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Monitoring and Evaluation of electronic resources in Academic and Research Institutions in Kenya

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MONITORING AND EVALUATION OF ELECTRONIC RESOURCES IN ACADEMIC AND RESEARCH INSTITUTIONS IN KENYA

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   • Agatha Kabugu, University of Nairobi

Lastly, we offer our regards and blessings to all of those who supported us in any respect during the completion of the project.
ACRONYMS AND ABBREVIATIONS

AGORA - Access to Global Online Research in Agriculture
AIM - African Index Medicus
AJOL – African Journals Online
AKU - Aga Khan University
EU - Egerton University
HINARI – Health InterNetwork Access to Research Initiative
ICIPE - International Centre of Insect Physiology and Ecology
INASP – International Network for the Availability of Scientific Publications
JKUAT - Jomo Kenyatta University of Agriculture and Technology
KABU - Kabarak University
KENET - Kenya Education Network Trust
KLISC - Kenya Libraries and Information Services Consortium
MEDLINE - Medical Literature Analysis and Retrieval System Online
MEERU - Monitoring and Evaluation of Electronic Resource Usage
M&E - Monitoring and Evaluation
OARE - Online Access to Research in the Environment
PERii – Programme for the Enhancement of Research Information
UoN - University of Nairobi
USIU - United States International University
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1.0 INTRODUCTION

The revolution of Information Communication and Technology has brought a great change in the way libraries are providing services. Libraries have continued to embrace these technologies vis-à-vis Internet thus seeing the introduction of electronic resources to the library collection and services. The availability of good internet connectivity is essential in the provision of electronic resources. Kenya has had internet since 1996 (Mutula, 2001) and over the years there has been great effort to improve connectivity such as the recent introduction of fibre optic cable in 2009. The need for good internet connectivity has also been supported by initiatives such as Kenya Education Network (KENET) whose aim is to enhance internet access for Kenya Universities (Odero-Musakali & Mutula, 2007).

With the advent of internet and subsequently an emergence of electronic resources, libraries have encountered a myriad of challenges ranging from collection management, cost of the resources, marketing of these resources, training users on how to use these resources among others. These are some of the challenges that saw libraries in Kenya come together in 2002 to discuss concerted efforts to overcome these challenges. In response to this, Kenya Libraries and Information Services Consortium (KLISC) was formed in 2003. Cost being a major challenge for sustainability of electronic information resources (e-resources) which continue to inflate every year, KLISC’s main objective therefore was cost sharing and capacity building (Ouma, 2007). According to a survey carried out by (Ouma, 2007) KLISC has made great strides in alleviating these challenges and this has translated into better services offered by KLISC member libraries.

1.1 ELECTRONIC RESOURCES (E-RESOURCES) IN KENYA

There have been a number of e-resources initiatives available for Kenyans. Some have been free and others offered at subsidized costs through support from funders. Some of the initiatives that Kenyans have been able to exploit over the years include: HINARI, OARE, AGORA, AJOL, AIM, Medline, and PERii among others. It is known that donor funded projects could come to an end once the donors stop funding and therefore the consortium has been a very important model for sustainability of such resources.

1.2 THE STUDY

As earlier pointed out, the provision of e-resources does come with a lot of challenges. One way to identify these challenges and also identify ways to improve these services is through Monitoring and evaluation (M&E) (Rosenberg, 2008). M&E is an important tool for decision making and also for the purpose of evaluating the impact of these resources on user population. The advent of e-resources has also seen the need for libraries to re-strategize services such as training and marketing. Monitoring and evaluating the impact of such services on e-resources is therefore vital.

Three Monitoring and Evaluation of E-Resources and Usage (MEERU) workshops provided through the collaboration of KLISC and INASP: PERii have since been conducted in Kenya, and attended by nominees from different institutions countrywide. Though a few libraries have made an attempt to evaluate the utilisation of e-resources through in-house data from the reference desk and the publishers’ statistics data, there has not been a single national survey
conducted to measure the use of electronic resources or assess factors hindering its usage. As a result very little if any, is known on usage, the users or factors influencing its usage.

The focus for this study was agreed during the initial meeting of a KLISC and INASP: PERii collaborative M&E capacity enhancement project. Selected in order to address an evident lack of hard evidence, the project aimed to evaluate the extent of usage of electronic resources and the impact of marketing and training activities on the usage. The survey was also designed to give users the opportunity to give their perspectives on use of the resources and the challenges they encounter in doing so. The survey aimed at answering the following questions:

1. What is the extent of usage of e-resources?
2. What is the impact of training on the usage of e-resources?
3. What is the impact of marketing on the usage of e-resources?
4. What challenges do users encounter when using e-resources?
2.0 METHODOLOGY

2.1 SURVEY DESIGN
The study used a mixed method design to evaluate the access and use of electronic resources at academic and research libraries in Kenya. Open ended and structured questionnaires were used together with an interview schedule and observation.

2.2 POPULATION
7 KLISC member institutions were selected for this study carried out between November 2010 and February 2011. Table 1 provides a list of the institutions.

Table 1: Institutions that participated in the survey

<table>
<thead>
<tr>
<th>NAME</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Aga Khan University</td>
<td>AKU</td>
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<tr>
<td>Egerton University</td>
<td>EU</td>
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<tr>
<td>Kabarak University</td>
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<td>International Centre of Insect Physiology and Ecology</td>
<td>ICIPE</td>
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<tr>
<td>Jomo Kenyatta University of Agriculture and Technology</td>
<td>JKUAT</td>
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<tr>
<td>University of Nairobi</td>
<td>UoN</td>
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<tr>
<td>United States International University</td>
<td>USIU</td>
</tr>
</tbody>
</table>

Management staff, Faculty, non-teaching staff, researchers, scientists, postgraduates and undergraduates students formed the target population. The study used a variety of tools including questionnaires (online), interviews and personal observation to collect both qualitative and quantitative data.

2.3 SAMPLE SIZE
The survey adapted the purposive/convenience sampling method to select the respondents. Approximately a thousand emails were sent out via respective institution’s broadcast mail list to all students and staff. Through purposive sampling technique one Librarian, 1 Administrator, 1 faculty, 1 staff and 10 students (postgraduate and undergraduates) were selected to be orally interviewed.

2.4 SURVEY INSTRUMENTS
An online questionnaire with both closed and open ended questions was used for data collection. An interview schedule for the administrator, librarian, faculty and staff and students was prepared.

Both research tools were aimed to collect data on;

i. Resources used in the library
ii. Access and awareness of the electronic resources
iii. Frequency in use of the PERii resources
iv. Training in use of resources
v. Marketing and promotion and
vi. Challenges and suggestions to enhance access and use of the e-resources

The survey was designed using Survey Monkey, an online survey tool. It was administered by sending emails to the respondents with an enclosed link to the online survey, posted on the Library’s Social media channels and use of flyers.

2.5 DATA COLLECTION PROCEDURES

The survey used primary data collected from various categories of users via an online open and closed ended questionnaire and interview schedule. Through a link from the Survey Monkey online research tool, the questionnaire was emailed to the respondents and responses were automatically collected. Other selected participants were visited and interview conducted.

2.6 DATA ANALYSIS

Survey analysis was done using the online Survey Monkey research tool and Microsoft Excel. Results were downloaded and presented in bar graphs, tables and pie charts for easy interpretation

This report provides main findings from the survey.
3.0 FINDINGS AND DISCUSSIONS

3.1 DEMOGRAPHICS

The following institutions participated in this study:

Table 2: Number of participants for the online survey

<table>
<thead>
<tr>
<th>Name</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>AKU</td>
<td>59</td>
</tr>
<tr>
<td>EU</td>
<td>164</td>
</tr>
<tr>
<td>KABU</td>
<td>108</td>
</tr>
<tr>
<td>ICIPE</td>
<td>28</td>
</tr>
<tr>
<td>JKUAT</td>
<td>124</td>
</tr>
<tr>
<td>UoN</td>
<td>214</td>
</tr>
<tr>
<td>TOTAL</td>
<td>697</td>
</tr>
</tbody>
</table>

Table 3: Number of participants interviewed

<table>
<thead>
<tr>
<th>Institution</th>
<th>Administrator</th>
<th>Library Administrator</th>
<th>Library Staff</th>
<th>Teaching Staff</th>
<th>Students</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>AKU</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>EU</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>KABU</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>ICIPE</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>JKUAT</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>10</td>
<td>18</td>
</tr>
<tr>
<td>UoN</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>USIU</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>7</td>
<td>21</td>
<td>18</td>
<td>59</td>
<td>111</td>
</tr>
</tbody>
</table>
The following were the responses according to their categories:

![Pie chart showing response rate by category]

**Figure 1: Response rate by category**

The data here indicates that the majority of respondents were under-graduate students; probably because they form the majority population or they are easily available on campus as compared to the other groups.
3.2 FINDINGS ON THE EXTENT OF USAGE
The respondents were asked to choose their favorite resources from a choice of print and non print resources. Across the 6 institutions, print materials appeared to be very popular. These could be attributed to the problems highlighted later in the report with regard to access, facilities and skills.

![Figure 2: Comparing Books and e-Journals usage](image)

Further investigation on electronic journals (e-journals) usage indicated that 84% of respondents have used them (see figure 5).

**What does the popularity of books to e-resources suggest?**

Having indicated that access to computers as a major hindrance to access to e-resources; it is no wonder that print books were popular. Electronic resources require ICT infrastructure which includes steady and reliable internet connectivity and computer terminals; which in this case were not put in place.
The survey revealed that even though some usage is recorded, most respondents were not aware of the full range of electronic resources offered in the institutions (18%). It identified a number of barriers to usage of electronic resources; 6 common reasons were highlighted for not using e-resources and are captured in the following graph.
Figure 4: Common barriers to usage of e-resources

From the data, it appears that lack of access to computers workstation and poor connectivity are the most common hindrances to usage of e-resources. These seem to have played a great role in low usage of e-resources.

Although not analyzed to establish correlation in this study, from the feedback collected it is apparent that the level of institutional support invested in the library and the level of ICT services available varies considerably across the respondent institutions.
Figure 5: PERii Kenya databases usage by survey respondents
Oxford, JSTOR, Cambridge, Emerald appeared to record high usage (17%, 13%, 14% and 17% respectively), while specialized databases were least used and in some of the institutions never used. An interesting but predictable trend can be identified here, with the least used databases and or publishers being specialized databases. We can conclude majority of users at the level of respondents to be more interested in the generic (multi-disciplinary) database and for libraries to proportionally emphasize generic databases in their promotional activities’. This would however first require further analysis at an institutional level as majority of respondents not yet studying at a post doctoral level of specialization and focus of the individual institutions not linked to this study.

### 3.3 FINDINGS ON HOW TRAINING IMPACTS ON USAGE OF E-RESOURCES

The researcher sought to know if the respondents have ever been trained on use of electronic resources. Searching skills are vital for effective use to be registered; 55% indicated they had received training, while 73% who had not been trained cited lack of awareness as the prime reason as to why they have never attended to any training programmes. Others reasons given for not being trained includes:

- No trained personnel in my opinion, lectures aren’t committed
- Got a good background in access and use of electronic resources
- Have not been given the opportunity
- The e-resource could not be accessed through the egernet (intranet)
- Not in our curriculum, not aware of training sessions, it is not incorporated in our course
- Training not available
- Self learning
- Lack of advertisement
- Already familiar with use
- Not informed on availability of resources
- When and where are these trainings done?
- Interested but I have never been given the opportunity
- Self trained
- Didn’t know where to get the training
- This is very basic knowledge from where I come from
- I’m fairly competent
- My class was not interested, though I was
- No one ever announced such a training
- “Sijapata nafasi ya kwenda to the library (I haven’t gotten time to visit the library) to get informed about the electronic resources available”
- Taught myself
- Should be mandatory to new students
- Our entire class of MBA evening class was never informed
- Resources self explanatory on the website
- Attended similar training elsewhere

Majority of the respondents (66%) alluded that training had enhanced their access and retrieval skills, were thus able to do it with much ease. 45% thinks that as a result of trainings their
academic outputs have greatly improved. Electronic resources training has also facilitated better referencing skills according to 42% of the respondents.

![Figure 6: The training impacts on usage of e-resources](image)

It is interesting to note that when the respondents were asked which mode of training was most effective, a majority rated trainings by librarians very highly.

**Can this tell of the level of confidence library users have on the librarians?**

The data suggests “yes”. This is evident from the following comments from respondents:

> “Improved my ability to network with professional colleagues”

> “Able to assisting users”

> “Led to efficiency in my work performance”

Holistic training programme depends on other factors like content, searching skills, citation and referencing, facilitation, facilities and schedules. Interestingly enough, the respondents were much concerned with availability of facilities when asked what areas they would want improved or initiated than even the content or schedules, a 52% response attest to this. The other concern was the levels of searching skills. 47% indicate the need for such skills to be imparted.
 Does it mean that formalized training sessions should be put in place to enhance the use of electronic resources?

The data suggests ‘yes’. The analysis suggested that regular trainings need be introduced and if possible have Information literacy entrenched in the curriculum. The respondents showed confidence in the librarians’ training; thus they (librarians’) needs to put more effort towards this end. During our interviews with the respondents, they (students) showed keen interest to attending the next training session organized.

This clearly indicates that training activities must form part and parcel of the service in order to make it more effective as opposed to reactive approaches taken by most libraries.

3.4 FINDINGS ON HOW MARKETING AFFECTS USAGE

The findings revealed that most respondents found out about e-resources from the traditional orientation sessions held for new members to the institution. Some respondents indicated that we were hearing of the electronic resources for the first time through the survey, some learned from colleagues, a few from the library web portal/web site, during orientation, from library notices through seminars, word of mouth, from university Open days and exhibitions.

The respondents were asked to suggest ways to improve the marketing of electronic resources. A significant number of respondents were concerned about the inadequate marketing (awareness) aspect; while others believed the answer is in provision of more trainings.

Respondents acknowledged the need for more promotion of e-resources as evident from the number of responses. They suggest the following as ways to improve in marketing:

- Involvement of all stakeholders
- Improve on orientation
- Online advertising/ promotion
- More awareness creation in all university campuses
- Being proactive
- Motivation of marketers
- Liaison with IT department and management for provision of the access point of the electric resources, i.e. computers, internet and intranet

3.5 CHALLENGES EXPERIENCED IN ACCESSING E-RESOURCES

These are some of the significant challenges experienced by the users:

- Inadequate computer in the library
- Poor internet connectivity
- Delays in downloading information
- Poor lighting (ergonomics)
- Lack of support facilities, e.g. printers, limited access rights to some articles
- Lack of skills / training
- Portal not readily accessible. By the way, how do you get to the portal??
- Bulletins and brochures are only available if one physically frequents the library - lots of information
- Doesn’t get through
• Brochures and bulletin require time to read. Time is a scarce resource in the hectic schedule of a doctor
• Resident (no off campus access)
• I could be wrong but I think access to the Library portal is via HN intranet, which limits accessibility
• The library portal is difficult to find the items you want - not user friendly
• I have never received any email stating the updates of library, apart from this one today
• Not aware that there was training available
• Never had any Emails concerning availability and use of facility
• Have not received/seen any other than one bulletin
• We rarely get any bulletins or brochures, please send them via email
• Not readily available
• There should be an orientation lecture to all the new students admitted ...
• It’s hard to get what you want on the portal and the links
• Be more interactive and occasionally enquire from users what problems they encounter and find out who requires further assistance or training
• Access to rights protected journals and back-files
• Referencing tools
• Access to compendiums

In summary the major issues highlighted by the respondents are lack of awareness, poor internet speeds, poor and or inadequate searching skills, inadequate facilities (computer workstations), power surges and off-campus access. Data also provides
4.0 CONCLUSION AND RECOMMENDATIONS

4.1 CONCLUSION
This report will surely make a big difference now and onwards on the Library’s monitoring and evaluation programme. It is the first comprehensive report on usage and access to be undertaken since the library started subscribing via PERii for electronic resources. It is evident that usage is enhanced where awareness levels are high, in this case; data has suggested that the Library needs to do more marketing and or improve its marketing strategies so as to be able to reach out to all its clientele.

The study has shown that training programmes currently in place may not be adequate. Orientation sessions done at the beginning of the semester may not be enough and a great deal of the respondents seems to suggest scheduled, regular trainings be organized.

Despite the need for more online resources the need for the library as a space is still appreciated as users requested for more computers and also more quiet reading space, the data affirms so with a sizeable number picking the Library as the site of choice for access; while some indicated the librarian as the most trusted source of training.

Though there have been notable initiatives to improve internet connectivity in Kenya, the survey shows that connectivity still remains the major challenge. This calls for concerted effort from all stakeholders and policy makers to work towards improving connectivity and the necessary infrastructure.

4.2 RECOMMENDATIONS
In view of this study, the following recommendations are suggested for efficient utilization of electronic resources:

- There is need to design effective marketing and promotion strategies, that should be regular and scheduled to take care of all the target groups
- There is need to design and implement a structured Information literacy programme that targets various user groups that can be integrated in the university curriculum
- Efforts be made towards upgrading and increasing the existing infrastructure (computers, internet bandwidth and skilled staff) for better connectivity
- Concerted efforts be made towards developing and or adopting a federated search application that will enhance searching for the novices to experts
- A sustainable system of monitoring and evaluation be devised so as to make this a day to day work rather than a one off activity. Regular monitoring and evaluation should be
conducted to establish the effectiveness of the electronic resources in meeting user needs and satisfaction

- Increase awareness levels by working with all stakeholders to maximize the usage of these resources
- Increase the number of computers in libraries and departments to facilitate access to electronic resources.

REFERENCES


APPENDIX 2 ONLINE SURVEY QUESTIONNAIRE

1. Data on library use

Thank you for choosing to complete this short questionnaire. The feedback you provide will help us in identifying how we can best support you the user of our library services.

1. Please choose from the following categories to describe your group?

- Research Scientist
- Non Teaching Staff
- Postgraduate student
- Teaching Staff
- Undergraduate student
- Alumni
- Other (please specify)

2. What is your field of interest / Research areas

- Agriculture, Aquaculture & Food Science
- Earth & Environment
- Medicine
- Architecture & Planning
- Humanities
- Nursing, Dentistry & Health care
- Art & Applied Arts
- Law & Criminology
- Physical Sciences & Engineering
- Business, Economics, Finance & Accounting
- Life Sciences
- Social & Behavioral Sciences
- Computer Science & Information Technology
- Mathematics & Statistics
- Veterinary Medicine
- Other (please specify)

* 3. How often do you use the library?

- Daily
- Weekly
- Monthly
- Infrequently
- Never

2. RESOURCES USED

1. Which library resources do you use?

- Print books
- Print journals
- Electronic books
- Audiovisual materials
- Electronic journals
- Other (please specify)

* 2. Do you use electronic resources?

- Yes
- No

3. ACCESS and AWARENESS
1. From which location do you access electronic resources?

- Office PCs
- Library PCs
- Mobile Phone
- Computer Labs
- Cybercafé
- Campus WiFi (Wireless)
- Home

Other (please specify) 

2. If you are not using any of the above resources, please state the reasons.

- Not aware
- Poor connectivity
- Unfriendly interfaces
- Lack of access to computer
- Lack of searching skills

Other (please specify) 

4. ELECTRONIC RESOURCES - DataBases
1. How often do you use the following e-resources?

<table>
<thead>
<tr>
<th>E-Resources</th>
<th>Daily</th>
<th>Weekly</th>
<th>Fortnightly</th>
<th>Monthly</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acoustical Society of America</td>
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<tr>
<td>American Institute of Physics</td>
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<td>American Physical Society</td>
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<td>Beach Tree Publishing</td>
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<td>JSTOR</td>
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<td>Mary Ann Liebert, Inc., publishers</td>
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<tr>
<td>NPG (Nature and Palgrave Macmillan Journals) (as subscribed)</td>
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<td>Organisation for Economic Co-operation and Development Source OECD</td>
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<td>OSA - Optical Society of America</td>
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<td>Oxford University Press - Oxford Journals</td>
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<td>Project MUSE</td>
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<td>Royal College of Physicians</td>
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<td>Royal Society - Royal Society Journals Online</td>
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<td>Royal Society for Chemistry - RSC Journals Archive</td>
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<tr>
<td>Royal Society for Chemistry - RSC Journals Online</td>
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<tr>
<td>Sage Online Journals</td>
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<tr>
<td>Springer</td>
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<td>Symposium Journals</td>
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<tr>
<td>University of California Press - Caliber</td>
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<tr>
<td>University of Chicago Press</td>
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</tbody>
</table>
2. Have you ever been trained on the access and use of electronic resources?
- Yes
- No

5. E-RESOURCES - not trained

1. If not trained on use of electronic resources, please give reasons
- Not aware
- Semester schedule
- Not interested
- Other (please specify)

6. TRAINING

1. If yes, what was the mode of training and how would you rate this training?
   - Lectures
   - Class reps
   - Workshops
   - Through the Librarian
   - Self learning modules (Online Tutorials)
   - Demonstrations
   - Other
   Please specify what "other represents"

2. Has the training improved your ability to access & use electronic resources?
   - Yes - A lot
   - Yes - A little
   - No

3. If trained how has it impacted on your teaching/ learning/ research activities
   - Improvement in information access & retrieval
   - Increased research output
   - Improved referencing skills
   - Improved quality in research output
   - Improved grades (GPA)
   - Other (please specify)
4. What areas would you like improved or emphasized?

- Content  - Facilitation  - Regular training
- Searching skills  - Available Facilities  - Flexible scheduling
- Citation & Referencing  - General Organisation  - Target group

Other (please specify):

5. What areas would you like introduced or initiated?

7. Marketing and promotion

1. How did you learn about the electronic resources and how would you rate effectiveness?

<table>
<thead>
<tr>
<th></th>
<th>Very effective</th>
<th>Effective</th>
<th>Least effective</th>
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</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Library</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Instruction/Workshops/Seminars</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Posters/brochures</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Library portal</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Exhibitions</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Tutors/professors</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>From a friend/colleague</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Emails</td>
<td>○</td>
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</tbody>
</table>

Other (please specify):

2. Suggest ways on how we can improve the marketing of electronic resources.

3. This data is for our records and names will not be shared publicly.

Institution: ____________________________

Library: ______________________________

Your name (optional): __________________

Email Address (optional): __________________

THANK YOU FOR YOUR TIME AND PARTICIPATION.
## APPENDIX 3 QUOTES AND COMMENTS FROM SERVICE USERS

### Table 1:
Respondents who indicated poor for any of the marketing tools were asked to give reasons. The following reasons were provided:

- Portal not readily accessible. By the way, how do you get to the portal??
- Bulletins and brochures are only available if one physically frequents the library - lots of information doesn't get through
- Brochures and bulletin require time to read. Time is a scarce resource in the hectic schedule of a doctor resident.
- The library portal is difficult to find the items you want - not user friendly, not accessible off campus
- I have never received any email stating the updates of library, apart from this one today
- Not aware that there was training available
- Never had any Emails concerning availability and use of facility
- Have not received/seen any other than one bulletin
- We rarely get any bulletins or brochures, please send them via email
- There should be an orientation lecture to all the new students
- Be more interactive and occasionally enquire from users what problems they encounter and find out who requires
- Further assistance or training

### Table 2:
Besides lack of awareness, no computers or poor connectivity, other reasons given for not using e-resources included:

- Require passwords that we do not have to
- Accesses to Wiley Interscience and Springer articles are via HINARI since the two former require membership fee I think. The other 'never' are simply because I am totally unaware of the resource

### Table 3:
The respondents indicated the following problems on accessing online resources/databases:

- Some require subscription
- Occasionally there is no access probably due to poor internet connectivity or issue of subscription
- Password required
- Denied access especially Springer
- Not able to access some articles because the journals are unavailable on Hinari or if they are, they require payment
- Link to Hinari is sometimes erratic. If you want to get online journals from other sources the websites are blocked by the hospitals firewall.
- Not able to access a lot of the surgery and critical care journals that I need.
- Lack of access to computers(not enough), do not know how to use them, username and password d unable to access, not easy to open
- A few weeks back, Hinari was not accessible but its good now.
- There are no instructors available always
- Lack of adequate experience on how to search
APPENDIX 4 INSTITUTIONAL VISITS-INTERVIEW QUESTIONNAIRES

Teaching staff

1) What is your field of interest / research areas?
2) Which library resources do you use?
3) Do you use electronic resources?
4) If No, please state the reasons
5) If yes, from which location do you access electronic resources?
6) Have you had training on use of electronic resources?
7) If trained, how has it impacted on your teaching and research activities?
8) What are the major challenges you have experienced in accessing or using the Library's Electronic Resources?

Students

1) What is your field of interest / Research areas?
2) Which library resources do you use?
3) Do you use electronic resources?
4) If No, please state the reasons
5) If yes, from which location do you access electronic resources?
6) Have you had training on use of electronic resources?
7) If trained, how has it impacted on your learning and research activities?
8) What are the major challenges you experience in accessing or using the Library's Electronic Resources?

Administrators

1) What percentage of the budget is allocated to the Library?
2) Has Library Information Literacy been entrenched in the curriculum?
3) What is the role of management (administration) in supporting Information Literacy programmes?
4) How would you rate the IT infrastructure in your organization/institution (Poor – Fair – Good – Excellent)
5) (Based on the answer above) Kindly explain what your administration is doing to sustain and enhance it?

Library Administration

1) Do you have any training programmes on access to e-resources?
2) What strategies are in place to promote e-resources?
3) How would you rate the IT infrastructure in your organization/institution (Poor > Fair > Good > Excellent)
4) (Based on the answer above) Kindly explain what you are doing to sustain and enhance it?
5) What efforts have you put in place to enhance Library staff ICT skills?

Library Staff

1) Are you aware of e-resources?
2) Are you aware of any training programmes of Library Electronic resources? (ask if they were for the students or staff)
3) Do you participate in the training programmes
## APPENDIX 5  SUMMARY INTERVIEWS AND OBSERVATIONS

<table>
<thead>
<tr>
<th>QUESTIONS</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your field of interest / Research areas?</td>
<td>Engineering</td>
<td>N/A</td>
<td>Seed science, Physics, Education, Natural resources, Language, Literature &amp; Linguistics, Ecology and management of arid areas</td>
<td>Computer Science, Small Business management, Education Management</td>
</tr>
<tr>
<td>Which library resources do you use?</td>
<td>Books, journals (print)</td>
<td>Books, Print journals, Electronic journals, CD-ROM, Newspapers, Conference proceedings</td>
<td>Online journals, books, newspapers and internet</td>
<td></td>
</tr>
<tr>
<td>Do you use electronic resources?</td>
<td>Not yet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If No, please state the reasons</td>
<td>Never took the initiative to learn</td>
<td>Not aware of training sessions, Lack of time, Busy Schedule of work</td>
<td>Some are never accessible beyond the office</td>
<td></td>
</tr>
<tr>
<td>If yes, from which location do you access electronic resources?</td>
<td>N/A</td>
<td>Library Resource centre, Computer lab, Faculty computer labs, Personal laptops (LAN enabled), Cyber cafe</td>
<td>Office PCs &amp; at Home</td>
<td></td>
</tr>
<tr>
<td>Have you had training on use of electronic resources?</td>
<td>Not yet</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If trained how has it impacted on your teaching and research activities?</td>
<td>Able to conduct online searches with minimum assistance, Improve research outputs, Supplement lecture notes</td>
<td>I am able to prepare timely work plans, notes, Access to current and reliable literature related to my area, I am able to</td>
<td>Able to conduct online searches with minimum assistance, Improve research outputs, Supplement lecture notes, Assist in my</td>
<td></td>
</tr>
</tbody>
</table>

28
<table>
<thead>
<tr>
<th>Question</th>
<th>Challenge</th>
<th>ICT skills</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What are the major challenges you have experienced in accessing or using the Library’s Electronic Resources?</strong></td>
<td>Limited capacity of access&lt;br&gt;Most offices are not connected to the internet&lt;br&gt;Access is limited to only areas subscribed to not other areas. For example areas on seed science not well covered.&lt;br&gt;Unable to print on-line resources neither can I order them from the publishers-subscription costs are too expensive.</td>
<td>Lack enough ICT skills to access e-resources&lt;br&gt;Lack adequate time to search through the databases&lt;br&gt;Some e-resources are not user friendly-have complicated user interfaces</td>
</tr>
<tr>
<td>QUESTION</td>
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</tr>
<tr>
<td><strong>What is your field of interest/research areas?</strong></td>
<td>Research professor</td>
<td>Research</td>
</tr>
<tr>
<td><strong>Research area:</strong></td>
<td>Development</td>
<td></td>
</tr>
<tr>
<td><strong>Which library resources do you use?</strong></td>
<td>Mainly e-resources</td>
<td>Online</td>
</tr>
<tr>
<td><strong>Do you use electronic resources?</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>If NO, please state the reasons.</strong></td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>If YES, from which location do you access electronic resources?</strong></td>
<td>Office, Home</td>
<td>Office, library</td>
</tr>
<tr>
<td><strong>Have you had any training on use of electronic resources?</strong></td>
<td>No</td>
<td>Yes, INASP training ... in 2006 HINARI training in ILRI</td>
</tr>
<tr>
<td><strong>If trained, how has it impacted on your teaching and research activities?</strong></td>
<td>N/A</td>
<td>Positive impact as I use electronic resources for all my work. I write proposals using electronic resources</td>
</tr>
<tr>
<td><strong>What are the major challenges you have experienced in accessing or using the library’s electronic resources?</strong></td>
<td>Core journals not available online Connectivity – slow internet</td>
<td>At times there is no internet connectivity Slow connectivity Technical issues with databases where one is unable to access</td>
</tr>
<tr>
<td>QUESTIONS</td>
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</tr>
<tr>
<td><strong>What percentage of the budget is allocated to the Library?</strong></td>
<td>No formula on library budget allocation but E-journals and books</td>
<td>Approx 1% of E budget</td>
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<td>are allocated approx on basis of a 2:1 ratio</td>
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<tr>
<td><strong>Has Library Information Literacy been entrenched in the curriculum?</strong></td>
<td>Not yet</td>
<td>Yes, for the last 2 yrs</td>
</tr>
<tr>
<td><strong>What is the role of management (administration) in supporting Information Literacy programmes?</strong></td>
<td>Provide facilitation in terms of personnel, funds, equipment</td>
<td>Provide facilitation to access to Information in terms of staffing and infrastructure</td>
</tr>
<tr>
<td></td>
<td>Enhance improvement of e-resources through discussions in senate meetings. Improve on the e-learning system of the university to provide access to multidiscipline subject areas. Enhance availability of e-resources</td>
<td></td>
</tr>
<tr>
<td><strong>How would you rate the IT infrastructure in your organization/institution (Poor – Fair – Good – Excellent)</strong></td>
<td>Fair</td>
<td>Excellent (Very Good)</td>
</tr>
<tr>
<td><strong>(Based on the answer above) Kindly explain what your administration is doing to sustain and enhance it?</strong></td>
<td>Provide facilitation in terms of personnel, funds, equipment</td>
<td>Infrastructure is continuously improved on by the ICT department at a rate of 100% to facilitate regular communication and liaising with international bodies and partners in research work.</td>
</tr>
<tr>
<td></td>
<td>Enhance awareness through regular training to both students and staff Enhance improvement of e-resources through discussions in senate meetings. Improve on the e-learning system of the university to provide access to multidiscipline subject</td>
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</table>
areas. Improve on the electronic library facilities. Encourage use of smart books for teaching purposes and for students to be able to access material for revision purposes. Management Plan to increase budget on e-resources ICT to enhance on connectivity- provide adequate computers, laptops provided through subsidy by Safaricom ‘booths’

| Others: Strategies of promotion | Exhibitions, open access w/shops Brochures Training using class reps & lectures Lobbying during orientation week Currently working on institutional repository policy | Enhance and improve on the marketing strategies to improve access | Posters, email list, intranet & extranet, adverts on each machine |

### Administrators (continued)

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<thead>
<tr>
<th>QUESTION</th>
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<tbody>
<tr>
<td>What percentage of the budget is allocated to the library?</td>
<td>9%</td>
<td>About 8-10%</td>
</tr>
<tr>
<td>Has library information literacy been entrenched in the curriculum?</td>
<td>Part of general orientation</td>
<td>First Year Experience (FYE) teaches students how to survive in the university and within it they study I.L. They are also introduced to library resources during orientation. Lecturers are encouraged to send students to the library for instruction.</td>
</tr>
<tr>
<td>What is the role of management (administration) in supporting information literacy programmes?</td>
<td>Providing infrastructure, resources, manpower and training. Budgeting</td>
<td>During May/September, we have faculty development workshops for staff and the library has a session.</td>
</tr>
</tbody>
</table>
How would you rate the IT infrastructure in your organization/institution? | Good | Excellent. The institution has a budget for every employee to have a computer that is replaced after five years

(Based on the answer above) Kindly explain what your administration is doing to sustain and enhance it. | Increase access points by providing wireless access. Providing the hardware | Budgeting for ICT materials. Policy to encourage use of ICT in teaching

Challenges | Lack of access to journals due to budget limitation.

Additional Comments | Ability to share resources when institutions come together.

Library Administration

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<th>QUESTIONS</th>
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</thead>
<tbody>
<tr>
<td>Do you have any training programmes on access to e-resources?</td>
<td>Payments done directly to KLISC for subscription of e-resources</td>
<td>New students are taken through training and also on request</td>
<td></td>
<td>No yet</td>
</tr>
<tr>
<td>What strategies are in place to promote e-resources?</td>
<td>Library exhibitions- twice a year Conducted an Open Access workshop in 2010 Advertisement on available e-resources through the University website</td>
<td>Posters, brochures, demonstration, “walking the talk”, w/shops, Programme Leaders</td>
<td>Posters Liaise with deans on new products available in the library through selective orientation. Library webpage Continuous training</td>
<td>Posters Library webpage/portal Email alerts Social media channels Flyers Bookmarks</td>
</tr>
<tr>
<td>How would you rate the IT infrastructure in your organization/institution (Poor &gt; Fair &gt; Good &gt; Excellent)</td>
<td>Fair</td>
<td>Excellent</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>(Based on the answer above) Kindly explain what you are doing to sustain and enhance it?</td>
<td>-Acquire adequate facilities; PCs, cabling etc -Improve on the bandwidth -Recruit skilled and adequate</td>
<td>Increase bandwidth, 4 year hardware replacement policy, firewalls in place &amp; deployment of firewalls solutions</td>
<td>No policy on ICT relies on University plans</td>
<td>Add 10 computers annually</td>
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<tr>
<td>QUESTIONS</td>
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</tr>
<tr>
<td>What efforts have you put in place to enhance Library staff ICT skills?</td>
<td>personnel.</td>
<td>There are training programs for</td>
<td>IT skills enhancement – own initiative,</td>
<td>Majority of users have laptops so</td>
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<td></td>
<td></td>
<td>library staff and users (in-house) i.e. one to one or ad hoc basis, online tutorials</td>
<td>in-house training</td>
<td>have wireless connection within a certain radius</td>
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<td>Plans are underway for scheduled training programs</td>
<td>Trainings are also subject based</td>
<td>Staff strategy – learning as we go along</td>
</tr>
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</table>

<p>| Others (Challenges &amp; Observation)                                        | Most resources retrieved from the institution except the ones with passwords Library does not open on weekends. Suggestion: Licenses to access information from home |                                      |                                        |                                        |</p>
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<thead>
<tr>
<th>QUESTION</th>
<th>A</th>
<th>B)</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have any training programmes on access to e-resources?</td>
<td>Yes</td>
<td>Yes</td>
<td>has a programme on training and a full time instructional librarian in addition to others. Trainings are done for different categories of users. For lecturers, we reach them by going to their offices, booking appointments with them.</td>
</tr>
<tr>
<td>What strategies are in place to promote e-resources?</td>
<td>Website, Help desk, Committees (support from Vice Chancellor)</td>
<td>Promotion during training. Posters Bulletin. B website Survey</td>
<td>Workshops/trainings Orientation programmes for new students and staff. Pamphlets and leaflets in strategic places in the library. Through the website, Emails “Campus this week” Programme. Talks – Freshman Experience</td>
</tr>
<tr>
<td>how would you rate the ICT infrastructure in your organization/institution?</td>
<td>Good</td>
<td>Good</td>
<td>Excellent – the infrastructure is good and caters for all categories of staff. The administration is also increasing the bandwidth.</td>
</tr>
<tr>
<td>(Based on the answer above) Kindly explain what you are doing to sustain and enhance it.</td>
<td>PCs life is 3 years so factored this in the budget. Order of 30 computers per year There is support from VC</td>
<td>Reviewing budget. Replacing old. Computers with new ones. Enhancing wireless access.</td>
<td>Training Increasing manpower.</td>
</tr>
<tr>
<td>What efforts have you put in place to enhance library staff ICT skills?</td>
<td>Workshops, Identify needs and train staff on areas such as digitization</td>
<td>Giving staff training opportunities both internally and externally. Attending workshops.</td>
<td>All staff employed in the library have to be ICT literate. A staff development policy is in place and staff are required to identify their weak areas. The institution will support their attendance of relevant courses in terms of funding and time off.</td>
</tr>
<tr>
<td>Challenges</td>
<td>PERI e-resources to be integrated in one interface to make search easier.</td>
<td>A lot of training and less usage. Some users have technophobia. Shortage of staff - instructional staff instructs as well as does other administrative duties</td>
<td></td>
</tr>
<tr>
<td>QUESTION</td>
<td>A</td>
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<td>C</td>
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<td>---</td>
</tr>
<tr>
<td>Are you aware of e-resources?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Are you aware of any training programmes of library electronic resources? (ask if they were for students or staff)</td>
<td>Yes the library is running information literacy classes offered by the library. Also orientation, communication skills taught in 1st year which library is involved</td>
<td>Information literacy for users. Staff are also trained</td>
<td>Yes, Offers training for both faculty and staff</td>
</tr>
<tr>
<td>Do you participate in the training programmes?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes. Provide ongoing training in the resource centre</td>
</tr>
<tr>
<td>Challenges</td>
<td>Training 50,000 students is a big challenge. Difficult to reach students who only attend evening classes. Time is a challenge.</td>
<td>No of computer To reach all users is a challenge.</td>
<td>Lack of skills especially distance learner. Limited access to computer i.e. limit to 1 hour in the resource centre. Connectivity – slow. Need for dedicated staff in the resource centre. Limited number of PCs.</td>
</tr>
<tr>
<td>QUESTIONS</td>
<td>D</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Are you aware of e-resources?</td>
<td>Yes</td>
<td>Aware of e-resources</td>
<td>Aware of e-resources</td>
</tr>
<tr>
<td>Are you aware of any training programmes of Library Electronic resources? (ask if they were for the students or staff)</td>
<td>New students are taken through training and also on request</td>
<td>Aware of training programs</td>
<td>Aware of training programs</td>
</tr>
<tr>
<td>Do you participate in the training programmes</td>
<td>Have been taking users through training but need for more staff training</td>
<td>Participates</td>
<td>Participates</td>
</tr>
<tr>
<td>Others: (Challenges, Observation)</td>
<td>Most resources use IP and cannot be accessed at home</td>
<td>Searching skills inadequate</td>
<td>Challenges: time factor (short), reaching the community, staffing, no enough equipment, space, Digitization, power fluctuations, no policy on ICT relies on University ICT plans &amp; operating systems keep changing very fast</td>
</tr>
</tbody>
</table>
### QUESTIONS

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</table>
| *What is your field of interest / Research areas?* | Human resource 3 (30%)  
Entrepreneurship 1 (10%)  
Economics 2 (20%)  
Physics 2 (20%)  
Biomedical 2 (20%)  
Total 10 | Biological Control of Insect Pests  
Field & Horticultural crops  
Insect Pest Management  
Malaria, vector biology & Ecology | Guidance and counselling 1  
10%  
Agricultural Information & Communication Management(AICM)  
1 - 10%  
Geography 1  
10%  
Agriculture economics 2 - 20%  
Food Science 2 - 20% | Computer science  
Library Information Science  
Commerce |
| *Which library resources do you use?* | books  
e-journals  
e-books | Online journals, books, newspapers and internet | Books, internet & newspapers | Online journals, books, newspapers and internet |
| *Do you use electronic resources?* | Books 10 - 100%  
Internet 10 - 100%  
e-journals 2 - 20%  
e-books – 0 - 0%  
CD-Roms – 5 - 59%  
Majority said they do not use | Yes, use e-resources (100%) | Yes aware | Yes – 3  
No – 7 |
| *If No, please state the reasons* | Not aware of their availability  
Not familiar  
Not interested  
Not sure how to access | N/A | N/A | Not aware of their availability  
Not familiar  
Not interested  
Not sure how to access |
| *If Yes, from which location do you access electronic resources?* | Library ICT section  
Computer lab  
Personal Laptops  
Cyber cafes | Library PCs, Office PC & home | Library PC & cyber-café | Library PCs, Office PC & home |
| *Have you had training on use of electronic resources?* | No - 6  
Yes (During orientation) - 4 | Yes – 2  
No - 1 | No training on use of e-resources | Yes – 3  
No – 7 |
| *If trained how it has impacted on your learning and research activities?* | Complete assignments with ease  
Able to surf the internet  
Able to conduct online searches with minimum assistance  
Supplement lecture notes | writing of high quality papers & thesis preparation  
accessing up-to date information, reduce time, publish in high impact journals | Able to surf the internet  
Able to conduct online searches with minimum assistance  
Supplement lecture notes | Easily access information quickly, more varied information easier than before, searching quickly |
| What are the major challenges you experience in accessing or using the Library's Electronic Resources? | Lack enough ICT skills to access e-resources  
Lack adequate time to search through the databases  
Some e-resources are not user friendly- have complicated user interfaces  
Few computers connected to the internet  
Computers infected with viruses  
Low speed of the internet  
Not able to access the resources outside the university | Challenges: unavailability of some paper, limited subscription, password problems, restricted access by publishers, inaccessible internet during weekends  
Suggestions: increase subscription, system worked well so that users don’t get stack | Challenges: access problems, network issues & Power  
Challenges: access restrictions, variety of databases, navigation, bandwidth, annual registration (AJOL), searching skills |

<table>
<thead>
<tr>
<th>Students – A(continued)</th>
<th>QUESTION</th>
<th>Student 1</th>
<th>Student 2</th>
<th>Student 3</th>
<th>Student 4</th>
<th>Student 5</th>
<th>Student 6</th>
<th>Student 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your field of interest/research areas?</td>
<td>Human resource</td>
<td>Project management</td>
<td>B-Commerce 1st year</td>
<td>BA Economics 4th year</td>
<td>Electrical Engineering 2nd year</td>
<td>Anthropology – 4th year</td>
<td>Research methods and statistics – PhD student</td>
<td></td>
</tr>
<tr>
<td>Which library resources do you use?</td>
<td>Electronic journals and print books</td>
<td>Internet and thesis</td>
<td>Only books</td>
<td>Print books</td>
<td>Print books and reading carrels</td>
<td>Books, E-journals(Jstor), google</td>
<td>Books and e-journals( ejournal, jstor, emerald, APA journals)</td>
<td></td>
</tr>
<tr>
<td>Do you use electronic resources?</td>
<td>Yes – I use e-resources</td>
<td>Not able to use e-resources</td>
<td>No</td>
<td>No</td>
<td>Use google and Wikipedia</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>If NO, please state the reasons</td>
<td>They are inaccessible, I cannot access from the office</td>
<td>Not aware of resources</td>
<td>Not aware of resources</td>
<td>Not aware of resources</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>If YES, from which location do you access electronic</td>
<td>From ejournals lab and</td>
<td>General internet from</td>
<td>Access internet from Computer lab</td>
<td>Computer lab and library</td>
<td>In the library</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| resources? | my house
I access general internet from the office | room/hostel and comp lab outside the library | (not in library) | | |
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</thead>
<tbody>
<tr>
<td>Have you had training on the use of electronic resources?</td>
<td>I have not attended any training</td>
<td>Has been trained once on how to use e-resources</td>
<td>No</td>
<td>1st year training on communication skills</td>
</tr>
<tr>
<td>If trained, how has it impacted on your learning and research activities?</td>
<td>No impact as I have not been trained.</td>
<td>No impact as was not able to access but I have been able to use OPAC</td>
<td>N/A</td>
<td>Has made learning easier</td>
</tr>
<tr>
<td>What are the major challenges you experience in accessing or using the library’s electronic resources?</td>
<td>Connectivity is slow Outdated equipment Ratio of students to computers is very high Ignorance – lack of awareness Poor attitude from staff Problematic wireless network training is not provided immediately one joins campus</td>
<td>Slow internet Connectivity PDF a problem to download At times no internet for as long as 2 weeks</td>
<td>Slow speed Complex information Poor internet connectivity Few computers.</td>
<td>Most journals don’t allow access to the current issues Pdf articles not able to convert in word Few computers Internet connectivity problem. Access ours limited Centre not opened after 4.pm, and closed over the weekend.</td>
</tr>
<tr>
<td>QUESTION</td>
<td>Student 1</td>
<td>Student 2</td>
<td>Student 3</td>
<td>Student 4</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>What is your field of interest/research areas?</td>
<td>Nursing</td>
<td>Nursing</td>
<td>Sociology and Psychology</td>
<td>Nursing - 4th year</td>
</tr>
<tr>
<td>Which library resources do you use?</td>
<td>Books, E-journals, internet</td>
<td>Books and e-journals, internet</td>
<td>Books, online resources</td>
<td>Books, photocopies, online journals</td>
</tr>
<tr>
<td>Do you use electronic resources?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes for all</td>
<td>Yes</td>
</tr>
<tr>
<td>If NO, please state the reasons</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>If YES, from which location do you access electronic resources?</td>
<td>Library</td>
<td>In the library</td>
<td>Office and the library</td>
<td>Resource centre and my house</td>
</tr>
<tr>
<td>Have you had training on the use of electronic resources?</td>
<td>Yes, trained by the librarian.</td>
<td>Trained in class by faculty..</td>
<td>Has not been trained and would wish to attend one</td>
<td>Has been trained three times.</td>
</tr>
<tr>
<td>If trained, how has it impacted on your learning and research activities?</td>
<td>Has made learning easier</td>
<td>Made research easier in terms of getting resources faster and current information</td>
<td>Not applicable</td>
<td>It makes learning as well as accessing ejournals easier.</td>
</tr>
<tr>
<td>What are the major challenges</td>
<td>Very few users have</td>
<td>Most journals</td>
<td>Can only comment</td>
<td>There are not enough</td>
</tr>
<tr>
<td>QUESTION</td>
<td>Student 1</td>
<td>Student 2</td>
<td>Student 3</td>
<td>Student 4</td>
</tr>
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<td>--------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>you experience in accessing or using the library's electronic resources?</td>
<td>passwords. Passwords not provided at the computer lab. Poor network connectivity.</td>
<td>are locked. Some journals don't give full text articles. Few computers Slow Internet connectivity. Viruses.</td>
<td>on using google because I get lots of hits that are not relevant. Viruses in computers.</td>
<td>computers. When out of campus, you cannot access the ejournals.</td>
</tr>
<tr>
<td>QUESTION</td>
<td>Student 1</td>
<td>Student 2</td>
<td>Student 3</td>
<td>Student 4</td>
</tr>
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</tr>
<tr>
<td>What is your field of interest/research areas?</td>
<td>Strategic management</td>
<td>Criminal justice</td>
<td>Communication and political science</td>
<td>Organizational development</td>
</tr>
<tr>
<td>Which library resources do you use?</td>
<td>Electronic journals – 3 Books – 4</td>
<td>Books, periodicals both print and non print.</td>
<td>Books and print journals</td>
<td>Books, journals( Jstor, Ebscohost, Chicago journals), Google</td>
</tr>
<tr>
<td>Do you use electronic resources?</td>
<td>Yes – 3</td>
<td>No – 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If NO, please state the reasons</td>
<td>Not aware – 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If YES, from which location do you access electronic resources?</td>
<td>Own modem – 1</td>
<td></td>
<td>Library</td>
<td>Library multimedia centre.</td>
</tr>
<tr>
<td>Have you had training on the use of electronic resources?</td>
<td>Has had training – yes during orientation – 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If trained, how has it impacted on your learning and research activities?</td>
<td>The training attended was beneficial but still had to consult library staff afterwards.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are the major challenges you experience in accessing or using the library’s electronic resources?</td>
<td>Wireless network keeps fluctuating. Slow internet Computers not enough Lack of remote access Network is down at times Most of the journals are from developed countries, need for journals from other countries</td>
<td></td>
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</table>
### Library visits - Observations

- A very welcoming and well guided entrance
- Good working relationship between Library staff and users
- University library very clean and conducive environment for study
- Adequate security
- Inadequate Cabling system in the library
- Inadequate computers
- Low speed of access to e-resources
- Printing services available

### Observations

- A very good and welcoming environment (both internal and external)
- Trunking well done throughout the information centre
- Adequate working and reading space
- Fast speed of accessing e-resources
- Have adequate printing and photocopying services for both staff and students
- A very good working relationship between staff and users - very interactive

- Welcoming and good environment
- Well signed (signs are present although not professional)
- Under-resourced (computers and furniture)
- Congested

- A welcoming and conducive atmosphere
- Good and interactive relations between library staff and students
- Security terminal automated and up-to-date.
- Cabling system well trunked throughout the library
- Presence of Promotional materials - posters, brochures
- Well labelled display ranks
- Computers and other ICT facilities not adequate compared to the user population.
- Notice boards updated
- Presence of active suggestion boxes
- Library webpage shows the available electronic resources - journals, databases from PERii

- Promotion material on notice boards around the library
- Resource center available though not adequate. Computers are too few
- Training room available in the library, which is used for training of users
- No sign of marketing brochures
- Enquiry desk at the entrance of the library with staff available to assist

- Very clean and welcoming environment, staff available to assist users.
- Need to add more pc’s at the library computer lab. Enough printers for the users and the staff.
- Signage available as you get into the library.
- Few marketing brochures at the circulation desk
- Librarians interact very well with their users. They are friendly and welcoming.
- Staff has good computer skills and technology knowledge.
- The librarian sits in the management committee and the institution factors e-resources in the library budget.

- The entry foyer is very welcoming with very attractive paintings
- Very clean environment and modern furniture
- Signage is very good
- Brochures available in strategic places on all floors of the library
- Friendly and helpful staff who seem to interact very well with users of the library
- Staff are very well informed and skilled on issues of electronic resources
APPENDIX 6 PHOTOGRAPHS OF THE PEER REVIEW AND VISITS

Interview on session at Kabarak University

Part of the Internet workstations at Kabarak University
University of Nairobi Online Public Access catalogue (OPAC) stations

Interview session at Aga Khan University Nairobi

Interview session at United States International University