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Experiences in the Use of the Internet at Egerton University Library, Njoro-Kenya

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Abstract

University libraries have long desired one–stop shopping for their clienteles and, in this period of electronic age, their clienteles are demanding for it. They need to search from a single point at any physical location, and retrieve information from citations in journal indexes, abstracts and full text information from the electronic sources. This paper reports findings of a study undertaken in late 2003, which aimed to identify how far the use of internet has enhanced teaching, research and scholarly communication at Egerton University. The study involved students, faculty members and library staff. Apart from fairly maintained internet services, the results of this study show that use, interest and confidence in using the internet by female respondents is less compared to male respondents. E-mail and search engines were found to be the most frequently used resources and tools of internet. It also explored that majority of both the library staff and users have not received any instructions in the use of internet. Besides, charges for internet within the university libraries and other university service points are exorbitant and somewhat prohibitive.

1. INTRODUCTION

If the purpose of higher education is to develop and acquire new sources of knowledge, then there should be no alternative to the library. To quote a former President of India, Dr. S.D. Sharma, who rightly stated: "that a library is more important than a university because it can function without the university whereas the university cannot function without a library".[5] Thus, higher education depends critically on acquiring the know-how for using modern library techniques to the best advantages. The development of information technology (IT) and its widespread application in support of networking among libraries is the most significant factor in the growth of resource sharing.

In the current IT era, library and information professionals should realize that provision of access to information is of essence than mere collection building. Thus a balance between local ownership and network access should not only be struck but also be reflected in the collection development policy. University libraries now accept the fact that major portion of the current information is produced over the internet in digital form as a complement to print or other traditional forms. Besides, for enhancement of scholarly communication in terms of research and extension, globalisation of knowledge and information, the internet turns to be the cure/need of the day. Consequently, institutions of higher learning and research worldwide cannot avoid the provision and use of internet. The internet is expected to become a powerful tool for academic research as well as well as corporate and development sector, provided

that security and copyright issues regarding authenticity of articles are resolved.

2. EGERTON UNIVERSITY

Egerton University is one of the six universities in Kenya. It was established in 1939 as an agricultural college for Africa with first intake of three students. The three students were British ex-servicemen who had returned from World War II and were now being prepared for farming in Kenya highlands. In 1949 a Diploma in Agriculture was initiated.

In the wake of high demand in the university in-take, in 1986, the college was elevated as a constituent college of university of Nairobi. However, in 1987, the college was granted full university status by an act of parliament[3]. Its upgrading was in response to the increasing demand for higher education and the consequent pressure exerted on Nairobi, Moi, and Kenyatta universities, the only institutions of higher learning in Kenya at that time. It was anticipated to focus on problems of agriculture and beyond in its training, research and consultancy programmes.

At present Egerton University has combined staff strength of about 3000 and about 9000 students spread in various faculties and schools. In the five campuses namely; Main (Njoro Town), Laikiapia (Nyahururu Town), Kisii (Kisii Town), Town Campus (Nakuru Town) and Kenyatta (Nakuru Outskirts). The Njoro Campus where the Main is located is 28 km south west of Nakuru and 180 km north west of Nairobi city on Njoro–Mau Naroko road.

2.1 The Library

The main library at Njoro opened its doors as an agricultural library in 1939 with a few agricultural books. It had a population of three student users and one untrained staff under the guidance of a teacher librarian. This library obtained its present status of university library in 1987 when it became a full-fledged university. To date, Egerton university library in its system comprises six branch libraries. These are the Main Library (central library), Faculty of Arts and Social sciences (FASS) library, and the J. D. Rockefeller Research Library, all at Njoro Campus. Others are Laikipia, Kisii, and Town and Kenyatta Campus libraries, respectively. To fulfill its main aim as an essential service provider, the libraries have all together collections of about 200,000 volumes of books and bound periodicals. In addition, it has databases on CD-ROM such as Agricola, AGRIS, CAB-CD, Derwent Pest Bank, Medline, Serline and Tropag and Rural. These types of CD-ROMs are operated with the assistance of a retrieval software called WINSPIRS. Interestingly, the findings indicate that these were World Bank donations and they have not been updated since 1996 when the World Bank credit ended. Others are self loading CD-ROMs with titles like the Graduate Record Examination (GRE), Acquired Immune Deficiency Syndrome (AIDS), Collection of Theses and Dissertation Abstracts of Universities in Kenya and also Food and Agricultural Organization (FAO) CD-ROMs on topical issues in agriculture. Current contents CD-ROM databases on various aspects of biological, physical and material sciences are also received, though quite irregularly as donations from corporate bodies. The Library has in its stock a negligible number of audio-visual materials and has insufficient capacity to support the services, at the moment.

Egerton University Library is at present computerised but not automated with most of its computers (more than 29) used for administrative work. By the beginning of year 1999-2000, internet connectivity was introduced in the university system. By extension, the library became a beneficiary. Internet business and especially the e-mail and website searches became a booming attraction as many users were eager to understand what could be accrued from its services. To date, main library runs a dial up connection accessed via the Department of Computer Science, which acts as the central node at the Njoro Campus. However, the use of the internet and other electronic services picked up when The Electronic Essential Agricultural Library (TEEAL) was set up in Egerton University in the year 1999. This is

known as a 'Library in a box' and is housed within the J. D. Rockefeller Research Library also within the Njoro Campus. With its more than 400 strong, yearly-upgraded CD-ROMs, TEEAL, together with supplementary information resources offered through the internet facilities, have supported particularly agricultural scientists in their continuous quest for scholarly research.[8]

2.2 The Internet

The internet is the abbreviation of the International Network system, now popularly termed as the 'Network of networks'. A further elaboration portrays the internet as facilitating a global pool of information and services accessible by means of locally executed interface software. It may be noted that internet as a resource tool in its proximity covers local, regional, national and international networks, people and computers, all linked together via cables, telephones, and satellites. In their study, Maheswarrappa and Ebnazar[7] observe that not only is the internet the single largest source of information globally but also a very powerful and dynamic tool of communication.

The use of internet made its entry to Kenya in the early 1990s. This technology was used as a preserve for sensitive government and non-governmental offices. However, shortly after mid 1990s, internet use began spreading to all spheres including public use. It suffices to note that Kenya stands as one of highest internet subscribers in Africa, behind South Africa, Egypt, Morocco, Namibia, Zimbabwe, Botswana[1].

2.3 Internet's Impact on Information Services

Libraries and information centres including the university libraries have from time to time been concerned with services to clientele and access to collections. Conventionally, services and access have been offered based on demands to the visitors who actually enter the library premises. The physical presence in the library has been the features for distinguishing library patrons. These advances permitted librarians and information scientists to assist those who had specific and definite need for information and regarded the library as the place to go for help.

Now, the technology of networks has had very real implications for information services and "Academic institutions and the universities and their libraries were early beneficiaries of national electronic initiatives"[2] such as National Research Education Network (NREN). With the advent of library systems, libraries have made the transition from the card catalogue to the online catalogue, allowing electronic access to information and making keyword searching a real possibility, a really boom to novice library users. The electronic information and data collections available to librarians are growing at an exponential rate; every corporation, government agency, scholarly organisation wants to make a mark on the field or industry. The internet has virtually regenerated libraries, taking them from a paper-based, location specific, on-demand service to one that is available to their clientele at any time and from any location.

2.4 Literature Review

In spite of the internet's popularity, Lazinger *et al*[6] observes that published studies specifically on use of the internet by the academic community are surprisingly small. Tilloston *et al*[9] were more interested to know how internet application benefited the users of Toronto University Library in terms of kind of information, satisfaction, and so on.

Zhange[11] emphasized that internet based e-resources were increasingly used for scholarly purposes. It also investigated on how the internet based e-resources could improve scholarly communication for the benefit of researchers. Jange[4] examined how best the internet can be exploited in providing internet based services to the community. In a study on the importance of the internet amongst students and academics in the Netherlands, Voorbij[10] retorts that internet may have conquered a place for itself, but it has not pushed aside traditional printed and other information resources. Maheswarrappa

and Ebnazar[7] reports the results of an exploratory study on the use of internet resources and services in Gulbarga City in India based on account of city users and those of the university and college environment. The study found that majority of the users sampled have been using internet in the last six months for communication purpose and e-mail was their favourite.

On the other hand, the study notes that negligible literature has been conducted on the use of internet in African university libraries other than impacts of information technology in general. For instance, Wema and Nawe (2000) highlights areas of computer use in university libraries in general with emphasis on African University Libraries with particular reference to University of Dar es salaam. Mutula (2001) examined the IT environment in Kenya while assessing how libraries particularly those of public universities should respond, if they are to compete effectively in the new technological dispensation and become part of the global information society.

In a nutshell, use of the internet in academic institutions is now inevitable and its introduction in institutions like the universities cannot be neglected as it stands to be a strong back up of any tangible resources of information. Its immense power of instantaneous access to remotely located information resources is essential, because it considerably subsidizes other electronic resources such as CD-ROMs, and so on.

2.5 User Survey

This user survey took into account two subjects; the library users (students and faculty) and also the library supporting staff. Students and the faculty members of staff, from the faculties of Agriculture, Agricultural Engineering, Arts and Social Sciences, Commerce, Education and Human Resources, Environmental Science and Science, mainly use Egerton University Library. Therefore, the patrons from these seven faculties were involved in the study. From these faculties, a random sample was drawn from a total of 14 departments. In order to reach a sample of 140 faculty members and 210 students, 10 faculty members and 30 students within each faculty were requested to complete the questionnaire. The authors personally distributed the questionnaires to both the faculty members and the students. Other questionnaires were provided to the users while visiting the library service points.

Appendix I contains the questionnaires of the library users whereas appendix II consists of the interview schedule for library staff, respectively. At the end of the entire exercise, a total of 240 responses were received. Results of the study were analysed with the help of simple statistics mainly involving the use of MicroSoft Excel.

2.6 Results and Discussion

The categories of users covered in the study included undergraduates (90), graduates (120), visiting researchers (05), faculty (130) and guest faculty members (10). Gender was equally catered for as a total of 135(39%) females and 215(61%) males participated in the study. Table 1 below shows the size and composition of the sample, as well as the response rates. A response of 68.5% can be considered being of above average, when considering the fact that answering the questionnaire took about 5-10 minutes. Only 90 (31.43%) respondents did not return the questionnaires.

The study found that all the respondents are familiar with the internet. However, the majority of these users (i.e.170 or 68%) accessed internet in the Computer Science Department. Other fairly visited locations for the use of internet are: TEEAL (150 or 62.5%), Private cyber café (140 or 58.3%), and the University Main Library (80 or 33%). Only 10(4.16%) of the respondents indicated having internet at their desk but it was not clear whether this was at home or in the university offices. Unfortunately 30(12.5%) of the respondents did not have access to the internet.

2.6.1 Skills and Length of Internet Use

The study found that only 205 (85.42 %) out of 240 library users had the necessary skills to use the internet without much help

Table 1. Sample and return rates

Subgroup	Issued	Returned	Response rate
Students			
Agriculture	30	30	100%
Agricultural Engineering	30	27	90%
Arts and Social Sciences	30	18	60%
Commerce	30	16	53.3%
Education	30	15	50%
Environmental Science	30	24	80%
Science	30	21	70%
Faculty			
Agriculture	20	18	50%
Agricultural Engineering	20	14	35%
Arts and Social Sciences	20	10	50%
Commerce	20	07	35%
Education	20	10	50%
Environmental Science	20	16	80%
Science	20	14	70%
Total	350	240	68.57%

from the library supporting staff. This is when the authors define internet users as persons who use one or more facilities of the internet during the last two months of the study/research or work related purposes. Table 2 shows the length of internet use by the university users per faculty. It shows that 180 (75%) of the respondents have been using internet for more than one-year now. Only 62.5% of the respondents from commerce have experience with the use of internet that dates back from more than one year, compared to 91.6% of agriculture, and 84% of environmental scientists. Surprisingly, there were 3(6.2%) respondents out of the 13(5.4%) that indicated having started using internet in less than a month in the Department of Agriculture.

2.6.2 Use of Internet by Status

The use of internet was more popular among the undergraduate students in contrast to the other groups'. Out of the 205 respondents who actively used the internet; the graduates (research scholars and post graduate students) had a share of 92.5 % based on their total and answering population. The faculty fairly used the internet than in contrast to their students. Figure 1 demonstrates the status of the users

Table 2. Length of internet use, total and discipline

Period	Total (n=240)	Agri. (n=41)	Agri. Engg. (n=41)	Arts (n=28)	Education (n=23)	Env. Sci. (n=25)	Comm. (n=40)	Sci. (n=35)
More than 1 year	180 (75%)	44 (91.6%)	28 (68.2%)	19 (67.8%)	17 (73.9%)	21 (84%)	25 (62.5%)	26 (74.2%)
3 months - 1 year	22 (9.2%)	6 (12.5%)	2 (4.8%)	5 (17.8%)	-	4 (16%)	2 (5%)	3 (8.6%)
Between 1 month-3 months	25 (10.4%)	4 (8.3%)	6 (14.6%)	3 (10.7%)	4 (17.4%)	2 (8%)	3 (7.5%)	4 (11.5%)
Less than 1 month	13 (5.4%)	03 (6.2%)	05 (12.2%)	2 (7.1%)	03 (13%)	-	-	-

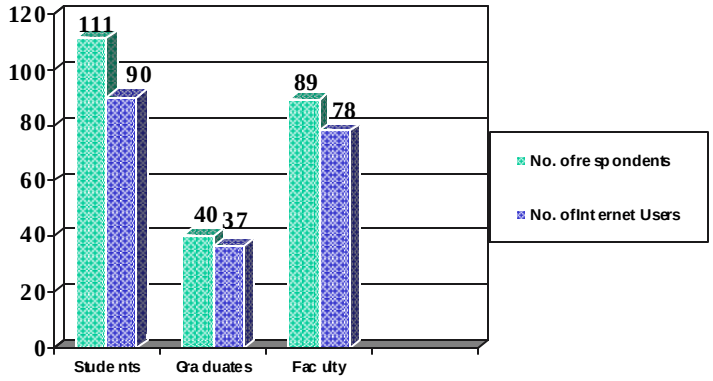

Figure 1. Status of internet users (total respondents & actual users)

population with their respective percentage in the use of internet.

2.6.3 Learning to Use Internet

The library users at the Egerton University Library were asked to state on how they learnt to use the internet. Table 3 shows that 150(78%) users knew how to use the internet through self-study and closely followed by assistance from colleagues. Lectures/skills offered by the library play a minor role. That does not mean that support from the library is regarded as unimportant.

Table 3. Methods of learning skills

Method	No. of response	%
Self-study	150	78%
Lectures/skills given by library	65	31.7%
Instructions (guides) on internet	72	35.1%
Individual library instruction	27	13.2%
Assistance from colleagues	125	60.9%
Other	22	10%

The respondents who chose 'other' did not elaborate what these methods include. Also there are many reasons for the discrepancy between the low use of and high need for library courses. Among the reasons are that users expect courses to be given by the computer centre of the university rather than the library. Many users in general are reluctant to spend time on library instruction. The authors opine that libraries should not offer standard courses but tailor made courses that take into account computer literacy, discipline and status of the users.

2.6.4 Use and Purpose of Internet Facilities

Data mining or sourcing for information on a relatively new topic is only one of the possible uses of the World Wide Web (WWW). The respondents were asked to give reasons why they use internet but based on fixed choices by the authors. Table 4 demonstrates that out the possible 205 actual users who use internet, 192(93.6%) of the respondents use it for personal reasons. One hundred and fourty-five (70.7%) prefer using internet for research related activities. Surprisingly, those who chose 'other' (4.8%) indicated that they could use internet for chatting with friends and sometimes source for foreign pen pals. (Table 4)

Table 4. Purpose for the use of internet

Reasons	Respondents	%
Personal work	192	93.6 %
Teaching	60	29.2%
Study	38	18.5%
Research	145	70.7%
Office work	25	12.2%
Entertainment	90	43.9 %
Other	10	4.8%

It is observed that the use of internet for office work was not popular among the users as only 25(12.2%) respondents were using its applications.

2.6.5 Importance of Internet for Study/Research and so on

Respondents in this situation were to identify the facilities of the internet that are important for study/research or any other related work. By far the most important used facility is e-mail as shown in table 5.

Table 5 shows that more than 162(79%) of the respondents use e-mail services. As confirmed from unscheduled interview with most of these users, it was found that the majority of the users use it regularly. However, they find surfing internet very costly at the university in terms of fee levied per hour or minute and also poor accessibility, as the main library of the university still uses dial up connection.

Electronic journals were found more popular as 75.6% and 31.7% of the respondents treated them as important and very important for their work respectively. However, most of these electronic journals are CD-ROMs based. At least 64.3% of the internet users appreciate the importance of the WWW resources, as they would find more information relevant and also closer to their works.

2.6.6 Search Engines

The internet users at Egerton University Library Systems at Njoro were asked to state how they searched for information resources on the internet.

A list of six search engines was given to them, so that they indicate how often, now or never they use them. Details are shown in table 6.

Table 6. Use of search engines

Search engine	Never	Sometimes	Often
Alta vista	34.1%	46.8%	36.0%
Amazon	41%	42.9%	33.2%
Yahoo	-	28.7%	88.2%
Google	3.9%	20.4%	92.6%
WWW virtual library	21.9 %	15.6%	36.1%

Table 6 indicates that, Google and Yahoo are the most popular search engines. It is also observed that Alta Vista is a scholarly search engine as later viewed by some faculty and research internet users.

2.6.7 Search Options

A list of three options were shown to the library users to facilitate them indicate their preferred technique for search. Details and results are given in table 7.

Table 7. Preferred search options

Methods	Respondents	%
Simple search options	121	59%
Advanced searches	83	40.4%
Both, depending on the query	46	22.4%

The table above indicates that 121(59%) respondents preferred to find information from the internet by applying simple search options. However, the study found that those respondents who were more skilled in internet applications are the ones who are using the advanced searches. In this situation research scholars and a few faculty members were found to be more useful.

2.6.8 Benefits of the Internet

Despite of the hurdles caused by the type of internet connectivity at the main library at

Table 5. Perceived ratings of important internet facilities for various services

Characteristics	Unimportant	Slightly important	Important	Very important
E-mail	10 (4.8%)	28 (13.6%)	162 (79%)	40 (19.5%)
External catalogue	162 (78%)	20 (9.7%)	40 (19.5%)	20 (9.7%)
WWW resources	20 (17%)	25 (18.5%)	155 (64.3%)	40 (19.5%)
Electronic journals	35 (9.7%)	38 (12.1%)	132 (75.6%)	65 (31.7%)

Egerton University, the final verdict on the use of the WWW is quite encouraging. When asked "how much do you find in general when searching information with the help of internet?." Answers to the users responses are shown in table 8.

Table 8. Perceived results of internet searches

Results	No. of respondents	%
Nothing	09	4.3%
Something but not enough	56	27.3%
Enough	79	38.5%
More than enough	61	29.7 %

Interestingly, only 9(4.3%) of the internet users indicated that they found nothing at all, while 65.8% found something or enough. 61(29.7%) of these library internet users found more than they required, a sign of either serendipity or overload.

2.6.9 Importance of Internet for Various Purposes

How important to you are information resources on the internet for the following purposes? A list containing 4 fixed choices pertaining to the importance of the internet was provided to the users to indicate how they found it useful in their works. Details of their perceptions are presented in table 9.

Table 9 demonstrates that the web or internet appears especially suitable for searching factual and ephemeral information as 161(78.4%) of the respondents found it important or very important. Averagely majority of the users fairly liked its usefulness, despite of 109(53.1%) internet users tick marking 'unimportant' in all the purposes given for the use of internet.

2.6.10 Library Supporting Staff

Apart from getting responses from the users, the authors also opted to interview few of their library colleagues on the use of internet within Egerton University Library at Njoro. The survey involved 3 professionals and 14 semi-professionals of whom 10 were females and 7 males. The aim was to collaborate and incorporate the report for management purpose and also be a reference case for other libraries in Kenya and beyond that may like to conduct a case study similar to the present study.

During the interview process, the study found that 15 library staff of the sampled 17 were not only familiar with the internet but they used it regularly. However, 2 of these library staff were familiar but so far they had not used the internet facilities. Other familiar internet based services are shown in figure 2.

Figure 2 shows that the library supporting staffs are more familiar to the use of e-mail and online journals. However, 26% percent also used E-journals. It is worthy to note that although neither OPAC nor web-based OPAC have not been provisioned at Egerton University Library, 4(9%) of these supporting staff were not only familiar with them but also used them elsewhere while in training and in other libraries.

On acquisition of their internet skills, the study explored that majority of them learnt these skills from their colleagues (12 or

Table 9. Perceived importance of internet

Purposes	Unimportant	Slightly important	Important	Very important
Searching factual Information; answering specific information, etc.	38 (18.5%)	41 (20%)	70 (43.1%)	91 (44.3%)
Keeping abreast of new developments in your discipline	8 (39%)	59 (28.7%)	87 (42.4%)	86 (41.9%)
When writing term papers, research projects	23 (11.2%)	61 (29.7%)	89 (43.4%)	67 (32.6%)
Finding relevant & additional information	40 (19.5%)	46 (22.4%)	82 (40%)	72 (35.1%)

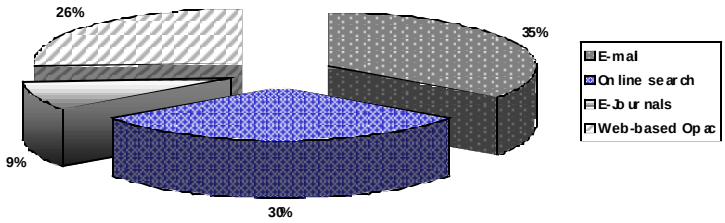

Figure 2. Library staff with IT based library facilities familiarity

70.5%) not only at Egerton but also from other sister university libraries. Self-study (8 or 47%) was also a popular method used to acquire the skills. Attending to seminars, conference and works shops were only confined to a few i.e., 4(23.5%).

Eight(47%) of the library supporting staff indicate that they were daily assisting the users to access and search electronic information sources. Three(17.6%) of these staff preferred to assist users only twice a week, while 2(11.7%) of them could do such function once a week. Commenting on how important search engines are towards the enhancement of scholarly communication, many of these library staffs remarked "these are very powerful resources of information, the entire world has become a small global village and no doubt search engines such as the Google, AltaVista, yahoo, Amazon, and so on are very important to scholarly research. Two(11.7%) of the library supporting staff felt that the search engines are not useful at all as they carry some information that is scandalous, immoral and anti-culture in line with the research and reading.

2.6.11 Problems of Subject Searching and Internet Use

Subject searching on the internet throws up a lot of problems. The majority of the users and even the library support staff complain about the large amount of irrelevant information hits. In this situation the library professionals opined that assigning of subject headings or classification codes on the internet resources was essential for easy retrieval of particular information in conjunction with the use of Boolean operators

Secondly, lack of quality resources on the internet was seen as another menace. Hence, this meant that one must be careful when interpreting the statements, any information retrieved from the internet. The third characteristic of these problems relates to technical matters such as slow or uninterrupted transmission, and inadequate hardware or software since most of the PCs are Pentium II computers.

Respondents mentioned lack of knowledge and skills. The lack of knowledge of internet resources in one's own discipline and the need to receive support from the library fit into this picture. Researchers from Arts and Social Sciences were found to be the most disadvantaged as the few electronic and internet resources did not cover their areas of specialization in depth nor were they good in the use of search engines. The library supporting staffs were found not to be very well versed with techniques of the fast changing technology hence their skills need to be reengineered

3. CONCLUSION

Despite the dwindling budgetary allocation on collection development, to a limited extent, Egerton University Library offers needy-services through the internet to enhance scholarly communication. The majority of the respondents now use the internet for research or work related purposes. E-mail is the most popular facility. The WWW is used primarily to search general, factual, ephemeral, or very

particular information. The authors opine that the WWW is complementary facility, but not as a facility that replaces printed information. Performing subject searches on the internet is not with difficulty. The harshest problem appears be the huge amount of information due to irrelevant hits. However, the library supporting staff can play a role in counteracting this hurdle by performing the traditional tasks such as selection, bibliographical description, bibliographical control, current awareness and even individual assistance. However, a major draw back established was the ignorance of staff in using these applications to assist the users. The skilled ones being of a lesser number as compared to the served population were necessitated to work for long hours. Therefore the tendency of the few library supporting staffs being overworked seemed to be on the higher side.

There is strong need for information literacy and marketing of the modern library services which lacked at the university library. Most students and faculty members learnt how to use internet through self-instruction or assistance from colleagues. It is worth mentioning that keeping abreast of new developments is the right of information seekers such as those in the academic community. Thus, the kind of users need advanced techniques to handle situations as they come. Courses need to be tailor-made, based on the user level in internet skills and also the subject specialization of the intended course-members. It should not be assumed that library-supporting staff do not need the skills. Any new development on internet skills should be brought into the notice of the library staff, so that they sharpen their skills before they provide service and assistance to the library internet users. Over and above, the authors feel that with little encouragement given to the library supporting staff and the users of internet at the university, scholarly communication will be modernized and refined at the university. Therefore, the management needs to look at the situation keenly, support the library in allocation of more funds that may enable the library to acquire state of the art facilities to support the few internet and electronic resources of information currently available at the university. On the other hand, the Government of Kenya in conjunction with funding agencies from the private sector need to come in very strongly to modify the information infrastructure at Egerton University. In this manner, transmission of information by electronic means will be faster, more efficient and cheaper, in the long run for the common good of the internet user community at Egerton University.

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Appendix I

Questionnaire for Library Users

You can answer most questions by ticking a box or circling a number. Multiple answers are only allowed if necessary.

Part 1: **Your background**

1. Department and faculty_____

2. Status

- ☐ Undergraduates
- ☐ Graduates
- ☐ Faculty Member
- ☐ Guest Faculty
- ☐ Visiting Researcher

3. Sex

- ☐ Female
- ☐ Male

4. Are you familiar with the internet?

- ☐ Yes
- ☐ No

5. Do you have access to the internet? (*Multiple answers are allowed)*.

- ☐ Yes, at my desk
- ☐ Yes, in the university main library
- ☐ Yes, in the computer science department
- ☐ Yes, at the cyber café
- ☐ No

Part II: Internet in general

6. Do you have the necessary skills to use the internet?

1. Yes. 2. More or less 3. No

7. How long have you been using the internet?

1. More than one year 2. Between three months and one year 3. Between one month and three months 4. Less than one month.

8. How did you learn to use internet? (*Multiple answers are allowed)*

1. Self-study 2. A course given by the library 3. Online instructions/guides on internet
4. Individual instruction by library staff

9. Why do you use the internet services/resources?

1. Personal work 2. Teaching 3. Study 4. Research
5. Entertainment 6. Office work 7. Other

10. How important for study in their work are the following internet facilities to you?

1. Unimportant 2. Slightly important 3. Important 4. Very important.

A. E-mail	1 2 3 4
B External catalogues or bibliographical databases	1 2 3 4
C. Electronic journals	1 2 3 4
D. WWW resources	1 2 3 4

11. How often do you use the following search engines?

1. Never 2. Sometimes 3. often

A. Alta Vista	1 2 3
B. Amazon	1 2 3
C. Google	1 2 3
D. WWW Virtual Library	1 2 3

12. Which search option do you use most frequently?

1. Simple search option 2. Advanced search option 3. Both, depending on the query.

13. How much do find in general when you search information resources on the internet?

1. Nothing 2. Something, but not as much as was needed 3. Enough
4. More than was needed.

14. How important to you are information resources on the internet for the following purposes?

1. Unimportant 2. Slightly important 3. Important 4. Very important

A. Searching factual information, answering specific questions	1 2 3 4
B. Keeping abreast of new developments in your discipline	1 2 3 4
C. When writing term papers, research projects	1 2 3 4
D. Finding relevant and additional information	1 2 3 4

Appendix II

Interview Schedule for Library Staff

1. Status_____

- ☐ Professional
- ☐ Semi-professional

2. Sex:

- ☐ Female
- ☐ Male

3. Use of internet

A. Are you familiar with the use of the following internet based services have used?

	Familiar	Not familiar	Used
☐ E-mail			
☐ Online search			
☐ E-journals			
☐ Web-based OPAC			

4. How did you acquire your search skills?

1. Self-study 2. Colleagues 3. Courses undertaken in the department
4. Attending seminar, workshop, conference, etc.

5. Do you assist the users in accessing and searching electronic information sources?

1. Yes 2. Sometimes 3. No

If yes, how often?

1. Daily 2. Twice a week 3. Once a week

6. How important to you are the search engines in enhancing scholarly communication?

1. Very important 2. Important 3. Slightly important 4. Unimportant

7. What problems do you get when performing a subject search on the internet and how might subject searching on the internet be improved.

_____
_____
_____