prevention</a>		2
2		<a href="#">Mental Illness Prevention And Control</a> Newton, Jennifer.	1989	1

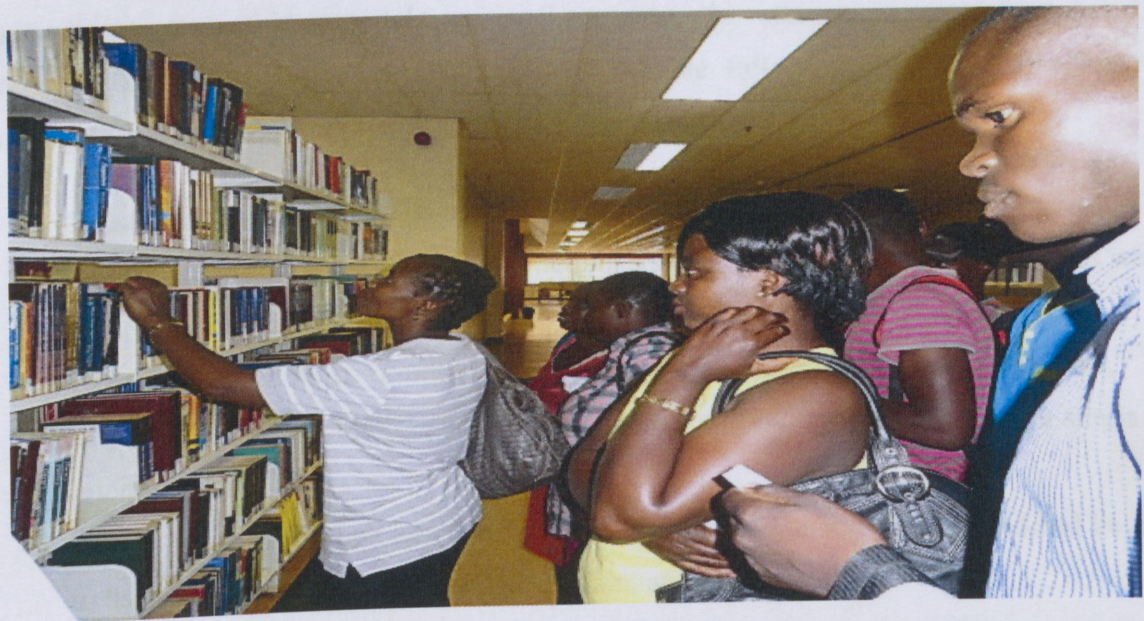
After the user typed the Subject which he/she is looking for the titles of relevant titles will appear on the screen. This will include the status of the book and the Call No.

SUBJECTS (1-2 of 2)			
<b>Mental Illness Prevention</b>			
1		<a href="#">Preventing Mental Illness</a> Newton, Jennifer. London : Routledge, 1989. <b>1 copy available at Main Open Shelf</b>	
		<b>LOCATION</b>	<b>CALL NO</b>
		Main Open Shelf	616.8905 new
		<b>STATUS</b>	
		BINDING	
2		<a href="#">Preventing Mental Illness In Practice</a> Newton, Jennifer. London : Routledge, 1992. <b>1 copy available at Main Open Shelf</b>	
		<b>LOCATION</b>	<b>CALL NO</b>
		Main Open Shelf	616.89 new
		<b>STATUS</b>	
		ON SHELF	

After the user typed the Subject which he/ she is looking the titles of the relevant books by the same subject will appear on the screen. The user will have to click on the relevant topic and the information of relevant titles will appear on the screen. This will include the Status and the Call No of the book. With the Call No. the user will be able to retrieve the book from the relevant shelf.



Picture 2.1: Online Public Access Catalogue (OPAC) Training during Library Orientation



Picture 2.2: Students searching for books on the shelves after consulting the Library OPAC to get the Call No e.g [322.4092 MAN](#)

- ant criteria of effectiveness, and
- Constituency satisfaction model which organisation was assessed by the degree to which its constituency or primary stakeholders have been satisfied.

## **2.10 CHALLENGES OF ONLINE PUBLIC ACCESS CATALOGUE (OPAC) CURRENT INTERFACE**

This section will discuss the bridging gap between OPAC and bookshelves and improving accessibility to a librarian.

### **2.10.1 Bridging the gap between online public access catalogue (OPAC) and bookshelves:**

A user often goes back and forth between an OPAC terminal and bookshelves, so that a tool like a bookshelf browser coupled with an OPAC will be helpful.

### **2.10.2 Improving accessibility to a librarian:**

It is crucial especially for remote users to have improved communication tools for collaborating with the librarian. According to (Ukgebo,2012:186) it is because even if OPACs and electronically accessible materials are well-prepared, the users need specialised assistance (Ukpebor, 2012:186). Ukpebor (2012) pointed out the following guidelines to address the challenges of OPAC usability improvement and were derived:

- Existing databases should be used without modification,
- Graphical images should be used to help users browse simulated book shelves as well as physical bookshelves,
- Bookshelves should be re-organised in accordance with semantically requirements,
- Multiple OPACs including personalized ones should be accessible through a single user interface,
- Active information such as “this book is checked out” should be iconized and be given to users as well as bibliographic information, and
- User interface of OPAC should be adaptable to the user environment like terminal type and user preferences.

Students easily get bored about the whole process because they need to see quick results and straight forward instructions. Issues of writing the call number down in most cases is frustrating students because they need to have a piece of paper to write on in order to be able to find the correct shelf or to memorise the shelf number and the first three letter of the author’s surname.

## 2.11 EFFECTIVENESS OF LIBRARY ONLINE PUBLIC ACCESS CATALOGUE (OPAC)

According to Maggison, Mosley and Pietri (1992:12), effectiveness is a managerial ability to get the right things accomplished by selecting the most goals and the proper steps to achieve. The pertinent question is not how to do things right but how to find the right things to do and to concentrate resources and efforts on them. Changes in information technology have impacted libraries due to changes in the format of information seeking behaviours of users like OPAC search versus Google search options by users which is a great challenge because users prefer to use Google as against library OPAC. Cameron (1978:6) stated out four models of an organisation which measure organisation's effectiveness as follows:

- Goal attainment model, in which goals and objectives of an organisation have been defined and measured based on the achievement of these goals,
- System resources model, which assessed on organisational ability to secure resources for its environment,
- Internal process model which used internal organisational activities as the dominant criteria of effectiveness, and
- Constituency satisfaction model which organisation was assessed by the degree to which its constituency or primary stakeholders have been satisfied.

Traditionally libraries uses the second model or the system resource model to measure the effectiveness believing that by counting the inputs they can directly indicate their library's effectiveness. Singh (2007:11) also added that since that the capability of academic libraries is to perceive to be at the risk in today's changing environment these libraries need to critically examine the effectiveness of their services like OPAC and continue the challenging task of understanding the information needs and information seeking behaviours of its users.

Libraries need to take stock of where they are now, list the services and resources they currently provide and ask users what they want and how they want it. The effectiveness of OPAC is one of the aspects which should be measured in performance assessment of academic libraries through

testing the satisfaction levels of users in relation to the use of OPAC. These can be done through evaluating the accessibility of library resources, speed of provision of item's location and well organised shelves (Ayob, 2011:4).

## 2.12 CRITERIA'S OF A USER FOCUSED OPAC INTERFACE

Ruzegea (2012:3) pointed out the following Criteria's of a user focused OPAC Interface and are:

- Consistency in terminology,
- Shortcuts for experienced users,
- Informative feedback about the search,
- Usability to undo or modify action,
- User control in specifying parameters,
- Clear error message and correct errors easily, and
- Alternative interface for expert and novice users.

According to Wallis, K, (2009:6) as he added to Ruzegea's view he added that there are many proposed features of the Next-Generation Catalogue and the most common features are in three categories as:

- Those that improve search functionality,
- Web 2.0 technologies and recommender features, and
- Enriched content.

## 2.14 FEATURES OF THE NEXT GENERATION CATALOGUE

For users to be able to maximise the functionalities of the Next generation Catalogue they have to register at the OPAC site by filling in a submission form online. A register user can login to site with email address and password to enable the user the privileges to get access to the web 2.0 features of catalogue. Besides the three main common features as mentioned by

### 2.13 THE NEXT GENERATION LIBRARY CATALOGUE

The term next-generation library catalogue as defined by Wallis, K, and (2009:6) refers to the new OPAC designs, which aim to provide better functionality in terms of library collection and services, and provide a better search experience to users. This is caused by a common concern about the dissatisfaction of users on the current OPAC interface which has been a longstanding issue among academic library users. The aim is not only to provide a better search experience but also a discovery and social academic library. The main concern is that Google has become dominant in academic libraries because it is user friendly and easy to use with straight forward command and its results ranking method.

Yang and Hofmann (2011:266) clarified the meaning of the Next generation or (current generation catalogue and refers to the modern Online library Catalogue with a specific set of advanced characteristics Discussions about the next generation catalogue (NGC) has been there for the past five years and some of its feature are also already implemented. Academic libraries has experienced the evolution of several generations of online catalogue from the first generation which originated between 1960 and 1970's, followed by the second generation in the early 80's which came with keyword or post-coordinate (Boolean) searching.

According to different studies conducted in connection to the next generation OPAC Yang and Hofmann (2011:267) including the one about evaluating six OPACs comparing them with the NGC characteristics like simple keyword search box on each page, spell checking, navigation, enriched content, recommended item list, cover art image it was found that none of the vendors managed to offer as vast a range of features as Amazon does.

### 2.14 FEATURES OF THE NEXT GENERATION CATALOGUE

For users to be able to maximize the functionalities of the Next generation Catalogue they have to register at the OPAC site by filling and submitting the registration form online. A register user can login to site with email address and password to enable the user the privileges to get access to the web 2.0 features of catalogue. Besides the three main common features as mentioned by

Tam and Cox (2011:13), Yang and Hofmann (2011:270) also unpacked them into the following characteristics and regarded them as the most crucial features for the NGC in libraries:

#### **2.14.1 Single point of entry for all library resources**

This means that the library catalogue should be a single search to access all library materials including pointers to the available articles in electronic databases. Presently users have to search the catalogue books and a different search should be made for databases access.

#### **2.14.2 State of the art web page interface**

Library catalogue should have a modern design similar to e-commerce sites. This criterion is highly subjective and difficult to quantify. A NGC should look and feel like popular sites such as Google, Netflix and Amazon.

#### **2.14.3 Enriched content**

NGC (Next generation Catalogue) should include book cover image and user-driven input like comments, descriptions, rating and tag clouds. The enriched content can be either from library patrons or commercial sources.

#### **2.14.4 Spelling Suggestion**

A Google style 'Did you mean?' spelling suggestion for the search keywords to offer other alternative spelling of the search to users. Spell-checking should also pop up the query with the correct spelling or suggest a list of terms so that users can simply click on one of them to get the correct result

#### **2.14.5 Tagging**

Tagging is popularised by websites associated with Web 2.0. Users can tag items/documents with their own keywords or terms. This kind of metadata helps describe an item and allows it to be found again by browsing or searching.

#### **2.14.6 Setting email alert or saving searches**

Registered users can save the searches made by them for future reference. It also enables them to set and receive periodic email alerts regarding new additional based on searches made by them. Once an alert has been set by a user, the user can receive automatic alerts through email with details of new materials relevant to the topic of interest.

#### **2.14.7 Faceted navigation**

Faceted is the ability to narrow down a search by choosing from the tabled facets. The Library catalogue should be able to search results as set of categories such as subject terms, dates, languages, availability, formats and location.

#### **2.14.8 Simple keywords search box with link to advanced search on every page.**

The NGC should start with the simple search box that looks like that of Google or Amazon. A link to advanced search should also appear on every page of the OPAC as users navigate and conduct searches.

#### **2.14.9 Relevancy**

Librarians are always complaining about the relevancy of OPAC searches outcome. Therefore the NGC should improve relevancy ranking with increased precision. There should be circulation statistics because more frequently circulated books indicate popularity and usefulness of a book. Items deemed important enough with multiple copies should also receive higher relevancy ranking. (Tam and Cox, 2011:13) also added that relevancy ranking is useful and important it saves time users can get what they want without scrolling down.

#### **2.14.10 Writing Reviews and Comments and Rating items**

The interface can allow the users to write reviews and comments regarding coverage, quality and usefulness of a particular document. Users can again rate an item based on the above mentioned criteria. The review and comments will be of immense use for others as they are getting the gist of the document and results in socializing the OPAC interface.

#### **2.14.11 Suggestion and Feedback**

Separate interface are also provided for users to suggest purchase of new documents and also to give feedback about the new system. The module can forward both the suggestion and the feedback to librarian via email automatically.

#### **2.14.12 User contribution**

NGC should allow users to add data to records. User input includes descriptions, summaries, reviews, criticism, comments, rating and ranking and tagging. Tag clouds can serve as access points and descriptive keywords leading to frequently used items.

#### **2.14.13 Real Simple Syndicate (RSS) feeds**

Richardson L. and McBryde-Wilding, H. (2009:32) described RSS feeds as a different way of receiving information. Really Simple Syndication (RSS) is to brief users about frequent updated content on a web site. RSS can be configured to send things like new books lists, top circulation books lists or new to users who subscribe. It is available for users who want to receive timely updates from OPAC system. It includes metadata elements such as title, author and publication date. The RSS reader checks the user's subscribed feeds regularly for new work, downloads any updates that it finds, provides a user interface to monitor and read the feeds.

#### **2.14.14 Integration with social networking sites**

NGC should consider the integration of social networking sites so that users can share links to library items with their friends on social networks like Twitter and Facebook (Sanjailal, Padmavathi and Seetharam, 2011:6).

### **2.15 CONCLUSION**

In conclusion most academic libraries the training is specifically based on the identification, location and the availability of items from a specific shelf whereas this training is not enough to

fill the gap for an independent and on the other hand students remains with a lot of dissatisfaction about the OPAC system.

The issue of upgrading the current OPAC is long because as a sign of dissatisfaction among library users they have totally turned to be more satisfied about the use of Google search engines whenever they need information in the library.

## 1.2 RESEARCH DESIGN

Research design is the visualization of the data and the problems associated with the employment of the data in the entire research project. Research design as defined by (Kothari, 2007:112) is a research design which involves a set of decisions regarding what a study is to be studied among what population with what research methods for what purpose. For this study, the researcher will use field study. The researcher used field study as a study design because it enables the researcher to assess the effectiveness of the library Online Public Access Catalogue (OPAC) system when used by University of Venda students to get an effective access to the library collection.

## 1.3 RESEARCH METHODOLOGY

Research methodology as defined by (Ogden, 2007:1) is the process, principles and procedures by which a researcher approaches the problems and work systems. According to (Denzin and Lincoln, 2000) research methodology is the process of choosing and justifying the research methods. In research, there are various research methods, which are qualitative and quantitative. For this study the researcher will use a combination of both qualitative and quantitative research methods.

## CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

### 3.1 INTRODUCTION

The researcher in this chapter will discuss research design and methodologies that will be used when conducting the study. This chapter will also outline the study area, population of the study, sampling method and sampling size, data collection, data analysis and ethical consideration.

### 3.2 RESEARCH DESIGN

Leedy (1997:93) defined research design as the visualization of the data and the problems associated with the employment of the data in the entire research project. Research design as defined by Babbie (2007:112) is a research design which involves a set of decisions regarding what a topic is to be studied among what population with what research methods for what purpose. For this study the researcher will use field study. The researcher used field study as a study design because it enables the researcher to assess the effectiveness of the library Online Public Access Catalogue (OPAC) system when used by University of Venda students to maximise the effective access to the library collection.

### 3.3 RESEARCH METHODOLOGY

Research methodology as defined by Guy (1987:12) is the process, principles and procedures by which the researchers approach the problems and seek answers. According to (Denzin and Lincon, 1998:73), the use of both qualitative and quantitative methods in a research is variously called multi-method, mixed methods or multiple methods. For this study the researcher will use a mixed methodology where qualitative and quantitative research methods will be used.

- **Qualitative methodology**

Qualitative methodology is a method in which the inquirer often makes knowledge claims based primarily on constructivist perspectives or advocacy/participatory perspectives or both, Creswell (2003:18). On the other hand Leedy (1997:105) also defined qualitative methodology as an inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words. The researcher will use qualitative method, because there is a close interaction between the researcher and the respondents and that the researcher will be able to understand the situation as it happens.

- **Quantitative methodology**

Quantitative methodology as defined by Creswell (2003:18) is a process in which the investigator primarily uses post positivist claims for developing knowledge like he can use and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of the theories, employs strategies of inquiry such as experiments and survey, and collects data on predetermined instruments that yield statistical data. Leedy (1997:104) also defined quantitative methodology as an inquiry into social human problems, based on testing a theory composed of variables, measured with numbers and analyzed with statistics procedure, in order to determine whether the generalizations of the theory hold true. The researcher used quantitative method because the researcher is able to ask specific, narrow research questions or formulates hypothesis about the variables that can be observed or measured.

### **3.4 STUDY AREA**

The study area of the research will be University of Venda which is located in the scenic region of Vhembe District in the vast Limpopo Province of South Africa and was established in 1982 to cater for the Homeland of Venda. Thohoyandou is the former capital of the independent homeland and the proud of the Vha-Venda people. It is situated in the South of Venda, on the main road between Louis Trichardt and Kruger National Park and it is a home of University of Venda.

### **3.5 POPULATION OF THE STUDY**

According to (Babbie, 2004:190) a research population is the aggregation of element from which the sample is actually selected. (Graziano and Raulin, 2004:202) also added that a population is a large group of all persons, events and so on. It is the total set from which the individual or a unit is chosen as a sample. In this study the population includes top management, academics, admin staff, and student's structures as well as all categories of students which makes about +- 13 000.

### **3.6 SAMPLING**

Barker in De Vos (2012:224) defined sample as a small portion of the total set of object, events or persons from which a representative selection is made. According to Kumar, 2011:397 sample is a subgroup of population which is the focus of your research enquiry and is selected in such a way that it represents the study population. It is composed of few individuals from whom you collect the required information, (Kumar, 2011:397). The sampled group of the study consists of Management, Deans, Directors, Library team and students.

#### **3.6.1 Sampling Methods**

According to (Kumar, 2011:298) sampling method is the way you select the required sampling units from a sampling population for identifying your sample. (Bless and Higson-Smith, 1997:95) also highlight that the strategy of this sampling method is to select respondents that are judged to be typical of the population under investigation. The researcher used non-probability sampling and its sub-type purposive sampling method. In this study purposive sampling was used where the researcher used judgemental to select the respondents which can give more information.

Purposive sampling as defined by (Kobus, 2010:79) means a sampling where participants are selected because of some defining characteristics that makes them holders of the data needed for the study. A purposive sample is one in which researchers choose participants deliberately with a purpose in mind, usually in order to make the sample more representative, (Vogt, 2012:348). The researcher used purposive sampling because the researcher to use judgement to select the sample

which is composed of elements that contain the most characteristic, representative or typical attributes of the population that can serve the purpose of the study best.

### 3.6.2 Sampling Size

The total sampled population of the study consists of 50. The sampled respondents of the study consist of 04 Executive Management, 08 Deans, 06 Directors, 04 Library management team and from Students parliament members will be as follows; Parliament speaker 01, deputy speaker 01, cabinet members 13, 05 chief whips, 08 schools representatives.

## 3.7 DATA COLLECTION

According to Neumann (1994:6) data collection is the empirical evidence or information that one gathers carefully according to the rules and procedures. Data collection method as defined by Grunnie (1993:44) is a procedure specifying techniques to be employed, utilized and activated to be conducted in implementing a research study. Because the researcher will use both qualitative and quantitative methods and two instruments used to collect data and with open-ended interview and survey questionnaires.

Interview is a method used to collect data in the social science where there is an interaction, either face to face or otherwise, between two or more individuals with a specific purpose in mind (Kumar, 2011:389). Interview involves asking questions of respondents and recording their answers. In this study open-ended interviews will be used. The aim of interview is to see the world through the eyes of the participants, and they can be a valuable source of information provided they are used correctly. The researcher will interview the respondents using open ended questions.

Questionnaire refers to a list of written questions, the answers to which are recorded by respondents (Kumar, 2011:389). The respondents read the questions, interpret what is expected and then write down the answers. The researcher will use structured questionnaire to collect the information. The researcher will distribute the questions to the respondents.

### 3.8 DATA ANALYSIS

Data analysis refers to the stage in the research process where the researcher, through application of various statistical and mathematical techniques, focuses separately on specific variables in the data set, (Mouton, 1996:161). According to (Bailey,1987:370) data is analyzed in order that the researcher can properly test his/her hypotheses and answer his/her research questions and results of the study can therefore be presented to the readers in an understanding and convincing way. This led to the use of both the Statistical Package for Social Science cross-sectional analysis (SPSS), and inductive interpretation thematic analysis.

Data collected through questionnaire will be analyzed by Statistical, Package for Social Science (SPSS) and information will be presented in a tabular form, frequencies and percentage.

Data collected through interview will be analyzed by thematic analysis and information will be presented in a narrative form. This method as mentioned by (Creswell, 2005:334) is a method which is used in interview method which directed the researcher to follow steps of qualitative data analysis as outlined below:

- **Step 1: Planning for recording data:** The researcher should plan to record data in a more systematic manner before collection of data.
- **Step2: Data collection and Preliminary Analysis:** Data analysis in qualitative inquiry necessitates a twofold approach. The first one involves data analysis at the research site during collection of data. The second one involves data analysis away from the site.
- **Step 3: Managing (organising) data:** This is the early stage in analysis wherein the researcher organise their data into file folder, index cards or computer files.
- **Step 4 : Reading and Writing Memos:** In this step after the researcher has organise the data, the researcher immerse himself in the detail trying to get a sense of the interview as a whole before breaking it into parts.

- **Step 5: Generating categories, theme and Patterns:** It involves noting regularities in the setting or people chosen for study. As the categories emerge the researcher search for those that have internal convergence and external divergence.
- **Step 6: Coding the Data:** The researcher has to apply some coding scheme to those categories and themes, and diligently and thoroughly marked passages in the data. Codes may take several forms: abbreviation of keywords, colour dot, numbers and the choice is up to the researcher.
- **Step 7: Testing Emergent Understanding:** The researcher began the process of evaluating the plausibility of her development understandings and explores them through the data searched for alternative explanations.
- **Step 8: Searching for Alternative Explanations:** In this step as the researcher discovers the patterns in the data he or she should engage in critical challenging the patterns that seem to be apparent. The researcher should search for others, plausible explanation for meaning to raw data.
- **Step 9: Writing the report:** This is the final step wherein the researcher writes a report, explain the data in details. The researcher engaged in an interpretive act, lending and meaning to raw data.

For the purpose of this study the above steps were used: Planning for recording data, data collection and Preliminary Analysis, Managing (Organizing) data, Reading and Writing Memos and writing the report.

### 3.9 ETHICAL CONSIDERATIONS

Ethical measures are principles which the researcher should bind himself /herself with, (Schulze, 2002:17). Ethics is a system of action guiding principles and rules which function by specifying the types of conduct that are permitted, required and forbidden. It involves a systematic

examination of the moral life and seeks to provide sound justification for the moral decisions and actions of people (Fry 2002:14). Ethics that were used in this study were discussed as follows:

### **3.9.1 Informed consent**

Informed consent refers to the willing joining of the research project by participants who have full knowledge of the risk and rewards of the project (Vogt, Gardner and Haeffele, 2011: 242). It is when the respondents are made adequately and accurately aware of the type of information you wanted from them, when the information is being sought, what purpose it will be put to, how they are expected to participate in the study and how it will directly or indirectly affect them.

### **3.9.2 Anonymity**

According to (Dane, 1990:21) Anonymity is when no one including the researcher, can relate to the participants identity to any information pertaining to the project. Is when the data is collected no one knows which data came from which participant. Anonymity means that participants cannot be identified because their identities are unknown. It is stronger than confidentiality.

### **3.9.3 Confidentiality**

It is a means of protecting the privacy of research participants by concealing their identities and shielding links to the data pertaining to them, Vogt (2012: 338). Confidentiality is an ethical requirement in most research: sensitive and personal information provided by participants should be protected and made unavailable to anyone other than the researcher.

## **3.10 CONCLUSION**

This chapter was about the preferred methodologies and procedures used by the researcher Both qualitative and quantitative research methods were used in this study and the sample size was composed of fifty respondents in number and purposive sampling method was applied. A questionnaire and interview were used as a method for data collecting. With regard to data analysis, statistical package for social science for cross-sectional analysis (SPSS) and inductive interpretation was used.

## CHAPTER 4: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

### 4.1 INTRODUCTION

The previous chapter presented the research design and the subsequent methodologies that the researcher intends following and which indicate the structure and the procedures that were followed to answer the researcher's study questions. It has been revealed that the study was conducted in mixed methodologies where quantitative and qualitative research methodology were used and this chapter data is presented, analysed and interpretation of the study. The following sections focuses on reporting the empirical investigation by providing answers to the perceptions and understanding of the assessment of the effectiveness of library Online Public Access Catalogue.

### 4.2 ANALYSES OF DATA COLLECTED THROUGH QUESTIONNAIRE

In this section the researchers analyse the responses collected by the questionnaires and are presented graphically in graphical tabular form and are followed by a brief synthesis of the findings for the item.

#### 4.2.1 Section a: Biographical Details

In this section the researcher presents the biographical details of the respondents in this study. The information are presented in graphical tabular forms and followed by a synthesis of the findings and the detailed findings are discussed in chapter 5.

**Table 4.1 Age of respondents**

	Response	Frequencies	Percentage
1	Less than 20 years	09	20.0%
2	21 – 30 years	22	48.9%
3	31 – 40 years	10	22.2%
4	41 years and older	04	8.9%
	TOTAL	45	100%

Most of the respondents, 22 (48.9%) who took part in this study were aged between 21 – 30 years. Ten (22.2%) of the respondents were aged between 31 and 40, and 04 (8.9%) were between above 41 years and old. 09 (20.0%) were youth aged at less than 20 years. It can therefore be concluded that in this study, there has been a relatively better representation of the population in terms of age distribution of respondents.

**Table 4.2 Gender of respondents**

	Response	Frequencies	Percentage
1	Male	25	55.6%
2	Female	20	44.4%
	TOTAL	45	100%

Table 4.2 presents the biographical details of the respondents in terms of gender. A total of 45 respondents took part in this study, of the 45 respondents, 25 (55.6%) were males whereas 20 (44.4%) were females. All targeted 45 respondents managed to return the questionnaires, and all the questionnaires were analysed.

**Table 4.3 Position of respondents**

	Response	Frequencies	Percentage
1	Manager	02	4.4%
2	Dean	01	2.2%
3	Director	01	2.2%
4	Library Team	04	8.9%
5	Student	37	82.2%
	TOTAL	45	100%

Table 4.3 indicate that majority of the respondents at 37 (82.2%) who took part in this study were students of the Univen. 04 (8.9%) of the respondents were library team, and 02 (4.4%) were managers. Few respondent at 01 (2.2%) was a Dean and 01 (2.2%) was Director who took part in the study. It can therefore be concluded that majority of the respondents who took part in the study were the students of the University of Venda.

**Table 4.4 Qualifications of Respondents**

	Response	Frequencies	Percentage
1	Diploma	04	8.9%
2	Degree	34	75.6%
3	Honours	02	4.4%
4	Masters	04	8.9%
5	Doctoral	01	2.2%
	TOTAL	45	100%

Majority of the respondents at 34 (75.6%) who took part in this study were studying or having a degree. 04 (8.9%) of the respondents were having diploma, and 02 (4.4%) were having honours. Few respondent at 04 (8.9%) were having masters whereas only 01 (2.2%) of the respondents was having a Doctoral degree and from all the respondents who took part in the study. It can therefore be concluded that in this study, there is a still need for the respondents to further their studies.

#### 4.2.2 Section B: The effectiveness of the library Online Public Access Catalogue (OPAC)

In this sub-section, data is analysed using graphical statistics which is further divided into four themes which arose from the survey questionnaire respondents. The four themes are the effectiveness of OPAC use by Univen students; user preference about OPAC system; user changing behaviour about OPAC interface versus Google search engines and the advanced features of OPAC interface to suit the new generation preference.

##### 4.2.2.1 The effectiveness of OPAC use by Univen students

This sub-section presents data regarding the effectiveness of OPAC use by Univen students. The data is presented in the form of tables followed by brief interpretation.

**Table 4.5 There is regular OPAC training for user**

	Response	Frequencies	Percentage
1	Strongly agree	09	20.0%
2	Agree	21	46.7%
3	Not sure	12	26.7%
4	Disagree	01	2.2%
5	Strongly disagree	02	4.4%
	TOTAL	45	100%

Twenty-one (46.7%) of the respondents agreed with the idea that there is regular OPAC training for user, 09 (20.0%) respondents strongly agreed. On the other hand, 01 (2.2%) disagreed and there was 02 (4.4) respondents who strongly disagreed women are still harassed sexually for appointment into leadership positions. Twelve 12 (26.7%) respondents were not sure whether that there is regular OPAC training for user or not. The statistics shows that to a greater extent majority of the respondents were aware that that there is regular OPAC training for user.

**Table 4.6 There is support by staff at the OPAC search terminals**

	Response	Frequencies	Percentage
1	Strongly agree	07	15.6%
2	Agree	21	46.7%
3	Not Sure	11	24.4%
4	Disagree	05	11.1%
5	Strongly disagree	01	2.2%
	TOTAL	45	100%

Twenty-one (46.7%) of the respondents agreed with the idea that there is support by staff at the OPAC terminals regular and 05 (11.1 %) respondents disagreed. On the other hand, 07 (15.6%) strongly agreed and there was 01 (2.2%) respondents who strongly disagreed that there is support by staff at the OPAC search terminals. The statistics shows that majority of the respondents agreed that there is support from staff at the OPAC terminals.

**Table 4.7 There is guide and support at the shelves**

	Response	Frequencies	Percentage
1	Strongly agree	12	26.7%
2	Agree	21	46.7%
3	Not Sure	07	15.6%
4	Disagree	04	8.9%
5	Strongly disagree	01	2.2%
	TOTAL	45	100%

The statistics shows that Twenty- one (46.7%) of the respondents agreed with the idea that there is support and guidance by staff at the shelves when looking for a book and 04 (8.9 %) respondents disagreed. On the other hand about twelve 12 (26.7%) strongly agreed and only one (2.2%) respondents strongly disagreed that there is support and guidance at the shelves by staff. The majority of the respondents agreed that there is guidance and support at the shelves.

**Table 4.8 There are enough OPAC terminals in the library**

	Response	Frequencies	Percentage
1	Strongly agree	10	22.2%
2	Agree	24	53.3%
3	Not Sure	10	22.2%
4	Disagree	01	2.2%
5	Strongly disagree	0	0.0%
	TOTAL	45	100%

The statistics shows that twenty-four (53.3%) of the respondents agreed with the idea that there are enough OPAC terminals in the library and only one (2.2%) respondents disagreed. About twelve ten (22.2%) strongly agreed and (0.0%) respondents strongly disagreed that there is enough OPAC terminals in the library. The statistics showed that the majority of the respondents agreed that there are enough OPAC terminals in the library.

**Table 4.9 Books are well organised at the shelves**

	Response	Frequencies	Percentage
1	Strongly agree	19	41.3%
2	Agree	19	41.3%
3	Not Sure	03	6.7%
4	Disagree	03	6.7%
5	Strongly disagree	01	2.2%
	TOTAL	45	100%

Table 4.9 shows the majority nineteen (41.3%) of the respondents agreed with the idea that books are well organised at the shelves and only three (6.7%) respondents disagreed. Another nineteen (41.3%) strongly agreed while only one (2.2%) respondents strongly disagreed that books are well organised on the shelves. Statistics shows that most of the respondents agreed with the point that books are well organised at the shelves.

#### 4.2.2.2 User preference about OPAC system

This portion presents the user preference about OPAC system. The information in this section are presented in graphical and tabular forms and followed by a discussion of the findings.

**Table 4.10 OPAC interface is what users want when searching for books**

	Response	Frequencies	Percentage
1	Strongly agree	20	44.4%
2	Agree	20	44.4%
3	Not Sure	01	2.2%
4	Disagree	04	8.9%
5	Strongly disagree	0	0.0%
	TOTAL	45	100%

The above table shows that twenty (44.4%) of the respondents agreed that OPAC Interface is what users want when searching for books and on the other hand four (8.9%) disagree. About twenty (44.4%) again strongly agree that OPAC Interface is what users want when searching for books and zero (0.0%) strongly disagree that OPAC interface is what users want when searching for books. Most of the respondents agreed that OPAC interface is what users want when searching for books.

**Table 4.11 OPAC is easy to use when searching for books in the library**

	Response	Frequencies	Percentage
1	Strongly agree	27	60.0%
2	Agree	15	33.3%
3	Not Sure	01	2.2%
4	Disagree	01	2.2%
5	Strongly disagree	01	2.2%
	TOTAL	45	100%

Table 4.11 shows that twenty-seven (60%) of the respondents strongly agreed that OPAC is easy to use when searching for books in the library while only one (2.2%) strongly disagree that

OPAC is easy to use when searching for books in the library. About fifteen (33.3%) agree that OPAC is easy to use when searching for books in the library and only one (2.2%) disagree. The statistics revealed that the majority of the respondents confirmed that OPAC is easy to use when searching for books in the library.

**Table 4.12 With OPAC is easy to find books**

	Response	Frequencies	Percentage
1	Strongly agree	30	66.7%
2	Agree	12	26.7%
3	Not Sure	03	6.7%
4	Disagree	0	0.0%
5	Strongly disagree	0	0.0%
	TOTAL	45	100%

Table 4.12 shows that thirty (66.7%) of the respondents strongly agreed that with OPAC is easy to find books and zero (0.0%) disagree that with OPAC is easy to find books. While the other twelve (26.7%) agree that with OPAC is easy to find a book zero (0.0%) again disagree that with OPAC is easy to find a book. The statistics shows that to a greater extent majority of the respondents were aware that with OPAC is easy to find books and training.

**Table 4.13 OPAC options are more preferred by users**

	Response	Frequencies	Percentage
1	Strongly agree	15	33.3%
2	Agree	18	40.0%
3	Not Sure	06	13.0%
4	Disagree	05	11.1%
5	Strongly disagree	01	2.2%
	TOTAL	45	100%

Eighteen (40.0. %) of the respondents agreed with the idea that OPAC options are more preferred by users only five (11.1%) disagree with the same idea. On the other hand, fifteen (33.3%) strongly disagreed that OPAC options are more preferred by users only one (2.2%) strongly disagree that OPAC options are more preferred by users than the Google search engines. The statistics shows that to a greater extent majority of the respondents confirmed that OPAC options are more preferred by users.

**Table 4.14 Users prefer spell checking OPAC interface**

	Response	Frequencies	Percentage
1	Strongly agree	11	23.9%
2	Agree	14	30.4%
3	Not Sure	16	35.6%
4	Disagree	04	8.9%
5	Strongly disagree	0	0.0%
	TOTAL	45	100%

The above table revealed that fourteen about four (8.9%) showed that they agree with the idea of spell check OPAC interface only four (8.9%) disagree with the idea. On the other hand while eleven (23.9%) of the respondents strongly agree with the idea of spell checking OPAC interface, zero (0.0%) strongly disagree with the idea. Most of the respondents confirmed that they are not aware that users prefer spell checking OPAC interface.

#### 4.2.2.3 User changing behaviour about OPAC interface versus Google search engines

This section provide a description of the user changing behaviour about OPAC interface versus Google search engines, and the information in this section are presented in graphical and tabular forms and followed by discussions.

**Table 4.15 User likes to search from Google than OPAC when looking for Information**

	Response	Frequencies	Percentage
1	Strongly agree	17	37.8%
2	Agree	10	22.2%
3	Not Sure	09	20.0%
4	Disagree	06	13.3%
5	Strongly disagree	03	6.7%
	TOTAL	45	100%

Table 4.15 revealed that seventeen (37.8%) showed that they strongly agree that users like to search from Google than OPAC when looking for information the other three (6.7%) strongly disagree that that users like to search from Google than OPAC when looking for information. On the other side ten (22.2%) agree that that users like to search from Google than OPAC when looking for information the other six (13.3%) disagree with the idea that that users like to search from Google than OPAC when looking for information. The statistics revealed that most of the respondents are aware that user likes to search from Google than OPAC when looking for Information.

**Table 4.16 Users claim that Google search engines are easy to use than OPAC**

	Response	Frequencies	Percentage
1	Strongly agree	15	33.3%
2	Agree	13	28.9%
3	Not Sure	12	26.1%
4	Disagree	5	11.1%
5	Strongly disagree	0	0.0%
	TOTAL	45	100%

The statistics shows that fifteen (33.3%) of the respondents strongly agreed with the idea that Google search engines are easy to use than OPAC options whereas zero (0.0%) strongly disagreed. On the other hand about thirteen (28.9%) agreed that Google search engines are easy to use than OPAC options and only five (11.1%) disagreed with the idea that Google search

engines are easy to use than OPAC options. The majority of the respondents are aware that Google search engines are easy to use than OPAC options.

**Table 4.17 OPAC interface is easily adapted to users' environment**

	Response	Frequencies	Percentage
1	Strongly agree	03	6.7%
2	Agree	21	46.7%
3	Not Sure	17	37.8%
4	Disagree	02	4.4%
5	Strongly disagree	02	4.4%
	TOTAL	45	100%

Table 4.17 revealed that twenty one (46.7%) agreed that OPAC interface is easily adapted to user's environment whereas only two (4.4%) disagree with the idea that OPAC interface is easily adapted to user's environment. On the other side three (6.7%) strongly agreed with the idea that OPAC interface is easily adapted to user's environment and only two strongly disagreed with the idea. Most of the respondents confirmed that OPAC interface is easily adapted to users' environment.

**Table 4.18 OPAC provide space for comments**

	Response	Frequencies	Percentage
1	Strongly agree	03	6.7%
2	Agree	10	21.7%
3	Not Sure	20	44.4%
4	Disagree	08	17.8%
5	Strongly disagree	04	8.9%
	TOTAL	45	100%

Table 4.18 showed that ten (21.7%) agreed that OPAC provide space for comments whereas eight (17.8%) disagreed with the idea that OPAC provide space for comments and about four (8.9%) strongly disagreed with the OPAC provide space for comments. On the other side three (6.7%) strongly agreed with the fact that provide space for comments. The statistics shows that to a greater extent majority of the respondents were not sure if OPAC provide space for comments.

#### 4.2.2.4 Advanced features of OPAC interface to suit the new generation preference

This section provide a description of the advanced features of OPAC interface to suit the new generation preference, and the information in this section are presented in graphical and tabular forms and followed by discussions.

**Table 4.19 Book cover image is available on OPAC interface**

	<b>Response</b>	<b>Frequencies</b>	<b>Percentage</b>
1	Strongly agree	05	11.1%
2	Agree	13	28.9%
3	Not Sure	11	24.4%
4	Disagree	06	13.3%
5	Strongly disagree	10	22.2%
	TOTAL	45	100%

Table 4.2.2.4 revealed that thirteen (28.9%) agreed with the idea that book cover image is available on OPAC interface while six (13.3%) disagreed with the idea that book cover image is available on OPAC interface. From the other side about ten (22.2%) strongly disagreed with the idea that book cover image is available on OPAC interface whereas only five (11.1%) strongly agreed with the idea that book cover image is available on OPAC interface. The statistics shows that the majority of the respondents agreed that Book cover image is available on OPAC interface.

**Table 4.20 Spelling suggestion is available on OPAC interface**

	<b>Response</b>	<b>Frequencies</b>	<b>Percentage</b>
1	Strongly agree	08	17.8%
2	Agree	18	40.0%
3	Not Sure	09	20.0%
4	Disagree	03	6.7%
5	Strongly disagree	07	15.6%
	TOTAL	45	100%

The statistics revealed that eighteen (40.0%) of the respondents agreed with the idea that Spelling suggestion is available on OPAC interface whereas about three (6.7%) respondents disagreed that that there is Spelling suggestion is available on OPAC interface. From the other side about seven (15.7%) respondents disagree that there is Spelling suggestion is available on OPAC interface. The statistics shows that the majority of the respondents agreed that there is Spelling suggestion is available on OPAC interface.

**Table 4.21 Email is linked to OPAC interface**

	<b>Response</b>	<b>Frequencies</b>	<b>Percentage</b>
1	Strongly agree	04	8.9%
2	Agree	12	26.7%
3	Not Sure	17	37.8%
4	Disagree	07	15.6%
5	Strongly disagree	05	11.1%
	TOTAL	45	100%

The statistics revealed that seventeen (37.8 %) of the respondents were not aware that email is linked to OPAC interface. On the other hand about twelve respondents agreed that email is linked to OPAC interface whereas seven (15.6%) disagreed that Email is linked to OPAC interface. The statistics shows that the majority of the respondents they are not sure if Email is linked to OPAC interface.

**Table 4.22 Suggestion option for purchase of new books is available on OPAC**

	<b>Response</b>	<b>Frequencies</b>	<b>Percentage</b>
1	Strongly agree	05	11.1%
2	Agree	09	20.0%
3	Not Sure	18	40.0%
4	Disagree	06	13.3%
5	Strongly disagree	07	15.6%
	TOTAL	45	100%

The statistics revealed that eighteen (40.0 %) of the respondents were not aware that option for purchase of new books is available on OPAC interface. On the other side nine (20.0%) of the respondents agreed that there is option for purchase of new books is available on OPAC interface. The statistics shows that the majority of the respondents are not aware that there is an option for purchase of new books is available on OPAC interface.

### 4.3 ANALYSIS OF DATA COLLECTED THROUGH INTERVIEW

In this section, the responses collected by the interview schedule are presented in a narrative form and the detailed findings are discussed in chapter 5.

**Question 1: How effective is the OPAC system when used by University of Venda students.**

#### ***Respondents 1:***

Respondents said that “library OPAC system is fairly effective as it is easy to use and the fact that students struggle to find books when the OPAC PCs are not working means that they find it an effective retrieval tool”.

### **Respondents 2:**

The second respondents indicated that “it is fast and also save time since that the Internet in the library is very fast as compared to other computers within the campus which students prefer to use when searching for information”.

### **Respondents 3:**

“It is effective because students are able to locate books and other material fast. The only problem is that books are located on the first floor and is easy to forget the location number on the way”.

### **Respondents 4:**

“It is effective because it made students to be able to access library books easily. Students are again able to search books by Author, title or by subject or by a topic from the assignment given by the lecturer. The problem is that with OPAC you can easily find a book but when you go to the shelf you find that the book is not there”.

### **Respondents 5:**

The last respondents indicated that “it is not effective because sometimes one cannot access it from outside the campus and that every time when you need a book you must walk from your office to the library to pick up the book.”

## **Question 2: What are the user preferences on OPAC system?**

### **Respondents 1:**

The first respondents indicated that “the Title search options is the most preferred as it is easy and straightforward. The second preferred on according to the first respondents is the subject though sometimes it cannot give straight forward results especially if you type in the topic of an assignment as it”.

**Respondents 2:**

The second respondents also stated “out that in most cases users prefer to search a book by title because it will only show you a straight answer if the book is available or not. The same respondents again said that the second choice is the author but it can mislead if one is not sure about the title of the book”.

**Respondents 3:**

The third respondents indicated that “most users prefer the title and keywords search when looking books. This is because in most cases it is not easy to know the author of the book but it is easy for library users to know the name of the book”.

**Respondents 4:**

The fourth respondents also indicated that “users prefer the title search more any other search options because it immediately show if the searched book is available or not. With other search options a user must able to know the name and initials of the author or one can be misled by the results”.

**Respondents 5:**

The last respondents indicated that “most he does not prefer any any option because he was not trained on how to find books. The respondents further said that the training which is done to students should also be offered to new staff members because some of the new staff members are not able to operate the OPAC and no one in the library is interested to train them”.

**Question 3: What is the cause of user behaviour changes from OPAC to Google search by students?**

**Respondents 1:**

The first respondents in question three mentioned that “users are changing from using OPAC more to Google because Google is a massive database where students are able to retrieve more

information as compare any library search engines whereas OPAC only use controlled language which requires searching skills and subject or disciplinary content knowledge”.

#### **Respondents 2:**

The second respondents in this question said that “the cause is lack of OPAC to give students quality information which they need for their studies because one can search for a book and find that the book is not available or is out with another user. On the other side with Google the information is always there on the internet and secondly it is quick to get information than to walk to the first floor checking for a book which you are not sure to find it even if the OPAC said on shelf. Lastly Google information is regarded as the best by students than to read the whole chapter when writing an assignment”.

#### **Respondents 3:**

This respondents indicated that “users are moving from OPAC use to Google because the Google provide massive clear information which is quick and easy to use like thesis, journal articles, abstracts and good summary of articles which users need when writing assignments”.

#### **Respondents 4:**

This respondents like respondents number 2, also indicated that “it is because Google enables users to find highly relevant websites by simply typing few relevant words into a text box. The second cause is lack of enough books in the library which force students to opt for Google information than to wait for one book with another use when the assignment is needed”.

#### **Respondents 5:**

The last respondents said that “it is because Google is more users friendly and focused than OPAC search options because one cannot just type whatever you need as it is. Secondly users are moving to Google because it displays more respond to a search the relevancy is high and there is more chance to get what you are looking for”.

**Question 4: Which advanced features do users want to be on the OPAC system?**

**Respondents 1:**

The first respondents in the question indicated that “users want relevancy of the results as on the Google search. These respondents further stated that users also need all Google features to be available on OPAC like full-text information of books, articles, theses and they also need it to have the capability to search databases subscribed by the library”.

**Respondents 2:**

From the second respondents stated that “users want to see the picture and colour of the book and this will make it easy to check the book on the shelf if they know the colour of the book which they are looking for”.

**Respondents 3:**

The third respondents like respondents number 1 said that “OPAC should be able to rank books according to their relevancy to the topic the user typed when searching for a book. These respondents again added that OPAC should have a feature which can be able to show how many students used the same title because it can also help to see the importance of the book”.

**Respondents 4:**

This respondent in this question responded as follows, “that OPAC must have a clear spelling check, OPAC must be able to alert students for new purchased books in the library, OPAC should be able to renew books by students themselves and lastly it should be able to link to parent/guardian record so that guardians should be able to see their students fines for results purposes”.

**Respondents 5:**

According to these respondents “OPAC features should be like Google in all the features and users should be able to print the Call No than to write them on papers. The respondents also

added that OPAC computers should be located among the shelves and talking device to tell users from which shelf to find a book should be available on OPAC”.

#### 4.4 CONCLUSION

In view of both the questionnaire and interview conducted the conclusion to sum up the different view by the respondents is that even though the majority seems to agreed that OPAC is effective in most areas, there is still a lot to be done and to impart more knowledge to students about the OPAC. This is because from the findings there are still respondents who seem to be not aware of most of the current OPAC interface set-up.

## **CHAPTER 5: RESEARCH FINDINGS, CONCLUSION AND RECOMMENDATIONS**

### **5.1 INTRODUCTION**

In the next chapter, a researcher summarised the findings, made recommendations and conclusion concerning the assessment of the effectiveness of the academic library Online Public Access Catalogue (OPAC) by students. The chapter reflects on the research objectives. In other words, it is a concise summary of the findings derived from the collected data through questionnaire and face to face interview. Furthermore, conclusion and recommendations were arrived at based on the findings of the study.

### **5.2 MAIN FINDINGS OF THE STUDY**

In this section, the researcher will provide the findings based on the four themes which arose from the objectives of the study and are the effectiveness of Online Public Access Catalogue (OPAC), user preferences about OPAC system, user changing behaviour about OPAC interface versus Google search engines, and advanced OPAC features to suit the new generation.

#### **5.2.1 The effectiveness of Online Public Access Catalogue (OPAC)**

The first objective of the study sought to assess the effective of OPAC use by Univen students and the researcher found out that majority of the respondents were aware that there is regular OPAC training for users. The majority of the respondents were aware that there is regular OPAC training for library users by library staff. The statistics shows that majority of the respondents agreed that there is support from staff at the OPAC terminals. The majority of the respondents agreed that there is guidance and support at the shelves. The statistics showed that the majority of the respondents agreed that there are enough OPAC terminals in the library. Statistics shows that most of the respondents agreed with the point that books are well organised at the shelves.

### **5.2.2 User preferences about OPAC system**

The second objective of the study was to understand user preferences about the OPAC system interface, and the researcher found out that most of the respondents agreed that OPAC interface is what users want when searching for books. The statistics revealed that the majority of the respondents confirmed that OPAC is easy to use when searching for books in the library. The statistics shows that to a greater extent majority of the respondents were aware that with OPAC is easy to find books. The statistics shows that to a greater extent majority of the respondents confirmed that OPAC options are more preferred by users. Most of the respondents confirmed that they are not aware that users prefer spell checking OPAC interface.

### **5.2.3 User changing behaviour about OPAC interface versus Google search engines**

The third objective of the study sought to describe user changing behaviour about OPAC interface versus the Google search engines and the findings revealed that most of the respondents are aware that user likes to search from Google than OPAC when looking for Information. The majority of the respondents are aware that Google search engines are easy to use than OPAC options. Most of the respondents confirmed that OPAC interface is easily adapted to users' environment. The statistics shows that to a greater extent majority of the respondents were not sure if OPAC provide space for comments.

### **5.2.4 Advanced OPAC features to suit the new generation**

The fourth objective of the study sought to explore advanced features of OPAC interface to suit the new generation preferences and the findings revealed that majority of the respondents agreed that Book cover image is available on OPAC interface. The statistics shows that the majority of the respondents agreed that there is Spelling suggestion is available on OPAC interface. The statistics shows that the majority of the respondents they are not sure if Email is linked to OPAC interface. The statistics shows that the majority of the respondents are not aware that there is an option for purchase of new books is available on OPAC interface. The study the assessment of

the effectiveness of the academic library Online Public Access Catalogue (OPAC) by students: a case of University of Venda Library. The objectives of the study were to explore the effectiveness of the Online Public Access Catalogue (OPAC), user preferences on the OPAC system, user changing behaviour about the OPAC interface and the advanced OPAC features to suit the new generation.

### 5.3 CONCLUSION

A review of the existing literature was done to gather the available literature on the main objectives of the study was done. From the literature review that was done it was revealed that user behaviour of academic library users has drastically changed and the internet search engines have become the most preferred tool over the library OPAC search options. It also showed that customers in today's libraries tend to embrace information provided by Google whole heartedly than using OPAC because they feel that internet Google search is more effective to provide relevant information quick and fast than OPAC.

The existing literature also revealed that students have different feelings about the current OPAC interface and it was revealed by the literature that there is a need to improve the current OPAC interface to maintain its relevancy and effectiveness to the next generation. The research process was both qualitative and quantitative and the researcher adopted a mixed methodology whereby qualitative and quantitative research methods were used. All the targeted respondents were reached and data was analysed and interpreted and findings of the study were presented.

### 5.4 RECOMMENDATIONS

On the basis of what has been summed up in this research, the study recommends the following: It recommends that as a starting point the library together with OPAC developers should consider to revisit the current OPAC interface and recommend for the total changing of OPAC interface to be at the level of its competitor the Internet Google search engines which students like the most over the OPAC system.

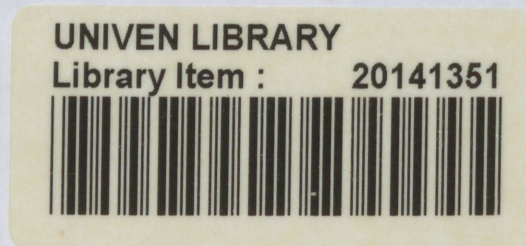
Furthermore it recommends students have different feelings about the current OPAC interface and it was revealed by the literature that there is a need to improve the current OPAC interface to maintain its relevancy and effectiveness to the next generation. Therefore with regard to the use changing behaviour of today's users there is an urgent need to attend to the changing of OPAC interface to strengthen its relevancy and effectiveness to its users, mostly to match with Google search engines which has emerged as its major competitor in the market because it is capable to offer quick and straight answers to its users in the market.

It also recommends that libraries should regard OPAC training as a continuous and critical project which needs proper planning, wide scope and guidelines which guide trainers on how to make the training more effective and lastly there is a need for a throughout the year. It is thus recommended that during OPAC training trainers should expand the scope to cover some options which students are not aware that they are available on the OPAC system and that OPAC is capable to offer those options. Therefore OPAC trainers should make sure that they expand both the scope and the training period during Library Orientation and Information Literacy skills.

#### 5.4 RECOMMENDATIONS FOR FUTURE STUDIES

Furthermore due to the research impact on the assessment of the effectiveness of the library Online Public Access Catalogue (OPAC) system when used by University of Venda students to maximise the effective there is still a lot of detailed research to be conducted: the following are the suggested for the research:

- Strategies to implement and enforce detailed OPAC training to all first year students as part of Information Literacy programme and form part of first year curriculum.
- The merging of OPAC, databases and the internet "Google" search engine to develop a "One Stop" search strategy for all



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## INTERNET SOURCES

<http://www.univen.ac.za/aboutus.php>

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## APPENDIX A

### INSTRUMENT

### QUESTIONNAIRE

## AN ASSESSMENT OF THE EFFECTIVE USE OF OPAC BY STUDENTS: A CAESE OF UNIVERSITY OF VENDA LIBRARY.

Please put a cross an (X) to the appropriate answer

### Section A: Biographical Details

#### 1. Age

Less than 20 yrs	
21 to 30 yrs	
31 to 40 yrs	
50 and above	

#### 2. Gender of Respondents

Male	
Female	

#### 3. Position of Respondents

Manager	
Deans	
Director	
Library Team	
Student	

#### 3. Qualification of Respondents

Diploma	
Degree	
Honours	
Masters	
PHD	

## Section B : The Effective use of Online Public Access Catalogue (OPAC)

	<b>The effective use of OPAC use by the students</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
5	There is regular OPAC training for users					
6	There is support by staff at the OPAC search terminals					
7	There is guidance and support at the shelves					
8	There are OPAC terminals in the library					
9	Books are well organised at the shelves					

	<b>User Preferences about OPAC Interface</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
10	OPAC interface is what users want when searching for books					
11	OPAC is easy to use options when searching for books					
12	With OPAC is easy to find a book.					
13	OPAC options are more preferred by users than Google search engines					
14	Users prefer spell checking OPAC Interface					

	<b>User behaviour about OPAC</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
14	User like to search from Google than OPAC when looking for information.					
15	Users claims that Google search engines are easy to use than of OPAC					
16	OPAC interface is easily adapted to users environment					
17	OPAC provide space for comments					

	<b>Advanced features of OPAC interface</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Not sure</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
18	Book cover image is important when using OPAC					
19	Spelling suggestion for titles is crucial					
20	Email linked OPAC is useful to users					
21	Suggestion box for the purchase of new books by users should be provided					

Thank you

## INSTRUMENT

### Interview Schedule

#### **An Assessment of the Effectiveness of Academic Library OPAC (Online Public Access Catalogue) by students: A case of University of Venda Library.**

1. How effective is the OPAC system when used by University of Venda students?

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2. What are the user preferences on OPAC system?

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3. What is the cause of user behaviour changes from OPAC to Google search?

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4. Which advanced features do users want to be on the OPAC system?

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Thank You.

The Director  
Library Services  
University of Venda

P/Bag X 5050

Thohoyandou

0950

Dear Madam,

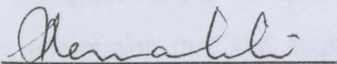
**Dear Respondents**

I Tshililo Violet Nemalili student No: 8703221 a student at University of Venda conducting a study on An **Assessment of the Effective use of OPAC by Students: A case of University of Venda Library**

This is an opportunity for you to be part on the assessment of the library OPAC and the findings of the study will benefit the Library to improve the OPAC

Thanking you in anticipation

Yours faithfully



**T.V. Nemalili**

**Cell No: 071 501 7347**

**Student No: 8703221**

Professor M.P. Khwazheba  
Deputy Dean, School of Management Sciences

Request Approved  
23/11/2019

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The Director  
Library Services  
University of Venda

16.04.2014

Dear Madam

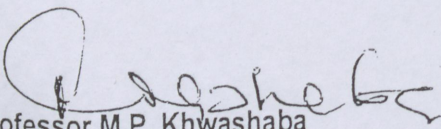
REQUEST FOR PERMISSION TO COLLECT INFORMATION FOR STUDIES (MASTER OF PUBLIC MANAGEMENT: NEMALILI T.V. (STUDENT NO 8703221)

The above matter refers.

We hereby wish to confirm that Nemalili T.V. is a registered Master of Public Management at the University of Venda. She is researching on the following topic: "An assessment of the effectiveness of the academic library Online Public Access Catalogue (OPAC) for students: A case of the University of Venda Library.

In order for her to complete her studies, we request your department to provide her with the information that she might need for her study project. As an institution of higher learning, we believe that the research she is undertaking will yield the results that might also assist your department. We for this reason encourage your department to provide her with the necessary information that will be collected through structured questionnaire and interviews from your department. We undertake that whatever information will be provided to her will be solely used for her studies.

We hope that you will find this to be in order and therefore, anticipate your assistance.

  
Professor M.P. Khwashaba  
Deputy Dean: School of Management Sciences

Request Approved  
Zz c - 21/04/2014



University of Venda