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Building Institutional Repositories in KLISC Member Institutions in Kenya: Current Status and Emerging challenges.

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ABSTRACT

The study was carried out at the Kenya Library Information Services Consortium (KLISC) member institutions. The main purpose was to examine and assess the development of institutional repositories (IR) in KLISC member institutions.

The objectives of the study were to examine the extent to which IR is put into actual practice, evaluate role of KLISC in supporting IR and determine barriers and intervention measures to address the problems. The paper provides useful case study to other consortia who would like to take initiative towards assisting their members to implement repositories.

The study was carried through survey design and the sample constituted 35 respondents from the 75 KLISC members. Data was analyzed using statistical method and presented using tables, and graphs.

The findings show that despite the challenges, KLISC members are committed to IR development and to succeed in this noble project they require considerable support from KLISC, institutional management, and external organizations.

Key Words

Open Access, Institutional repositories, Digital Repository, Consortia, Kenya.

INTRODUCTION

1. Background

With technological innovations over the past few years, the library began to move from being the custodian of books to an intermediary of information resources. The shift has resulted into more innovations such as the Open Access (OA) initiatives. OA involves making resources freely available globally. Berlin Declaration on Open Access to knowledge (2003) states that authors should allow all users the 'free, irrevocable, worldwide, right of access to information'. The United Nation recognized the importance of this right and in 1946, the General Assembly in Resolution 59 (1) resolved that 'freedom of Information is a fundamental human right', an implication that people have a right to access information.

The momentum to embrace OA Initiative in Africa has been building up since the OA movement gained momentum as a worldwide effort to provide free online access to scholarly research. Several institutions have already established Institutional Repositories (IR). According to the World Repository Map, there are approximately 2,075 repositories internationally listed on the Registry of Open Access Repository. Of the 34 African Repositories listed, 25 (62%) are found in South Africa, and only 4 (12%) are found in Kenya.

1.1. IR Concept in Kenya

The concept of OA is still new in most developing countries, and Kenya indeed has embarked in this noble project. Under the Kenya Constitution 2010, the right to Information is enshrined in the Bill of Rights Article 35 where it imposes a duty on the State to publish and publicize any important information affecting the nation. Kenya Legal fraternity has begun an initiative known as Open Access to Public Legal Information to provide access to legal information. Several institutions have established or are in the initial stage of establishing Institutional Repositories. Strathmore University, International Livestock Research Institute (ILRI), and Kenya Agricultural Research Institute (KARI) are already alive on the Internet. To support these initiatives, His Excellency the President Mwai Kibaki launched the Kenya Open data Website (www.opengov.co.ke) in July 2011 under which government agencies submit information to the website as a collaborative platform for providing free and Open Access to public Information.

1.2. Role of Kenya Library Information Services Consortium

The establishment of KLISC was prompted by the move from INASP to stop funding the electronic journals that was launched in 2000 by Programme for Enhancement of Research Information (PERI), hence the need for collective subscription to PERI E-Resources to share costs. Currently KLISC has membership of 75 institutions.

The IR concept gained momentum in KLISC member institution when two members were funded by INASP to attend OA workshop, and later a one week attachment at the University of Pretoria, after which they began rigorous training in OA and IR to sensitize KLISC member institutions. Open Access workshops and conferences have been conducted through the support of Eifl.net and INASP. About 35 of 75 KLISC member institutions have participated in these workshops and conferences and about 30 of those who participated have established or are in process of establishing IR. Most institutions began in small scale hoping to expand gradually in the future.

1.3. Challenges of IR

Kenya like many developing countries is still grappling with challenges in an attempt to establish and open up their repositories to the global world. Policy issues, staffing, infrastructure, promotion and sustainability are some of the challenges facing Kenya.

2. Statement of the Problem

Research and academic institutions in Kenya have come together to form a consortium to support each other in resources sharing and capacity building. All the member institutions have a goal of providing quality scholarly works to their researchers. There is hence need for research output to be captured, preserved and disseminated to address development issues in Kenya. Unfortunately, this is not so, for in many institutions, research articles, conference proceedings and theses and dissertations are locked out in closed access area where only a few can access.

It was realized that a product has no good to a customer if it is not readily available when and where it is wanted. There is

hence need for proper ways to manage, preserve and disseminate local content to enhance resources sharing for development. This can be effective through the establishment of IRs so that users can access valuable local content remotely for scholarly enhancement and national development.

The aim of the study is to assess the extent to which IR has been established to capture local content, the role of KLISC in supporting the establishment, and the challenges and intervention measures. The research seeks to evaluate the extent to which the Institutional Repository (IR) concept is put into actual practice at KLISC member institutions in Kenya; determine the role of KLISC in supporting the establishment of IR in Kenya, and establish barriers to effective establishment and development of IR in Kenya and recommend for intervention measures.

METHODOLOGY

3. Research design

The study adopted case study approach that investigated the prospects of establishing IRs in Kenya to enhance access and sharing of information. Orodho (2003) describes a case study as an approach to seek to describe a unit in detail, in context and holistically. This method brought out deeper understanding of the development of repositories in Kenya and in developing countries in general.

The fieldwork concentrated on KLISC member institutions, focusing on developing of IRs and the challenges involved. The study population included staff directly involved in IR initiatives. These were targeted because they are conversant with the IR concept.

3.1 Sample size

The researcher used stratified sampling to come up with two strata for those who have attended KLISC trainings in OA, and those not trained. According to Frankfort-Nachmias (1996) the researcher can select a percentage of the population at hand to get a sample size suitable for the study. Since the researcher's main objective was to find out the extent to which IR has been established in Kenya, judgmental and random methods were used, and 85% (30 respondents) of sample trained, and 13% (5 respondents) of the sample not trained were selected. Hence the total sample size added up to 35 respondents.

3.2 Data Collection Procedures

The researcher used unstructured open-ended questions to give respondents freedom to express their views, and structured closed-ended questions. Response rate was 74%. Of the 35 questionnaires sent to respondents, 26 were filled and emailed back to the researcher, while 9 questionnaires were not returned.

3.3 Data Analysis

Analysis of data involved preparation of mean, and percentages that were presented in the form of graphs, pie charts, and tables to tabulate data.

QUESTIONNAIRE RESULTS AND ANALYSIS

The chapter presented discusses the analysis of the questionnaires to determine the establishment of IR as per the objectives.

4 Response rate

Of the 35 questionnaires distributed to respondents, 26 returned completed questionnaires, an impressive response rate of 74%, an indication of significant interest in developing Institutional Repositories (IR)

4.1 Part A: General Information

This part was designed to cover general information about the respondents.

The respondents in this study were selected from various types of libraries to ensure data reliability. Of the 26 respondents, 11 (42.3%) were from public institutions, 11 (42.3%) from private institutions, and, 4 (15.4%) from research libraries, a balanced representation of the KLISC members

The respondents were asked to indicate their designation. Out of twenty six respondents, 21 (81%) were senior librarians, 3 (12%) were in the middle grades while only 2 (7%) were in the lower cadre of staff. Lovelock (1996) indicates that professional qualification is an important element in providing effective quality services, but as the profession develops, it is mandatory for librarians to acquire ICT skills to spearhead ICT related project such as IR projects.

4.2 Part B: Extent to Which IR is put into actual Practice in Kenya

This section deals with objective one, which establishes the extent to which IR is put into actual practice in Kenya.

4.2.1. IR establishment

The respondents were asked if they have established an IR in their institution. The results indicated that 17 (65%) institutions have embraced or are in the process of establishing IR in their institutions, while 9 (35%) have not established IR.

Among those not established IR, they were further asked if IR is in their Library Strategic Plan. 7 (78%) responded yes, while only 2 (18%) responded no, an implication that the 7 (78%) who have included IR in their strategic plan will definitely establish IR in future. Those who claimed to have no plan for IR establishment gave several reasons as listed below.

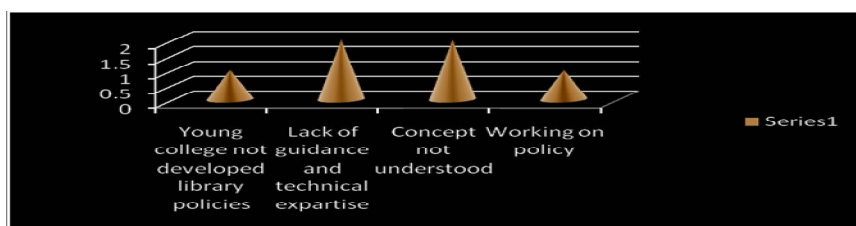


Figure 2: Reasons for not developing IR: Source: Field data

These findings indicate that with more guidance and sensitization on the benefits of IR, most KLISC institutions will be willing to embrace the IR concept.

4.3.2. Open Access Policy (OA) and IR

The respondents were asked to indicate if they have IR policies in place. Of the authorities responding, just 6 (23%) claimed to have a policy, while 20 (77%) claimed they had no policy. This is worrying that so few institutions recognize the need for formulation of IR policies to regulate good practice in the development of IR. Without a policy the project will definitely not succeed. It is encouraging that though 20 (77%) claimed they did not have a policy in place, a number noted that it was under development.

4.3.4. The Software used for the development of IR

The respondents were asked to indicate the type of software used, and 15 (57%) indicated that they were using Dspace, followed closely by Greenstone with 10 (38%), and others with 1 (5%). Having conducted several workshops in Dspace and Greenstone in 2009 and 2010, it was not surprising that the two software were the most preferred. This is an indication that training is an important factor in influencing choice.

4.3.5. IR Progress in KLISC Member Institutions

Respondents were asked to indicate their progress in the implementation of IR. It was found out that majority of the respondents are in the process of customization and submission and only 5 (19%) are on intranet and 3 (10%) are alive on the web, hence need for technical support to complete the installation process.

4.3.6. Contents/Collections Submitted in IR

The respondents were asked to indicate the kind of content deposited in their IR and response shows high preference for theses and dissertation as the figure indicates below. This is an indication that there is need to work on policy issues regarding theses and dissertation to allow submission and access to local content.

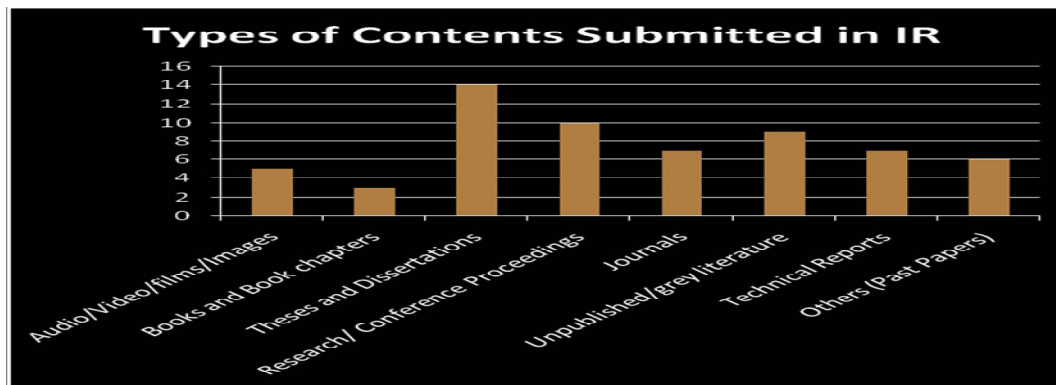


Figure 5: Content Submitted in IR: Source: Field data

4.3.8. Library Management Support for IR

	Excellent	Good	Fair	Poor	No Response	Total
Adequate Computer hardware	4	8	14	-	-	26
Adequate computer software	3	10	10	3	-	26
Adequate personnel for submission and digitization		11	9	6	-	26
Adequate scanners for digitization		5	5	16	-	26
Strategies to promote the service		7	12	3	4	22
Sustainability (Budget for the infrastructure)		4	7	10	5	21
Deal with licensing and copyright issues	2	3	5	13	3	23

Table 2: Library Management Support: Source: Field data

The table generally indicates that equipment such as scanners for digitization; IR sustainability and copyright are serious issue affecting the development of IR in most of the institutions. It was found out that the library management concentrates more on provision of computers more than other issues, hence affecting the development of the project.

4.4. Part C: The Role of Kenya Library Information Services Consortium (KLISC) In Supporting the Establishment of IR In Kenya

Section C was designed to find out the respondents opinion on the role of KLISC in supporting member institutions to establish IR.

4.4.1. KLISC Support in IR Development

The respondents were asked to indicate support of KLISC in IR project stipulated in their objective of supporting the development of local content. The responses were indicated as below:

Role	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Total No. of respondents
	%	%	%	%	%	%
Workshops sensitization for staff	4	4	0	35	57	100
Workshops to sensitize researchers and authors	24	18	40	11	7	100
Facilitation software training for staff	4	4	15	39	38	100
Provide leadership role in setting up of IR	10	11	26	35	18	100
Provide forum for local discussion group to share skills on IR	7	7	16	43	27	100
Facilitate cooperative purchasing of relevant equipment to share cost	54	23	23	0	0	100
Facilitate in forming advisory committee for IR	19	24	46	11	0	100
Provide leadership role in formulation of IR policies	27	31	35	7	0	100
Facilitate in promotion of IR in Kenya	7	7	28	47	11	100
Mean %	17	14	25	26	18	100

Table3: IR Support by KLISC: Source: Field data

With a total mean of 15 (56%) indicating strongly disagree, disagree and neither agree nor disagree, the result above reveal that there is a lot KLISC can do to support the IR project apart from the support they give for E-Resources. This may involve sharing costs in purchasing relevant equipment for member Institutions, which respondents indicated 20 (77%) strongly disagree and disagree. There is also need to facilitate sensitization for authors and researchers for as Barton (2004) indicated, academicians have to hear about a service many times over a period of time and from several sources before they embrace it. The overall findings of the role of KLISC in supporting IR indicate that KLISC supports development of IR but to a little extent.

4.4. Part D: Section D of the questionnaire sought to find out barriers affecting the establishment of IR in KLISC member institutions and the intervention measures

4.5.1. IR Awareness by high level management

The respondents were asked to give their opinion on how much the high level management in their institution understands the importance of IR. Majority of 11 (42%) felt the management know little, 7 (27%) indicted fairly well. Of the remaining, 2

(8%) declined to answer, and 6 (23%) indicated very well. Among those indicated very well, 4 (70%) were from private universities and research institutions. The result generally indicates that top level management understands little about the importance of IR.

4.5.2. Establishment of Committees to oversee the development of IR

The respondents were asked if management committee is in place to look into issues regarding the development of IR in their institutions. Of the respondents 13 (50%) indicated no, 9 (35%) indicated yes, while 4 (15%) declined to answer. This finding indicates that half of the institutions do not have a committee in place. This finding is not surprising bearing in mind that various issues concerning IR have not been adequately addressed hence derailing its development.

The respondents were further asked if they think IR establishment is important in their institution, 26 (100%) responded yes. The respondents were further asked to give reasons for their answer and the range of comments which accompanied this answer suggests that respondents appreciate the need for IR despite the challenges.

Reasons	Total No. of respondents: 26	%
Pro-active response to OA Movement	16	61
Support Information needs	13	50
Improve access to Institutional publications	15	58
Preservation of local content	21	81
Visibility of research output and institution	20	77
Resources sharing	20	77
Enhance research by reducing duplication	11	42
Attract research funding	9	35
Enhance networking among scholars	9	35

Table 5: Reasons for IR establishment: Source: Field data

4.5.4. Problems encountered in the establishment of IR

There were several comments written by the respondents to show the problems encountered in the development of IR as indicated in the table below.

Challenges	Total No. of respondents: 26	%
Lack of facilities/infrastructure	22	85
Copyright issues	24	92
Lack of technical expertise/inadequate staffing issues related to understaffing	18	
Lack of high level management support	21	81
Lack of understanding of the importance of the concept	12	46
Finance/proper funding	15	58
Fear of exposure of intellectual work that will be rated globally	6	23
Lack of prioritizing IR in library activities	23	88
Poor sensitization	21	81

Table 5: Challenges: Source: Field data

24 (92%) of the respondents consider copyright issues as the major constraint. 22 (85%) experience difficulties in issues concerning infrastructure. Lack of prioritization of IR in library activities was also cited by 23 (88%) of the respondents, indicating the need to embrace IR as a core activity in the library to place proper structures to support it. Library management needs to target the top level management to ensure proper support in all areas in the implementation of IR.

4.5.6. How Constraints could be addressed

The study set out to elicit solutions from the respondents as to how these barriers might be overcome. Their suggested solutions are enumerated below.

Solution 1: Management Support

- Proper staffing structure
- Considering IR as one of the core-activities in the library and place proper structure to support it
- Include IR in the library strategic plan for budget implications, staffing and sustainability
- Put up committees to develop IR policies that should include high level management, legal officers, Board of postgraduate, researchers, lecturers, and postgraduate student representative
- Ensure research carried out within institution's funding or funding from other bodies

Solution 2: Support from KLISC

- Spearheading for follow-up training in IR software for KLISC member institutions
- Follow-up visits to institutions that have developed or are in the process of developing IR to support them
- Provide forum/discussion groups for librarians/ICT specialists to share skills and discuss issues related to IR.
- Facilitate attachments/visits in institutions that are well established in IR so as to learn from each other.
- Facilitate in the sensitizing of KLISC member policy makers through conference or workshops so that they can understand, appreciate and support IR initiatives within their institutions. The conference/workshop should be attended strictly by head of institutions.
- Model sample policies which others can customize
- Facilitate in joint purchasing of equipment such as automatic scanner to be used by the members

SUMMARY, CONCLUSION AND RECOMMENDATIONS.

5.0. Summary and Conclusion

Conclusion of the study is based on the research questions. Establishment of IR is generally influenced by factors such as management support and KLISC support.

It was found out that each institution has a responsibility to ensure the development of IR. The Library must take the responsibility to sensitize top level management to gain support. The management needs to support IR in policy formulation and sustainability.

Secondly, KLISC can enhance its role in supporting member institutions to establish IR. It could be argued that at least KLISC member institutions are not dissatisfied with its performance regarding IR support but suggest for more support. On the other hand KLISC role should be to ensure that members are all on board in regards to IR.

5.1 Recommendations

Lack of government framework and policy regulations to guide institutions made researchers unwilling to share research information online. For radical improvement it would be necessary to have more backing from the government, preferably to the extent of developing an Open Access policy for the country for institutions to gain government support. The government of Kenya should be at the forefront to initiate Open Access project and to provide an enabling environment for such projects.

In the short term, however, the following recommendations should be carried out by the library authorities, Institutional high level management and KLISC.

5.2.1. Establishment of IR in Kenya

Regarding establishment of IR, the libraries need to involve the senior level management staff to gain their support. For them to convince the top management they need to come up with a proposal and aggressively justify the importance of IR within the institution

The library should put in place modalities concerning staffing structure/policy to ensure IR unit has adequate trained staff to devote time to IR related issues. The library needs to include IR in their performance contract or Library Strategic Plan to ensure budget allocation.

The library should lobby for the formation of a committee that comprises the legal officer, Board of Postgraduate, Library Management and other top management to oversee the establishment of IR.

It is the library's responsibility to sensitize staff, authors and researchers on the importance of IR to ensure support from all areas.

Regarding promotion, apart from workshops, direct marketing can also be used to promote and sensitize researchers, authors, faculties, and users. This can be done by embracing the use of e-mail, list serve, telephone and word of mouth, and use of web 2.0. Just as money is allocated for other activities, money should be allocated for promotional activities such as user awareness day, workshops for researchers.

On the other hand, the institutional management must ensure proper infrastructure is in place to enhance IR development. Equipment such as scanners, adequate computers, and software must be included in the library budget.

5.2.2. Role of KLISC

KLISC should take the leadership role to support their member institutions in development of the IR. The consortium should be more innovative so that they not only provide E-Resources but also support their member institutions in innovative projects such as the IR project. They should get ways of responding to the challenges facing IR in Kenya, that is, infrastructure, policy issues, training, and sensitization. KLISC can mobilize resources from members, and solicit for funds from International organizations through proposals. The funds can be used for training, purchasing of equipment such as quality automatic scanners are beyond reach of many institutions. This could be done collectively and placed at a central position where any institution that needs to use it may collect from the central area.

Apart from training, KLISC can go beyond to provide follow-up visits to support institutions in need or to assess the impact of the training. In a situation where an institution needs support, KLISC should be in a position to facilitate attachment/visits to institutions that are well established so that the members can learn from each other

By taking the leadership role, KLISC can facilitate the sensitization of top government officials and member policy makers through national conferences to help them understand appreciate and support IR initiatives.

5.3. Recommendation for further research

This was a survey of the establishment of Institutional repositories in Kenya: current status and emerging challenges. The researcher recommends a study that involves all institutions in Kenya irrespective of whether they are members of KLISC or not so as to get a true picture of IRs in Kenya.

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APPENDIX

DEAR RESPONDENT

I am a staff at the University of Nairobi Library. I will be presenting a paper on the development of Institutional Repository in Kenya at ETD 2011 Conference at Cape Town in South Africa. The paper is entitled 'Building Institutional Repositories in KLISC Member Institutions in Kenya: emerging challenges'.

The aim of the paper is to assess the progress of IR and the role of Kenya Library Information Services Consortium (KLISC) in supporting the establishment of IRs in Kenya. The study has been motivated by the fact that there is need for Institutions in Kenya to embrace IR concept to capture and share their local content.

The information you provide will be exclusively treated as confidential



Rosemary Otando
University of Nairobi

QUESTIONS

PART A: GENERAL INFORMATION

1. Please indicate the name of your institution-----

2. Please put an **X** at your type of institution in the table below:

Public University	
Private University	
Tertiary College	
Research Institution	

3. What is your designation -----

PART B: EXTENT TO WHICH IR IS PUT INTO ACTUAL PRACTICE IN KENYA.

Please put an **X** as appropriate

4. Has your institution established/developed an Institutional Repository (IR)?
 - a. Yes
 - c. No

If No, is the IR included in the Library Strategic Plan?

- a. Yes
- b. No

If no, why -----

5. If you answered 'a' in question 4, please tick as appropriate

Do you have a written policy regarding 'Open Access' and 'IR'?

- b. Yes b. No

If No, state why -----

6. Please put an **X** next to the Software used in the development of IR in your institution

- a. Greenstone
- b. Dspace
- c. E-prints
- d. Other Open source software, specify _____
- e. Commercial software, specify _____

7. What are the contents/Collections in your IR? **Tick all that apply**

- a) Audio/Video/films/images
- b) Books and book chapters
- c) Theses and dissertations
- d) Research articles and conference proceedings
- e) Journals
- f) Unpublished/grey literature
- g) Others, specify

8. In what stage are you in the establishment of IR? **Put an X to all that apply**

Installation	
Customization	
Submission	
Alive on the Intranet	
Alive on the Web	

9. To what extent has the library management supported the IR project in terms of the following services/facilities?

	Excellent	Good	Fair	Poor
Adequate computers hardware				
Adequate computer software				
Adequate personnel for submission and digitization				
Adequate scanners for digitization				
Strategies to promote the service				
Sustainability (Budget for the infrastructure)				
Deal with licensing and copyright issues				
Others, specify				

PART C: THE ROLE OF KENYA LIBRARY INFORMATION SERVICES CONSORTIUM (KLISC) IN SUPPORTING THE ESTABLISHMENT OF IR IN KENYA

10. Please rate each statement below using a 5 point scale, whereby 5 means you 'strongly agree', 4 means you 'agree', 3 means you 'neither agree nor disagree', 2 means you 'disagree', and 1 means you 'strongly disagree'

KLISC has supported my institution in the establishment of IR in the following areas;

No	Role	01: Strongly disagree	02: Disagree	03: Neither agree nor disagree	04: Agree	05: Strongly agree
1	Workshops/ training to sensitize staff on IR concept					
2	Workshops to sensitize researchers and authors on IR concept					
3	Facilitation of IR software training for staff					
4	Providing leadership role in the setting up of IR					
5	Provide forum for local discussion group to promote common interest in the development and sharing of skills in matters concerning IR					
6	Facilitate cooperative purchasing of relevant equipment to share costs					
7	Facilitate in forming of advisory committee to provide advice on matters relating to IR and IR software					
8	Provide leadership role in facilitating of formulation the IR policies					
9	Facilitate in promotion of IR in Kenya					

PART D: BARRIERS TO EFFECTIVE ESTABLISHMENT OF IR IN KENYA AND THE INTERVENTION MEASURES TO ADDRESS THE PROBLEM

Please put an X as appropriate

11. In your own opinion, how well does the high level management of your institution understand the importance of IR
 - a. Very well b. Well Fairly well Little Not at all
12. Library management has put up a committee in place to look into issues regarding the establishment and development of IR in your institution
 - a) Yes b) No
13. In your own opinion, is the establishment of IR in your institution necessary?
 - A) Yes b) No

Give reasons -----
14. Kindly enumerate the major problems you encounter that hinder the establishment and development of IR in your institution
 - a.
 - b.
15. Kindly suggest how the above constraints could be addressed