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Evaluation of the availability of the Internet in Student's hostels: Case Study of hostels around Strathmore University, Nairobi, Kenya

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ABSTRACT

Student hostels help in providing a residence for students who come to study far from their homes and hence the option of being a day scholar from home is not viable. The hostels provide basic services necessary for the residents to help them live decent lives while far away from their homes. This research addressed the availability of the internet in student's hostels in general. A handful of these hostels provide internet services to their residents. The students found the internet very useful as far as their studies are concerned since they were in a position to access a very wide range of information. **Key words:** Internet; hostels or halls of residence

Abbreviations; ISPs – Internet Service Providers; WANs – Wide Area Networks; IT – Information Technology; BCOM – Bachelor of Commerce

INTRODUCTION

With the growth in the numbers of admissions in institutions of higher learning; the public and private universities and colleges, most students have sought accommodation in privately owned hostels near their respective colleges and schools. These hostels are within close proximity to their institutions and the students are advised to seek assistant regarding their accommodation from the Dean of Students or the Center For International Programmes & Links ("University of Nairobi > Center For International Programmes & Links," 2010).

Research, whether basic or applied, is the most important means of adding our knowledge of ageing, disease and the individual. Consequently, if one does good quality research they will have a real influence on many spheres - even if this influence seems several steps down the line (MacLullich & Witham, 2010).

Hence, research is a very crucial duty of any student. Students are expected to continue with research work during their respective free time and this mostly happens to be the extra time that they are in their hostels. As a result, it is not possible since most of the hostels do not provide any Internet connectivity and hence, there is a lot of time wasting by the students. Students have to wait until when they can access cyber-cafés or when in the campus in order to work on their assignments and access other electronic resources.

The Internet has been around for quite some time now and the technology has evolved from its infancy where primarily it was used for information exchange and research purposes towards a more comprehensive medium, which caters for education, entertainment and business. Technology has developed considerably to cater for the demands of the bandwidth hungry web medium giving us a wide variety of choice right from the basic dialup service to high speed broadband and even dedicated Internet connections. The ever-increasing scope of the web has created a rat race with

the different Internet service providers (ISPs) vying with each other to maximize their share in the market.

MATERIALS AND METHODS

Internet use by students in higher institutions of learning

College students conduct research on the web (Lindsay & McLaren 2000) and its possible to make evaluations on the quality and type of research being conducted. In a similar fashion, one can examine the Internet research habits of students (Burton& Chadwick 2000) and find that although some depend solely on Internet resources in writing research papers, a majority of the students in the study used a combination of library and online resources. In some institutions where Internet access is relatively reliable and seamless, non-academic purposes represents one of the key Internet usage categories (Mitra & Hazen 1999).

Internet access and use of network bandwidth

In networking, bandwidth is used as a synonym for data transfer rate - the amount of data that can be carried from one point to another in a given time period (usually a second). This bandwidth is expressed in bits of data per second (bps) (Bandwidth Management White Papers (Network Management Bandwidth, Network Bandwidth Management) Software Downloads, Definition and Webcasts - Bitpipe. 2010). The most common approach to quality of service today is to overprovision the network bandwidth. Two common forms of Ethernet deployed inside the enterprise are 10 and 100 Mbps, while a T-1 connection capable of carrying 1.5 Mbps of data traffic is often used for enterprise wide area networks (WAN) or corporate connections to the Internet. Rich media communications can consume significant bandwidth on the enterprise network and network provisioning is an important part of any rich media implementation plan. The bandwidth and capacity of the interconnections in the Internet has reached several key points potentially allowing for transmission and use of high demanding research applications.

Access to the internet in students hostels

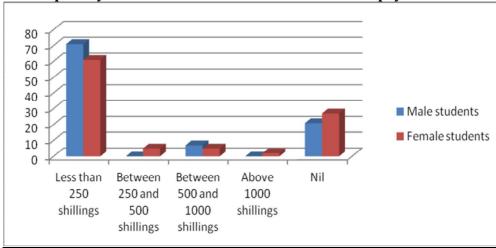
Most of the schools in the United States of America and other developed countries have been providing intranet and Internet connectivity to the students' hostels and dormitories for quite a long period of time (Sridhar & Jain 2006). In Nigerian Universities Internet is used as a tool for learning, teaching and research (Adomi, Omodeko & Otolo 2004). Access to the Internet can permit students to read different newspapers/magazines online for their leisure or educational purposes. In Tanzania, there are a variety of ways in which the electronic resources are accessed by students, but not in the hostels (Manda, 2005). The availability of Internet workstations in the universities, in students' hostels and at home is expected to influence the use of the Internet and library websites by the students (Aman 2004). This research has not yet been done in Kenya.

Models that have been used to measure the extent to which internet connectivity in hostels affects students school work

A research done in Nigeria evaluated the impact of Internet browsing on students' academic performance at the tertiary levels of education (Osunade 2003). The literature review focused on use of Internet services in tertiary institutions (two distinct models guide current efforts to make use of the Internet in higher education. The first approach seeks to improve existing forms and structures of post-secondary instruction to create "better, faster, cheaper" versions of today's courses and curricula by means of the Internet. The second approach is a more radical model which envisions the Internet as instrumental to a fundamental change in the processes and organizational structure of post-secondary teaching and learning), the cost and other obstacles to On-Campus Internet instruction (the technology is new, very costly, and perhaps too threatening to existing academic structures and traditions. Ignoring the potentials of this new technology for learning will lead to institutions being less competitive and attractive to prospective students) and then the use of technology in education was evaluated (the use of technology in the learning process can be evaluated using the FlashLight Toolkit method. To apply this method three elements are required: a technology (e.g. Internet), an activity for which it is used (e.g. information search), and the educational outcome of the activity (e.g. increased knowledge about topic)).

The methodology looked at research design, sample and sample techniques, research instruments and validity indices, data collection and collation and treatment of the data. The research then gives some recommendations regarding access of Internet services, the costing of the services, use of the

services by students and the available connection speeds for all users. The research concludes that there is a significant difference in the academic performance of students with Internet access and those without.



RESULTS a) Amount spent by students to access the Internet and who pays for the access

Figure 1: Amount spent by students on the Internet

- 71% of male students and 61% of female students spend less than 250 shillings per week on the Internet.
- 0% of male students and 5% of female students spend between 250 and 500 shillings per week on the Internet.
- 7% of male students and 5% of female students spend between 500 and 1000 shillings per week on the Internet.
- 0% of male students and 2% of female students spend above 1000 shillings per week on the Internet.
- 21% of male students and 27% of female students spend nothing per week on the Internet.
- The above show that most of the students do not spend much as far as connecting to the Internet is concerned.
- b) Timeslots preferred for Internet access

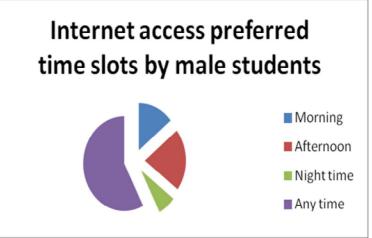


Figure 2: Preferred access times - Male students

- 14% of the male students prefer accessing the Internet during the morning hours.
- 21% of the male students prefer accessing the Internet during the afternoon hours.
- 7% of the male students prefer accessing the Internet during the night time period.
- 58% of the male students prefer accessing the Internet anytime.

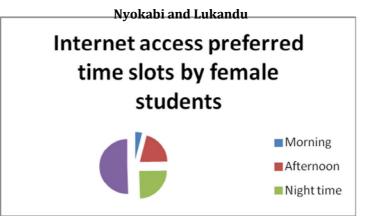


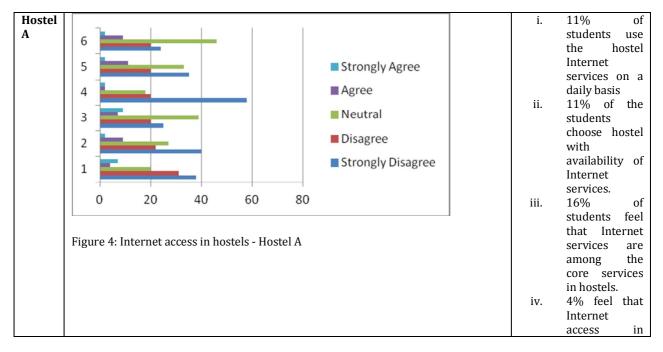
Figure 3: Preferred access times – Female students

- 4% of the female students prefer accessing the Internet during the morning hours.
- 21% of the female students prefer accessing the Internet during the afternoon hours.
- 25% of the female students prefer accessing the Internet during the night time period.
- 50% of the female students prefer accessing the Internet anytime.

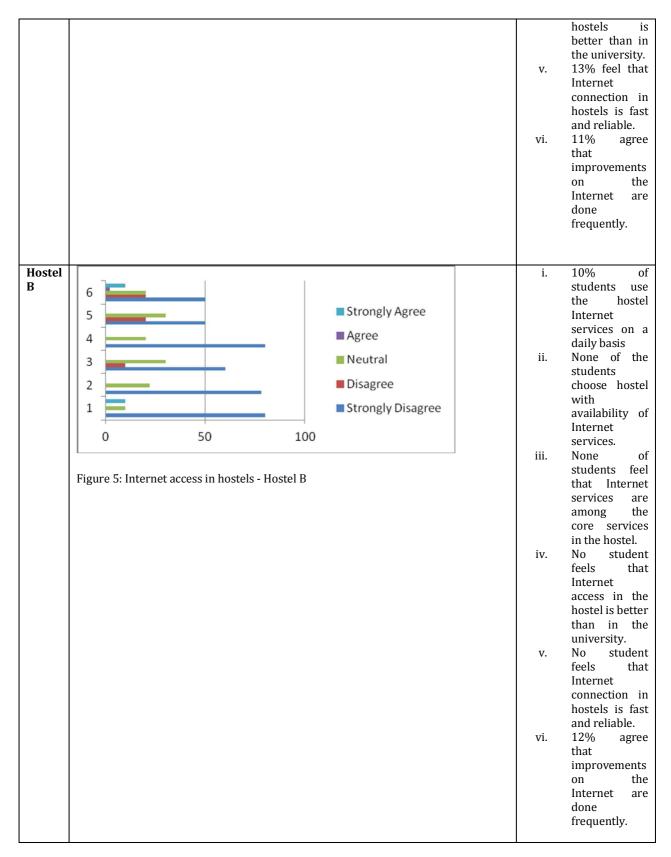
The above analysis shows that most students prefer accessing the Internet anytime compared to having a fixed time slot for Internet access. A number of students also prefer to use the Internet both in the afternoon and in the night time.

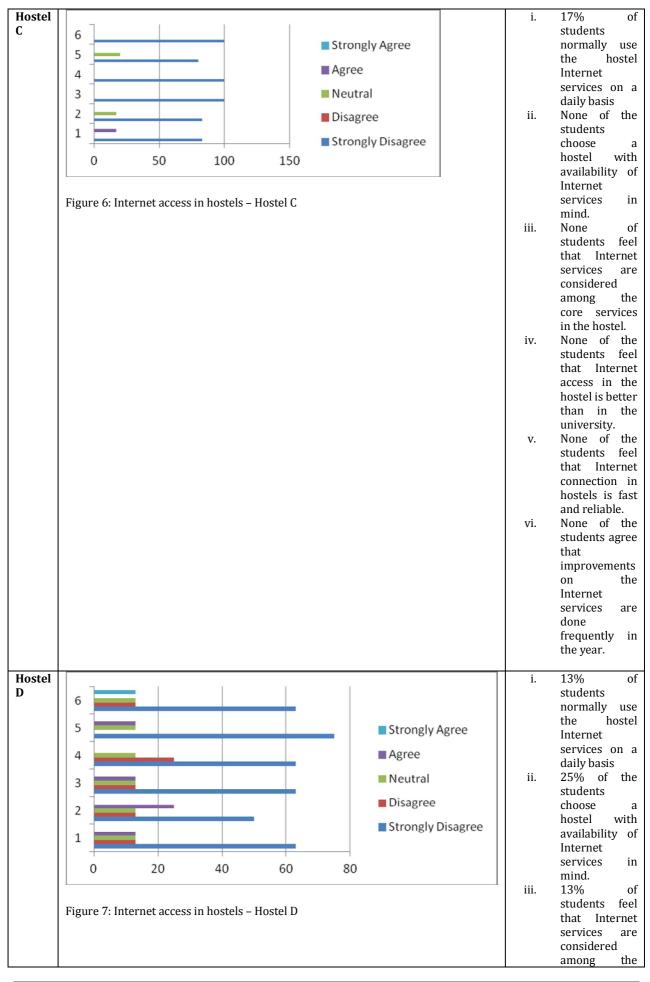
c) Problems encountered while using Internet services in the hostels

- i. There is no Internet access unless one uses a modem.
- ii. There are frequent time outs during Internet access due to too many hits and one has to wait until late when other students are not online.
- iii. The existing connection keeps fluctuating.
- iv. The Internet connection is too slow and has a poor speed.
- v. There are only few computers that are available and dedicated for Internet access in the hostels.
- vi. It's easier to use the Internet services provided in the university.
- vii. Access to the Internet is only limited to a few rooms in the hostel.
- viii. When using a modem, the money loaded can only be used for a very short while and ends up interrupting the ongoing work, especially the case of downloads from the Internet.
 - ix. There exists free Internet services that are reliable and hence no problems are encountered.
 - x. The student has to pay to access the Internet services, which therefore becomes an expense for the student.

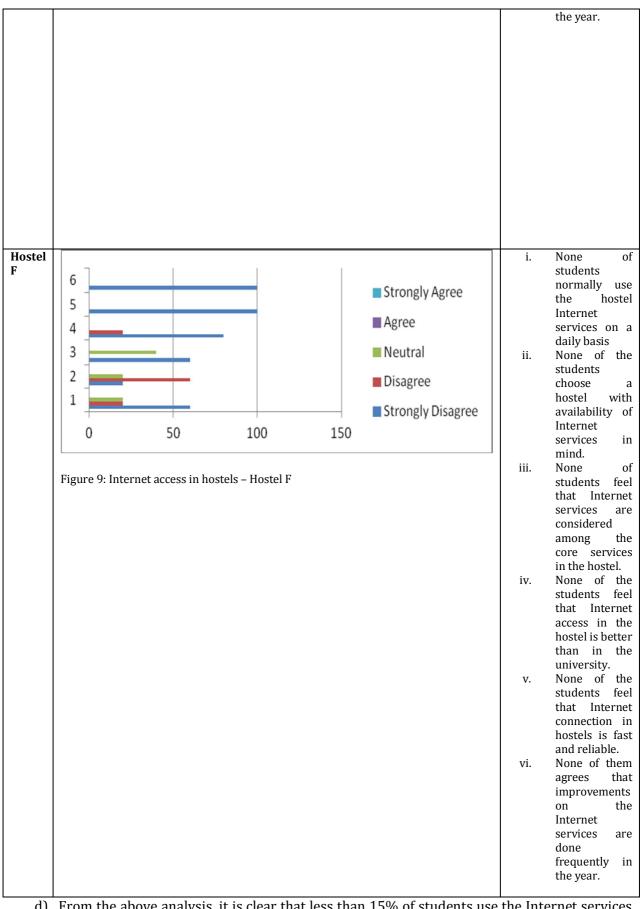


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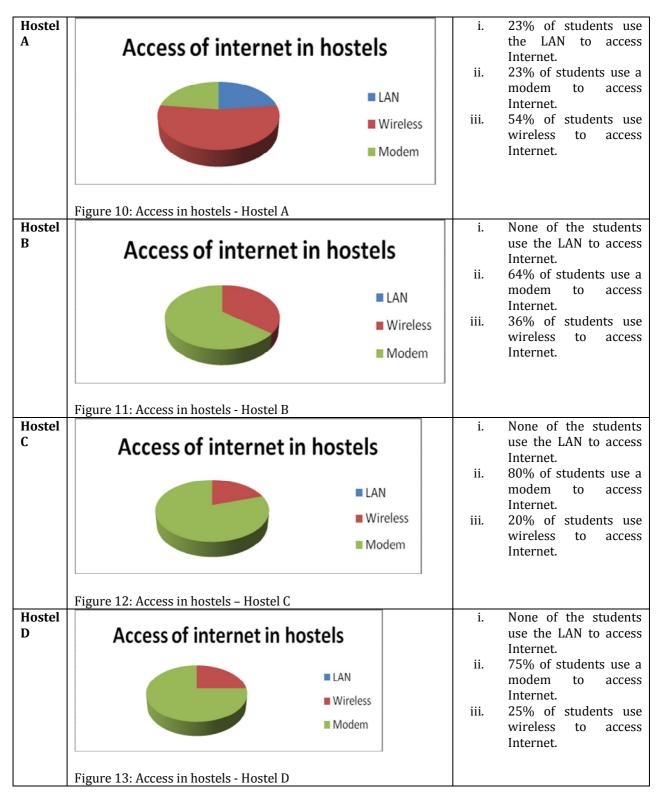
		iv. v. vi.	core services in the hostel. None of the students feel that Internet access in the hostel is better than in the university. 13% feel that Internet connection in hostels is fast and reliable. 13% agree that improvements on the Internet services are done frequently in the year.
Hostel E	6 6 9	i. ii. iv. v. vi.	None of students normally use the hostel Internet services on a daily basis None of the students choose a hostel with availability of Internet services in mind. None of students feel that Internet services are considered among the core services in the hostel. None of the students feel that Internet access in the hostel is better than in the university. None of the students feel that Internet access in the hostel is better than in the university. None of the students feel that Internet access in the hostel is fast and reliable. None of them agrees that improvements on the Internet services are done frequently in

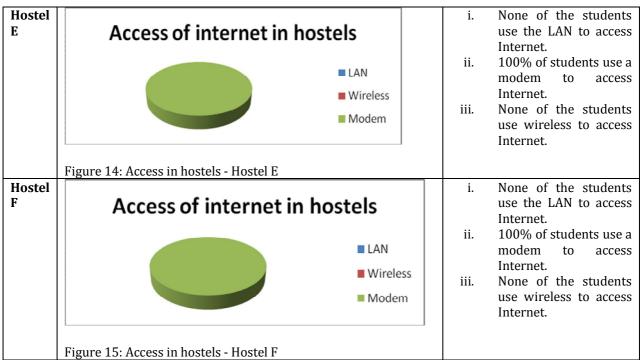


d) From the above analysis, it is clear that less than 15% of students use the Internet services provided in the hostels. Students rarely consider Internet services as a core thing that should influence their choice of a hostel. None of the above hostels considers Internet services as one of the core services required by students. In all cases, access of the Internet

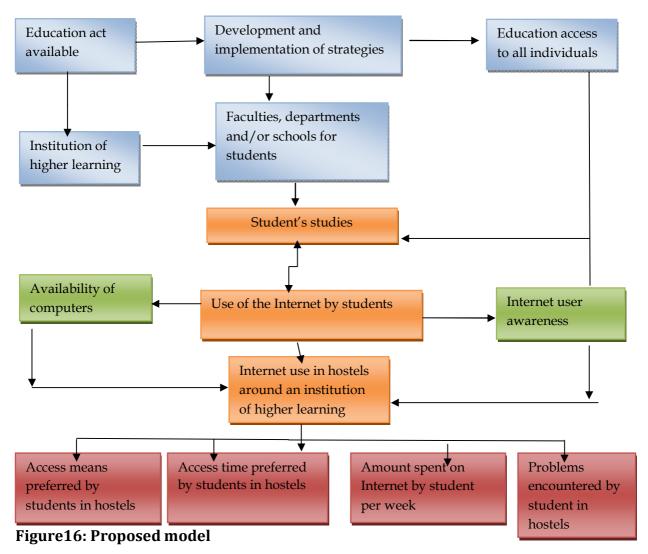
in the university is much better, faster and reliable than in the hostel. None of the hostels makes constant improvements on the Internet services.

- e) Internet access in the hostels:
- f) According to the means of access preferred by the students in hostels





From the above analysis, all students in the hostels prefer using a modem in their halls of residence except residents of Hostel A where wireless access is available. Some students prefer to use both wireless connections and modems to access the Internet.



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DISCUSSION

a) Current situation with students Internet access in hostels

The research revealed that, only one out of the six hostels provides Internet services to the resident students. This reveals that it is not a common phenomenon to have students accessing the Internet from their halls of residence.

In the residences where students have Internet access, the service is often very unreliable and as a result, students have been forced by circumstances to opt for other ways that they can use to gain access to the Internet. The designated areas that happen to have the Internet connection are always crowded since the rooms are much smaller and only a few computers have been dedicated for this purpose.

In these halls of residence, Internet services are never considered as one of the core services that need to be provided to the residents. The students do not pay much attention as well to the availability of Internet services in the residences where they intend to reside.

b) Proposed model

This model can be used in all spheres to check on internet access and performance of students. Implementation of this model will need an implementation matrix as shown in appendix I.

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Appendices

Appendix 1: Implementation matrix

	Model component and the measurement metric			No	Remarks
1.	Education Act				
	i.	Are you familiar with the education act in the country?			
	ii.	Have you read and understood the contents of the act?			
	iii.	Do the contents of the act influence the decisions that you have to make in any way?			
2.	Deve strate	lopment and implementation of egies			
	i.	Is there a strategy in place to help implement the education act in the country, for example, more recruitments for tutors, building			
		relevant curricula?			
	ii.	Have you read and understood the contents of this particular strategy?			
	iii.	Has the education act been developed to cater for the needs in the country?			
	iv.	Are there any facilities that have been put in place to help in the implementation of the existing strategy?			
3.	Educa	ation access to all individuals			
	i.	Has the education act ensured access to education by all individuals in the country?			
	ii.	Does the education act encourage science, technology and innovation in line with the country's vision 2030?			
	iii.	Has the education act been implemented in various institutions of higher learning?			
	iv.	Does the education act aim at improving the productivity and			

	v.	competitiveness of the human resource in Kenya by ensuring better learning facilities for students? Does the education act offer equal chances to male and female students in different, socio-economic groups and regions?		
4.	Instit	ution of higher learning		
	i.	Do the students in the hostel belong to an institution of higher learning, for example, a college, university or polytechnic?		
	ii.	Are the students in these residents close to their respective institutions?		
	iii.	Does the institution provide any extra services to students compared to what is provided in the hostels?		
	iv.	Does the institution liaise with the surrounding hostels to ensure that quality services are provided for the students?		
5.	Facul stude	ties, departments and/or schools for ents		
	i.	Do students belong to different faculties, departments and schools in their institution?		
	ii.	Do these faculties cater for the needs of the students and the market at the moment in terms of the courses they offer?		
	iii.	Do the students get relevant training to create a globally competitive and adaptive human resource base to meet the requirements of the country's		
	iv.	rapidly industrializing economy? Are students allowed to join a hostel during any year of study or do they join at the beginning of their study period?		
6.	Stude	ent's academic performance		
	i.	Do students perceive the Internet as useful in their studies/ academic research?		

	ii.	Does the Internet save time and energy for students when they have to do research?	
	iii.	Has the Internet helped in improving students grades?	
	iv.	Has the Internet helped the student in resolving problems through the use of online forums and blogs?	
	v.	Does the Internet waste students' time through the social networking sites, chat rooms and as a result affect their study time?	
	vi.	Is all the information available online considered to be useful by the students?	
	vii.	Do the students view Internet use as complex and hard to use?	
	viii.	Has the use of the Internet helped in improving student's school work by encouraging exploration and diversification to various fields?	
	ix.	Are students in a position to download resources and use them for their academic work?	
	X.	Can the student use online material in the course of their revision?	
	xi.	Can the student be in a position to communicate with fellow students and lecturers using the Internet?	
	xii.	Do students have interruptions in the course of their online research by fluctuations in the Internet?	
	xiii.	Do students consider online information more recent and more relevant compared to information on text books?	
7.	Use of	f the Internet by students	
	i.	Do the students need the Internet in the hostels?	
	ii.	Is the use of the Internet in the hostels popular among the student?	

	iii.	Are the access speeds available in the hostels appropriate for Internet access?	
	iv.	Do students use the Internet on a daily basis in the hostel?	
8.	Availa	ability of computers	
	i.	Is the quality of computers being used for Internet access good in terms of speed and specifications?	
	ii.	Are the available computers in a position to connect to the Internet?	
	iii.	Do the computers get serviced regularly by a technician?	
	iv.	Have the computers been loaded with the appropriate software to help access the Internet?	
	v.	Is there sufficient Internet bandwidth in the hostel to enable students access the Internet?	
	vi.	Do students have a favorable environment whenever they need to access the Internet in the hostels? For example, are the computer rooms spacious and not crowded?	
9.	Inter	net user awareness	
	i.	Do the students have basic skills needed to access the Internet?	
	ii.	Is there training offered to the students who cannot use the Internet?	
	iii.	Are the students are aware of the importance of the Internet to their studies?	
	iv.	Do the students know how to use the provided software to access the Internet?	
	v.	Can the students use various means to access the Internet, for example, mobile phones?	
10.	Inter	net use in hostels	
	i.	Are there Internet services provided in	

				Yes	No	Rei	narks			
		(v) Nil?		_	1	2	3	4	5	
		(iv) A	bove 1000 shillings?		1	2	3	4	5	
		(iii) B	etween 500 and 1000 sh	illings?	1	2	3	4	5	
		(ii) Betweer	1 250 and 500 shillings?		1	2	3	4	5	
		(i) Less tha	n 250 shillings?		1	2	3	4	5	
	i. D	o students inc	eur a cost to access Intern	et?						
13. A	Amount	spent by the	student		Ranking					
		(iv) A	ny time?		1	2	3	4	5	
		(iii) N	light time?		1	2	3	4	5	
		(ii) After	moon hours?		1	2 2	3	4	5 5	
		-	ning hours?		1	2	3	4	5	
		o students pro uring:	efer to work on the Intern	net						
12. A	Access times preferred by students					Ranking				
		ii. Wireless			1	2	3	4	5	
		ii. Modems	s?		1	2	3	4	5	
	i. D	o students pro i. LAN?	eler to use:		1	2	3	4	5	
11. A			red by students			F	lankir	lg		
11	be st th	etter than tho udent's institu e cyber cafes								
	th ye	e Internet do ear?	and improvements on ne frequently in the							
	ar	nd reliable?	t access speeds are fast							
	СС	ore service an	t services considered a d huge investments owners on the services?							
	th	e hostel?								

14.		ems encountered by students while the Internet in hostels	
	i.	Do Internet services exist in the hostel?	
	ii.	Does the service allow many students to access the Internet at one given point in time?	
	iii.	Is the Internet service reliable in the hostel?	
	iv.	How is the connection speed and data access using the service?	
	v.	Are there enough resources, in terms of computers, to help access the Internet form the respective hostel?	
	vi.	Is free Internet access provided in the hostel?	
	vii.	Are students able to fund their Internet use while in the hostel, for example, can they afford enough airtime when they have to use a modem or can they afford Internet access fees levied in the hostel?	