A Study on the Utilization of Digital Information Sources in Asmara (Eritrea)

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Abstract

Digital Information Sources are becoming more and more popular since they provide multimedia information, full-text search, reference link and easy in accessing and utilizing them. In Eritrea, particularly in Asmara city, significant investments have been made by the government of Eritrea in digital resources and accompanying computer-based technology to ensure access to those digital resources. However, the resources appeared to be underutilized by most of the people. The major purpose of this study is to find out the public awareness on digital medium of information, to determine how people in Asmara (Eritrea) use the digital information sources, the purpose of using digital information sources, the availability of digital information in Asmara, the difficulties in accessing information from digital information sources and finding ways and means to improve the accessibility and utilization of digital information sources. The study also seeks the people's opinion about the role of public libraries in providing digital information services.

Eritrean Telecommunication Services Corporation (Eritel) is one of several internet service providers in the country. EriTel was among the first organization to get a license to establish internet cafes, and the net services through leased lines and dial-up connections. However, connections are typically overcrowded and congestion is an acknowledged problem. EriTel controls the national gateway, which it created in partnership with US Agency for International Development (USAID). The Asmara Public Library (APL) established in 1958 is one of the major information service centre aims to enhance the reading culture in the country by providing useful books to the users or customers of the library. It also strives to provide up to date information about what is going on inside our globe to the community. The APL has physical library, children's library, Open Space Reading Facility, Seminars, Lectures and Group Discussion Facility, Net cafe and Digital Library. The special feature of the APL is "services outside the wall"

Keywords: Accessibility, Asmara Public Library, Digital Information Source, Eritel, Retrieval of Information

1. Introduction

Digital information resources are those resources whose deal with both born digital and digitized materials which can be either accessible from library's in house database or the born digital materials includes: e-books, e-journal, e-newspaper, e-magazine, thesis, dissertations, reports, website, www-resources and other related materials which can be considered necessary by the user, researcher, informational professional or even by the library management itself; on the other hand digitized materials means converting the materials from other format into digital format; in that case materials must have preserve the copy right law, for both the born digital and digitized format, some resources will be permissible to furnish information in full text and others will be limited to metadata and some resources will be freely accessible for anyone from anywhere in the world and others will have limited accessibility due to the library's policy and for cost related issues and also for the authentication [1].

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significant investments have been made by the government of Eritrea in digital resources and accompanying computer-based technology to ensure access to those digital resources. However, the resources appeared to be under-utilized by most of the people. The major purpose of this study is to find out the public awareness on digital medium of information, to determine how people in Asmara (Eritrea) use the digital information sources, the purpose of using digital information sources, the availability of digital information in Asmara, the difficulties in accessing information from digital information sources and finding ways and means to improve the accessibility and utilization of digital information sources. The study also seeks the people's opinion about the role of public libraries in providing digital information services.

Asmara, (in Tigrinya it means "Made them united") is the capital city of Eritrea, the North East Africa. sitting at an elevation of 2,325 meters (7,628 ft), it is located at the tip of an escarpment that is both the northwestern edge of the Eritrean highlands and the Great Rift Valley. Asmara is located in Eritrea's central Maekel Region. It is known for its well-preserved colonial Italian modern architecture, and is divided into thirteen districts or administrative areas: Acria, Abbashaul, EdagaHamus, Arbaete Asmara, Mai Temenai, Paradiso, Sembel, Godaif, MaekelKetema or Downtown, Tiravolo, Gejeret, Tsetserat and Gheza Banda. It is a home to a population of 563,930 inhabitants, although all ethnic groups are represented in the capital. the largest groups are the Tigrinya people (77%) and the Tigre people (15%). In Asmara, the main language is Tigrinya, Arabic. Throughout the city, English is also widely spoken and understood. Adult literacy for men is 95.2% and for women 89.95%, the highest in the nation for both sexes. Asmara is home to the majority of colleges and universities. The city has always been a national centre of education, and is home to many elementary and high schools. Until the recent opening of universities at Mai-Nefhi and Sawa, it was the seat of the only university in the country, the University of Asmara.

The **Eritrean Telecommunication Services Corporation** (formerly the **Telecommunications Service of Eritrea**), more commonly known as **EriTel**, is the sole operator of landline and mobile telephone communication infrastructure in Eritrea. It is one of several internet service providers in the country. EriTel was among the first organization to get a license to establish internet cafes, and the net services through leased lines and dial-up connections. However, connections are typically overcrowded and congestion is an acknowledged problem. EriTel controls the national gateway, which it created in partnership with US Agency for International Development (USAID) [2].

The Asmara Public Library (APL) established in 1958 is one of the major information service centre aims to enhance the reading culture in the country by providing useful books to the users or customers of the library. It also strives to provide up to date information about what is going on inside our globe to the community. The APL has physical library, children's library, Open Space Reading Facility, Seminars, Lectures and Group Discussion Facility, Net cafe and Digital Library. The special feature of the APL is "services outside the wall" [3].

2. Objectives of the Study

1. To know the awareness of the people of Asmara in using digital information sources, right way of accessing and retrieving the information.
2. To identify what kind of digital information source is mostly used.
3. To find out the purpose of the utilization of the digital resources and services.
4. To know the adequacy of information in digital resources.
5. To know the impact of digital information sources on the society.
6. To identify the problems of the people in using digital information sources.
7. To find ways and means to improve the utilization of digital information sources.

3. Data Collection and Analysis

Around 600 people were surveyed for the purpose of the study. A stratified random sampling method was used to select the sample population. The sample was divided into four groups as, Students, Office bearers, Business people, and others. Equal importance was given to gender distribution (Male 337 (56%) and Female 263(44%). The sample is very less comparing to the total population of Asmara, but still it is believed that the sample is good enough to fulfill the purpose of the study.

The survey was conducted using printed questionnaires, distributed among the public in person and collected the responses. The questionnaire was divided

into two sections; the first section deals with general information such as gender, age and occupation; the second section focused on the main purpose of the study.

3.1 Classification of User Group of Digital Sources

	Students	Office bearers	Business People	Others	Total
Male	78 (13.0%)	76 (12.7%)	88 (14.7%)	95 (15.8%)	337 (56.2%)
Female	85 (14.2%)	45 (7.5%)	56 (9.3%)	77 (12.8%)	263 (43.8%)
Total	163 (27.2%)	121 (20.2%)	144 (24.0%)	172 (28.7%)	600 (100.0%)

	Students	Office bearers	Business People	Others
Male	78	76	88	95
Female	85	45	56	77
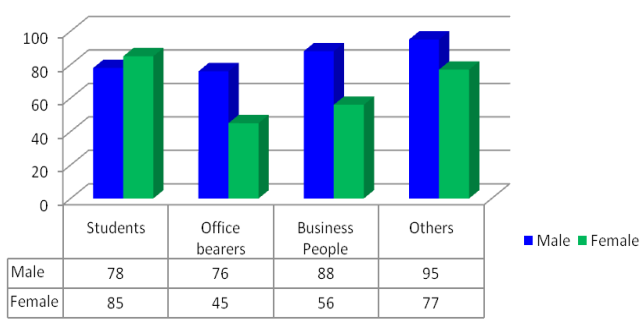
The survey was made among students 27%, office bearers 20%, business people 24% and others include unemployed, agriculture, homemakers, etc 29%.

3.2 Age Group

Age	<=15	16–25	26–35	36–45	46–55	56–65	66=>	Total
Male	72 (12%)	60 (10%)	67 (11.2%)	44 (7.3%)	37 (6.2%)	46 (7.7%)	11 (1.8%)	337 (56.2%)
Female	58 (9.7%)	63 (10.5%)	51 (8.5%)	39 (6.5%)	26 (4.3%)	20 (3.3%)	6 (1.0%)	263 (43.8%)
Total	130 (21.7%)	123 (20.5%)	118 (19.7%)	83 (13.8%)	63 (10.5%)	66 (11%)	17 (2.8%)	600 (100%)

The age group of respondents was divided into seven groups. Below 15 years old comprise 21.7%, 16-25 years 20.5%, 26-35 years 19.7%, 36-45 years 13.8%, 46-55 years 10.5%, 56-65 years 11%. Since the old age group (more than 65 years old) shows less interest to respond the surveyor, only 2.8% was surveyed.

3.3 Frequent use of Computers and Digital Sources

Frequency	Male				Female			
	Students	Office bearers	Business People	Others	Students	Office bearers	Business People	Others
Daily	24 (4.0%)	36 (6.0%)	19 (3.2%)	35 (5.8%)	33 (5.5%)	20 (3.3%)	13 (2.2%)	29 (4.8%)
Twice/thrice a week	16 (2.7%)	23 (3.8%)	26 (4.3%)	44 (7.3%)	19(3.2%)	12 (2.0%)	11 (1.8%	21 (3.5%)
Once in a week	17 (2.8%)	5 (0.8%)	23 (3.8%)	11 (1.8%)	21 (3.5%)	6 (1.0%)	14 (2.3%)	7 (1.2%)
Fortnightly	8 (1.3%)	4 (0.7%)	10 (1.7%)	0	8 (1.3%)	3 (0.5%)	4 (0.7%)	5 (0.8%)
Once in a month	9 (1.5%)	6(1.0%)	3 (0.5%)	5 (0.8%)	4 (0.7%)	4 (0.7%)	6 (1.0%)	9 (1.5%)
Occasionally	4 (0.7%)	2 (0.3%)	7 (1.2%)	0	0	0	8 (1.3%)	6 (1.0%)
Total	78 (13.0%)	76 (12.7%)	88 (14.7%)	95 (15.8%)	85 (14.2%)	45 (7.5%)	56 (9.3%)	77 (12.8%)

Around 35% people using the internet and the digital sources daily and 29% people using twice / thrice a week. It means more than 60% of the people using the digital sources very often. Around 66% male and 60% female were using the internet and the digital sources very frequently. Almost 13% people were identified that they are neither interested in surfing the net nor in digital sources. It is the responsibility of the public libraries to study the real issues for not using the internet and digital sources and to create awareness and motivation among the public to utilize the digital information sources in an effective and efficient way.
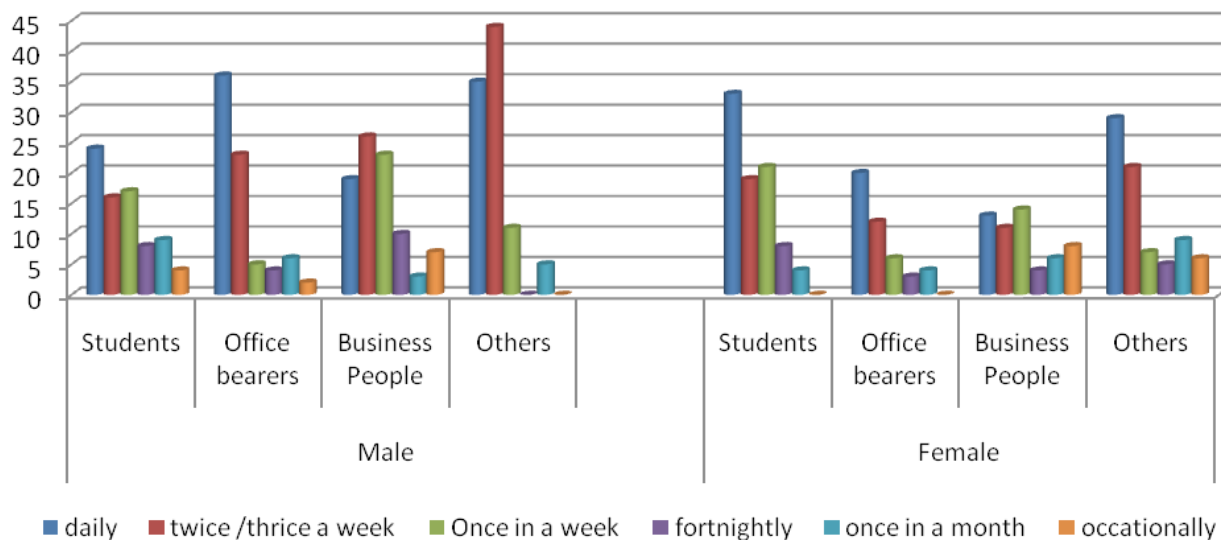
3.4 Purpose of using Internet/Digital Sources

Purpose	Male				Female			
	Students	Office bearers	Business People	Others	Students	Office bearers	Business People	Others
For Understanding / Clarifications	11 (1.8%)	13 (2.2%)	12 (2.0%)	10 (1.7%)	21 (3.5%)	9 (1.5%)	14 (2.3%)	8 (1.3%)
For New Informn/ Knowledge	4 (0.7%)	16 (2.7%)	13(2.2%)	12 (2.0%)	19 (3.2%)	6 (1.0%)	8 (1.3%)	15 (2.5%)
News and Events	15 (2.5%)	14 (2.3%)	23(3.8%)	16 (2.7%)	9 (1.5%)	11 (1.8%)	11 (1.8%)	12 (2.0%)
General Information	7 (1.2%)	8 (1.3%)	10 (1.7%)	14 (2.3%)	11(1.8%)	9 (1.5%)	5 (0.8%)	13 (2.2%)
Games / Entertainments	26 (4.3%)	18 (3.0%)	19 (3.2%)	25 (4.2%)	25 (4.2%)	4 (0.7%)	10 (1.7%)	22 (3.7%)
No Specific Purpose	15 (2.5%)	7 (1.2%)	11 (1.8%)	18 (3.0%)	0	6 (1.0%)	8 (1.3%)	7 (1.2%)

It is very impotent to record that only 2.5% male students are browsing internet or searching digital sources for understanding / clarifications or to obtain some new information or knowledge. This is little high among female students which records 6.7 %. At the same time both male and female students are equally preferred to use internet or other digital sources for games and entertainments. It means that the Eritrean students are not very serious to utilize the internet or digital information sources for any constructive purpose. In general only 15% of the respondents are eager to use the internet and digital sources for getting new information or knowledge. One fourth of the public are utilizing internet and digital sources for games and entertainments. At least 20% of the public are interested in news and events.
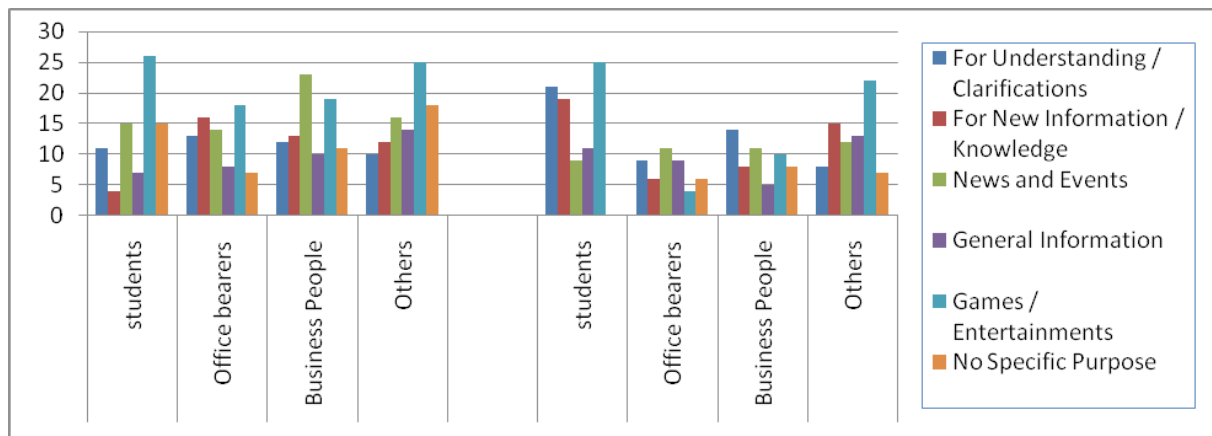
3.5 Understanding the Use of Digital Information Sources

Age - >	<=15	16–25	26–35	36–45	46–55	56–65	66=>	
Very Useful & Reliable	11 (1.8%)	14 (2.3%)	13 (2.2%)	13 (2.2%)	10 (1.7%)	12 (2.0%)	3 (0.5%)	76 (12.7%)
Useful but not reliable	18 (3.0%)	33 (5.5%)	31 (5.2%)	27 (4.5%)	26 (4.3%)	25 (4.2%)	5 (0.8%)	165 (27.5%)
Easy and Very Fast	6 (1.0%)	9 (1.5%)	12 (2.0%)	4 (0.7%)	5 (0.8%)	4 (0.7%)	0	40 (6.7%)
Not Easy to find right Informn	52 (8.7%)	31 (5.2%)	43 (7.2%)	28 (4.7%)	22 (3.7%)	11 (1.8%)	8 (1.3%)	195 (32.5%)
No Idea	43 (7.2%)	36 (6.0%)	19	11 (1.8%)	0	14 (2.3%)	1 (0.2%)	124 (20.7%)
Total	130	123	118	83	63	66	17	100%

Another serious question is the understanding the use of digital information sources 20% of the public responded with "no idea", and almost 33% were told that it is not easy to find correct information. It is clear that the people of Asmara (Eritrea) are not aware of the value and importance of digital information sources.

The administrators of public libraries should recognize the issue and take necessary steps to educate the people to understand the value of digital sources. It is also interesting to know that around 28% people told that the digital information sources are "Useful but not reliable".
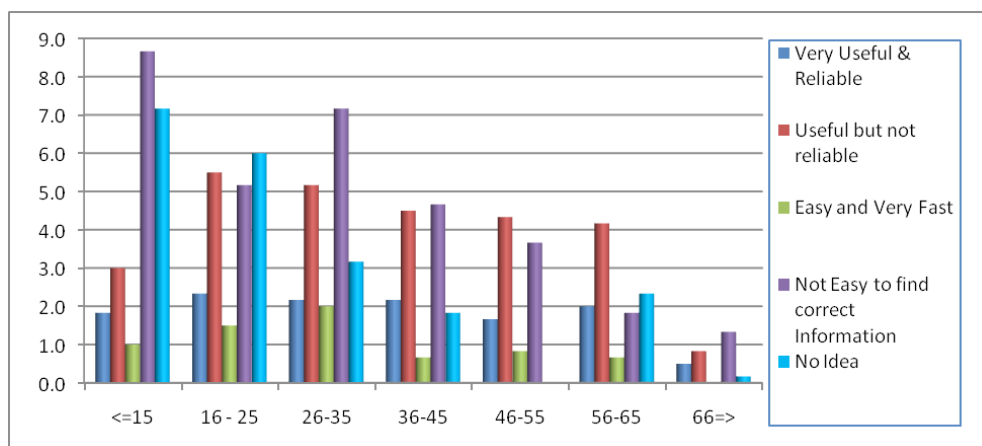
3.6 Difficulties in Accessing and Retrieving of Digital Information

Age - >	<=15	16–25	26–35	36–45	46–55	56–65	66=>	
Sources Not Adequate	22 (3.7%)	18 (3.0%)	21 (3.5%)	19 (3.2%)	20 (3.3%)	16 (2.7%)	5 (0.8%)	121 (20.2%)
Internet is very Slow	45 (7.5%)	41 (6.8%)	44 (7.3%)	26 (4.3%)	23 (3.8%)	25 (4.2%)	9 (1.5%)	213 (35.5%)
Costly /time consuming	34 (5.7%)	29 (4.8%)	33 (5.5%)	21 (3.5%)	16 (2.7%)	13 (2.2%)	3 (0.5%)	149 (24.8%)
Lack of Knowledge	16 (2.7%)	20 (3.3%)	9 (1.5%)	10 (1.7%)	4 (0.7%)	4 (0.7%)	0	63 (10.5%)
Lack of Guidance	13 (2.2%)	15 (2.5%)	11 (1.8%)	7 (1.2%)	0	8 (1.3%)	0	54 (9.0%)
	130	123	118	83	63	66	17	100%

It is not possible to solve any issue without knowing the real problem. The study will not give any positive impact unless knowing the difficulties of the public in accessing and retrieving of digital information. For this query more than 35% respondents told that the internet is very slow. Even the Eritel organization understands the problem of the net 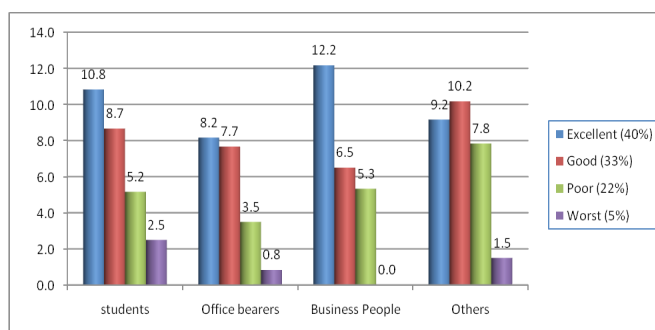connections which are typically overcrowded and congestion is an acknowledged problem. Around 25% respondents registered that accessing digital information sources are very costly and time consuming. Around 20% people recorded that they don't have proper guidance and knowledge in searching / browsing digital information. Another 20% responded that the digital information sources are not adequate.
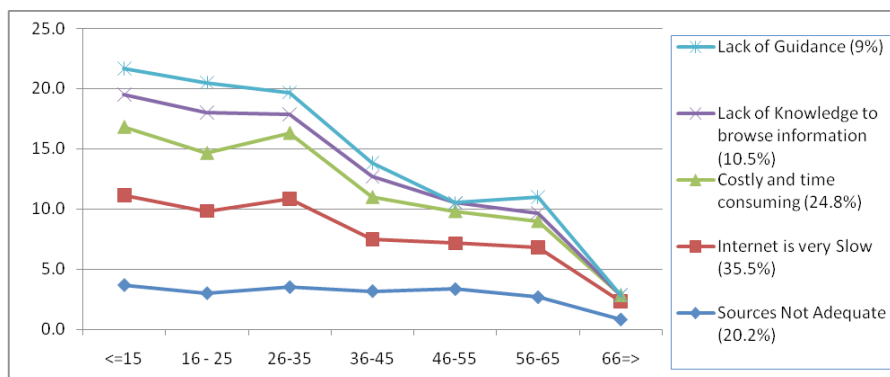
3.7 Role of Public Libraries in Digital Information Service

	Students	Office bearers	Business People	Others	Total
Excellent	65 (10.8%)	49 (8.2%)	73 (12.2%)	55 (9.2%)	242 (40.3%)
Good	52 (8.7%)	46 (7.7%)	39 (6.5%)	61 (10.2%)	198 (33.0%)
Poor	31 (5.2%)	21 (3.5%)	32 (5.3%)	47 (7.8%)	131 (21.8%)
Worst	15 (2.5%)	5 (0.8%)	0.0	9 (1.5%)	29 (4.8%)

At last the study turns about the role of public libraries in providing digital information services. Around 40% people of Asmara (Eritrea) recognized the public library services with "excellent" mark and 33% gave good rank. It is also important to know that the public library of Asmara is yet to satisfy another 27% of the public. Achieving this peak, the public library of Asmara will attain 100% excellence.

Finally the study brought some findings and suggestions.

- The telecommunication department should take necessary steps to increase the speed of Internet access.
- The government of Eritrea should trigger advanced and adequate digitization systems in all sectors.
- The Asmara Public Library may conduct user education programs, special workshops to the public in effective access and retrieve the valuable and reliable digital information.
- The teachers and experts of Information Technology, Librarians and others who are all well versed in utilizing the digital information should come forward to create awareness, motivate and to give hands on training to the public for effective access and retrieval of digital information.

4. Conclusion

Almost all conventional information sources, such as textbooks, dictionaries, encyclopedia, journals, etc are now available in the Net. No one can ignore the value of digital information. Public libraries should understand their social responsibility in creating awareness, motivating, accessing and retrieving the right information without any difficulties. The user community should be very serious in utilizing the digital information resources for positive and constructive way. There is no limit to spend time for reading books whether it is a traditional printed book or a digital one but entertainment is not like that, it is also important, but it has its own limit.

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