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Impact of E-Resources Literacy on E-Resources Consumption habits among College students: An Experimental Study

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Abstract

E-resources and its usages are escalating rapidly today. This study is an attempt to assess the consumption of e-resources and the impact of e-literacy on the college students of Shillong. For this an experimental method was adopted. Students were given guidance on e-resources and the data was collected on different stages using a structured questionnaire to see the impact on their consumption habits. One premier institute, that is, St. Anthony's College was selected for the study. It is spectacular to find that there is a significant difference in e-resources consumption among college students at the beginning and at the end of the study. The study shows that there was low e-resource consumption prior to the e-resource literacy input. However, there was a spike in e-resource consumption after proper guidance was given.

Key words: **E-Literacy, E-Resources Consumption, E-Resources, Digital Resources, Digital literacy, Internet**

Introduction

Information is growing by leaps and bounds in the world today. Earlier information are mainly available only in printed books, journals, newspapers and magazines. But today information is abundant and growing enormously particularly in the form of digital or electronic format (e-format). The advancement of computing and information technology has paved the way for electronic resources (e-resources). Its features, facilities, and benefits captivated individuals, organisations, companies, governments to create and share e-resources. Besides these, the onset of the World Wide Web in 1989 helps people create their new presence in a digital platform. E-resources saw a huge jump within few years as about 90% of the digital content that exists worldwide today was created in the last two years (Kemp, 2021). The pandemic caused by the COVID 19 has even accelerated the increase in e-resources as online education and physical distance become the new normal. Educational institutions which otherwise create limited resources earlier have now become prominent digital content producers. The impossibility of physical classes have activated teachers to

produce e-resources for their students to keep the wheel of learning rolling. It is unbelievable that about 2.5 quintillion bytes of digital data are created every single day (Piccialli, Cuomo, & Jeon, 2018; Zwitter & Hadfield, 2014; Devakunchari, 2014). All these e-resources could be in the form of text, image, graphics, animation, audio, video or a combination of these. They are being presented in the form of e-books, e-newspapers, e-journals, websites, e-libraries, blogs, vblogs, databases and the like.

Today, we consume vast quantities of digital or e-resources from countless websites, social media and other platforms. The digital technologies such as mobile phones, computers, television and many others help us engage and navigate the various resources. Among the different groups of peoples, college students are a powerful group of e-consumers and e-resources producers. Constantly they navigate through the various forms of e-resources. While there are numerous benefits of e-resources we cannot ignore the adverse impact of these resources on students. It is in this context that e-literacy is much more important today than ever.

Statement of the Problem

There is an information explosion in the world today. E-resources form a huge part of this information. These resources have penetrated every fabric of the individual and the society and influenced people's way of living either directly or indirectly. In this phenomenon the students who are navigating through the various e-resources in search of knowledge becomes the soft target. Daily they spend hours with different forms of e-resources and hence scholars, teachers, parents and critiques are overwhelmingly concerned over the adverse impact of e-resources. It is believed that e-literacy can be the agent of change to lessen the adverse impact. However, e-literacy and its skills cannot be acquired automatically. The quicker e-literacy is acquired the better it is. So it is imperative to inculcate sound e-literacy right from a young age so that e-consumption can be improved. However certain fundamental issues crop up: Do students know about the various e-resources? Do they know how to choose the right e-resources? Are students given proper guidance on e-literacy and e-consumption; are they given proper guidance for proper utilization of these e-resources? Thus e-literacy for students emerges as a vital concern. The role of educators in guiding and providing the right contents is also of utmost important.

When e-literacy is imparted to students, they will be able to navigate through e-resources meaningfully- where to find them, how to find them, how to get access to those contents, how to evaluate and utilise them meaningfully. If that is not done it might leave a long trail of irresponsible and illiterate e-consumers. So there is a genuine need for e-literacy and healthy e-consumption habits among college students. Therefore, an impact assessment study of e-literacy on e-consumption habits among college students is being done.

Objectives

1. To find out the e-resources consumption habits among college students

2. To assess the impact of e-literacy on the e-consumption habits of the college students

Research method, data collection and sampling

The method used for the study is the experimental method. Structured questionnaire was used for data collection. The present study covered students pursuing their undergraduate courses in Arts stream. The sample size for the present study consisted of 120 students. The structured questionnaires were framed and distributed to the respondents two times. First prior to the intervention and second after the intervention. The baseline data was collected right at the beginning of the study before the implementation of the E-literacy Resource Package (ELRP). This was followed by the compilation of the ELRP and its implementation was followed. The ELRP includes e-books, e-newspapers, e-library sites, e-journals, search engines, useful websites and online databases. The implementation was done through a one-on-one communication method. After the E-Literacy input the impact was assessed through a structured questionnaire after six months. The statistical tool used to compare the data and to measure the impact is the Non-parametric test - Wilcoxin signed rank test and p-value of <0.05 is considered to be significant.

Research Sites

St. Anthony's College situated in the heart of the Shillong city. The college was established in 1934 and today it has grown into a multi-stream and multi-discipline co-educational institution. The college offers 23 undergraduate and five post-graduate courses. The College offers both traditional and professional courses in Arts, Science, Commerce, Management, Media in undergraduate level and Political Science, Education, Computer Application and

Biotechnology in Post-Graduate level. It also provides various Diplomas, short term courses and industrial courses. It caters to over 4400 students coming from all over India and other countries belonging to various ethnic, cultural and religious background.

Definitions

E-Literacy: E-literacy is the ability to recognize the need for e-resources, identify and access to e-resources, evaluate and determine the relevance of these resources, consume e-resources responsibly, constructively create e-resources and effectively communicate information and knowledge with proper understanding of legal, political, socio-cultural and economic implications.

E-Resources: The various forms of digital resources, databases, e-libraries, search engines, e-books, e-newspapers and the like which are available on the world wide web which could be in the form of text, image, graphics, animation, audio, video or a combination of these.

E-Consumption Habit: E-Consumption habit here refers to the frequency pattern, approach and preference by which people consume the various forms e-resources.

Review of Literature

Understanding Online Resources

Broadly speaking electronic resources (e-resources), electronic content or online resources are digital material or resources that are available on the internet. Today online resources come in numerous forms. Some are just information in nature, others are educational and still others are just for entertainment. Shiratuddin, Hassan & Landoni (2003) points out that e-resources are digitised content, which is viewed on screen and not on paper. These are contents that are produced and stored electronically rather than in print and which can be in various forms such are graphics, audio, multimedia or hypermedia. Clark (2016) mentioned three characteristics of online or e-resources, namely, availability, speed of use and portable access. The advancement in the information technology particularly with the invention of the computers led to the creation of digital contents. Earlier online or digital contents are limited and personal. However, with the onset of the World Wide Web online resources were able to share and access across the globe. Within a short span of time digital and online resources increase exponentially.

The e-resources come in numerous types and in different formats. Pandey (2015) classified various contents of online resources. They could be subject specific websites meant for learning, online tutorials, dictionaries and encyclopaedias, repositories of maps and geographical facts, collection of biographic, readymade templates and assignments, online books and journals, online newspapers and magazines, blogs, websites, videos, audios, games, articles, pictures, movies, activities and the like.

Aspects of E-Literacy

The availability of the different types of e-resources demands different literacies. Thus, we have e-information literacy, ICT literacy which includes computer, internet and digital literacy. All these literacies could be included in a generic term e-literacy.

i). E-Information Literacy

Electronic information literacy in it basic understanding consists of the activities such as reading, writing and research that are accessed, supported, assessed and delivered through the use of the computer or any other electronic means (Shonrock, 2006). Martin (2003) adds more to the understanding pointing out that E-information literacy is the awareness, skills, understanding and reflective-evaluative approaches that are required for an individual to operate in the ICT environment. Again, Fortier (1998) include the idea of the ability to search, retrieve, organizes, employ and evaluate e-information. Similar to this Nayak, Nayak & Murgod (2006) points out that it is the ability to locate, evaluate and effectively use needed e-information with a set of skills and attitudes for lifelong learning.

ii). ICT Literacy

ICT Literacy can be understood as information literacy which takes places in a digital environment. Hence, from here we can point out that it is the interest, attitude, ability of individuals to use digital technology to access, manage, integrate, evaluate information, create contents and the ability to communicate with others in order to participate effectively in society (Van, 2004). Furthermore, Katz et al. (2004) points out that ICT literacy is the ability to appropriately use digital technology, communication tools, and networks to solve information problem in order to function in an information society. This will include the ability to use technology as a tool to research, organize and communicate information with

ethical, legal and socio-cultural responsibility. ICT literacy includes computer, internet and digital literacy.

a) **Computer literacy:** In its basic understanding computer literacy is the ability to make use of the computer for processing, analysing and manipulating data through the use of various operating and application softwares (Hirwade, 2006; McCulre, 1993). It is therefore associated with the knowledge about the computer hardware and software and to have the skills to make use the computer for one's own benefits (Zin, 2000; Adomi & Anie, 2006; Humes, 1999).

b) **Internet literacy:** Internet Literacy as the ability to use information and communication technologies to find, evaluate, create and communicate information. It requires both cognitive and technical skills (Becker, 2018).

c) **Digital Literacy:** Digital literacy is inter-connected with other literacies such as IT literacy, information literacy, technological literacy, online literacy, internet literacy, visual literacy and the like (Martin, 2005). Digital literacy and competencies according to Ferrari (2012) includes: - knowledge, attitudes and skills required to identify, locate, access, retrieve, store and organize the information. Hence it could be sum up as the ability to locate, organize, understand, evaluate, and analyze digital information using digital technology. It involves a working knowledge of computer technology. The European Commission (2003) declares that digital literacy is the much needed literacy today and without it citizens can neither participate fully in society nor acquire the skills and knowledge necessary to live in the 21st century.

Importance of E-Literacy

Electronic literacy is literally a new term. It was not included in the conventional understanding of literacy. However, today it has become one of the most important literacies. Topping & Mckenna (1999) refers electronic literacy to literacy activities (e.g., in reading, writing, spelling) that are delivered, supported, accessed or assessed digitally through computers or other electronic means rather than on paper. As information today is abundance, digital and network it is obvious that information literacy and digital literacy are part and parcel of e-literacy.

The digital and internet world provides galore of e-resources and has tremendous benefits for us. E-resources play vital role for human growth. E-resources are important for learning, news, entertainment, socialization, personality development, skills and the like. Kavithanjali (2019) lists a number of importance of e-resources:

1. The information can be reserved always up-to-date.
2. Easy replication, retrieval and sharing of data.
3. Incorporation of multimedia is possible (Image, Sound, Video etc.)
4. Can even link up to related additional resources.
5. It can be preserved for a long time.
6. Saves time by providing easy and immediate access.
7. It is stored in digitalized format, so there is no need for printing and binding.
8. The cost of e-resources is less than the print version

E-resources are so much that at times we are perplexed to navigate for apt and useful information. The lack of policies and the inadequate e-literacy in schools could result in inefficiencies in professional levels. The upward trend in the use of internet and e-resources doesn't lead people to e-literacy. In fact, lack of e-literacy could lead to adverse impact on people particularly children.

Consumption of E-Resources among students

Romanov & Aarnio (2006) studied on the use of electronic scientific information resources among medical and dental students found out that the use differs from student to student and that too when they used they do not use the full-text articles. Information-searching skills are correlated with the use of e-resources. They also found out that adequate training in information-searching skills increases the use of electronic information resources.

Many studies are found on the use of internet among students. The study of D'Espasito & Gardner (1999) shows that university students prefer to use internet resources rather than classical library. Again, Brodphy & Bawden (2005) found out that students prefer to use search engines instead of e-libraries. So the ability to locate websites is more important than locating information itself (Lazonder, 2000).

While analysing on the electronic resources usage among ophthalmologists Kumar (2019) found out that there is an average level of e-resources usage skill and have some awareness

about the e-resources. Haridasan & Khan (2009) too points out that students and faculty members are aware and are using the e-resources for their research work and many faculty members strongly agreed that computer and internet literacy is important to access information.

Impact of E-Literacy Resources

Alodiedat & Eyadat (2008) found out that e-resources can have a positive impact on students' academic self-confidence. Studies show that using computer, internet and e-resources boosts students' academic self-confidence (Chachra et al. 2009; Nelson Laird, 2005; Park et al. 2012). Similarly, Chen & Pen (2008) examined the basic relationship between the internet use of university students and their academic performance and found out that it has both positive and negative impact on students. Alshahrani, Ahmed & Ward (2017) made a study among Kenya, Saudi and UK undergraduate students on the influence of online resources on student–lecturer and found out that the internet as an information provider has improved students' academic self-confidence.

Lebeničnik, Pitt & Starčič (2015) in their study found out that ICT, if used wisely, can be beneficial for learning. It can be a beneficial tool for establishing a learning environment that meets personal learning needs and for establishing inclusive environments in classrooms. Similar studies were done on the effects of the use of technology on students' academic performance (Limpach et al, 2008; Rouibah & Hamdy, 2009; Scott et al, 2008; Johnson, 2008; Lin et al, 2008; Yeh et al, 2008; Rochester & Pradel, 2008; Barak & Sadovsky, 2008). However, the common conclusion was that e-resources have a positive effect on students if used properly. On the other hand, some other studies manifest that accessibility of e-resources is still a major problem for many (Selwny, 2007).

Jones et al (2011) in their study found out that e-resources helps in the achievements of the students and in the faculty performance. Rather than just a one-way lecture method e-resources provides opportunities to students to learn independently and teachers can just facilitate (Moore et al, 2011). It is also found that existing research on the impact of e-resources is too broad and multi-purpose and does not reflect the students' views (Simsim, 2011).

Sulissusiawan & Salam (2017) made a study on students' use of online resources to enhance learning endeavours and concluded that the students had mixed experiences both positively

and negatively when collecting information online. At times irrelevant activities and unconstructive learning takes place and self-regulation is the key to success consumption of online resources.

Data Analysis and Presentation

Data collection was done two times – the baseline was collected prior to the intervention and the second was collected after the intervention, keeping in mind the research objectives formulated and the research design adopted. The implementation of the ELRP has impacted the consumption habits of the respondents to a great extent as seen when we compare the baseline data with that of the post-intervention data.

Table 1: Demographic characteristics of the respondents

Individual variables	Frequency
Gender	
Male	60(50%)
Female	60(50%)
Age Group	
Below 18	4.2%
18-20	83.3%
20-23	7.5%
Above 23	5.0%
Respondents who surf the internet	
Yes	93.3%
No	6.7%
Devices through which respondents surf internet	
PC	1.7%
Laptop	3.3%
Smartphone	77.5%
Tablet	1.7%
Two devices	14.2%
Three devices	1.7%
Others	0.0%

As presented in the table above, the respondents are equally distributed between males and females. Out of the 120 respondents, there are 60 males and 60 females. Majority of the respondents, 100 (83.3%) respondents are between the age group of 18-20 years, 9(7.5%) belong to the age group between 20-23 years old, 6(5%) are in the age group above 23 years old and 5(4.2%) respondents belong to the age group below 18. Most of the respondents, 93.3% have been surfing the internet on a daily basis and very few of them, 6.7% do not surf the internet. Again, most of the respondents use smartphone as a device to surf the internet

with 77.5% and very few of them use Laptop with just 3.3% and those who use PC or Tablet are minimal with just 1.7%. There are others with 14.2% who use at least two devices.

Table 2: Search engines by which the respondents surf internet (n=120)

Sl No		Pre-Intervention	Post- Intervention	P-Value
1	Google	93.3%	8.4%	
2	Yahoo	0.0%	4.2%	
3	Bing	0.0%	0.0%	
4	Ask	0.0%	1.7%	<0.001
5	Two of above	5.0%	57.1%	
6	Three of the above	1.7%	28.6%	
7	All of the above	0.0%	0.0%	

Using the Wilcoxin signed rank test, the p value obtained is <0.001, which is significant. Thus, we can see that the intervention brought about a significant change in the usage of the search engines. Before the intervention the respondents mostly only used google with 93.3%. However, there is a significant impact after the intervention as many of the respondents started using at least two with 57.1% and some of them use three search engines with 28.6%.

Table 3: Awareness and Consumption of Online or E-Newspapers by Students (n=120)

Sl No	E-Newspapers	Pre-Intervention		Post- Intervention	P-Value
1	Vernacular	Yes	5.8%	52.5%	<0.001
		No	94.2%	47.5%	
2	English Local	Yes	18.5%	100.0%	0.002
		No	81.5%	0.0%	
3	National	Yes	15.0%	100.0%	0.001
		No	85.0%	0.0%	

Various e-newspapers categorized into vernacular, English local and National were given intervention to the respondents. The table above shows that there is significant impact on the awareness and consumption of e-newspapers after the post-intervention in all the different categories of e-newspaper, namely, vernacular, English local and National with p-value of <0.001, 0.002 and 0.001 respectively. Among the vernacular e-newspapers prior to the intervention only 5.8% were aware but after intervention 52.5% are aware. Similarly, with English local e-newspapers from 18.5% it changed to 100% and National e-newspapers with 15% it changed to 100%. The intervention has made a significant impact on the awareness and consumption level of the respondents.

Table 4: Purpose of Consumption of E-Newspapers (n=120)

Sl No	Purposes	Pre-Intervention	Post- Intervention	P-Value
1	For education	54.2%	6.7%	
2	For information	10.0%	5.0%	
3	For relaxation	24.2%	0.0%	<0.001
4	Two of the above	10.8%	55.0%	
5	All of the above	0.8%	33.3%	
6	Any other	0.0%	0.0%	

There is a significant change in the purposes of consumption of e-newspaper with the p-value obtained as <0.001. Prior to the intervention the respondents mainly used only for education. But after the intervention the respondents use from 10.8% to 55% for at least two purposes and 0.8% to 33.3% use for all the purposes, that is, for education, for information and for relaxation. This shows, that the awareness and understanding of the purposes become clearer among the respondents after the intervention. Thus, we can see that the intervention brought about a significant change in the purposes of consumption of e-newspapers.

Table 5: Time spent in reading E-Newspapers (n=120)

Sl No	Time	Pre-Intervention	Post- Intervention	P-Value
1	Less than 1 hrs	86.7%	37.5%	
2	1-2 hrs	5.0%	62.5%	0.001
3	2-3 hrs	0.0%	0.0%	
4	Any other	8.3%	0.0%	

The table above shows that there is significant change in the time spent in reading e-newspapers with p-value 0.001. Prior to the intervention the respondents spent mostly less than one hour with 86.7% and only 5% spent between 1-2 hours. After the intervention we see that most of the respondents spent between 1-2 hours with 62.5% and those who spent less than one hour decreases to just 37.5%. This shows that most of the respondents now spent more time in reading e-newspapers.

Table 6: Awareness of databases and useful websites (n=120)

Sl No	Websites		Pre-Intervention	Post- Intervention	P-Value
1	Wikipedia	Yes	89.2%	100.0%	0.0001
		No	10.8%	0.0%	

2	Google Scholar	Yes	20.8%	100.0%	0.01
		No	79.2%	0.0%	
3	JSTOR	Yes	5.0%	95.0%	<0.001
		No	95.0%	5.0%	
4	National Digital Library of India	Yes	6.7%	93.3%	<0.01
		No	93.3%	6.7%	
5	National Library and Information services	Yes	5.0%	96.7%	0.001
		No	95.0%	3.3%	
6	https://doaj.org/ (Direct Open Access Journals)	Yes	2.5%	90.0%	0.01
		No	97.5%	10.0%	
7	http://www.e-journals.org/	Yes	11.7%	80.8%	0.001
		No	88.3%	19.2%	
8	https://www.omicsonline.org/ (Open Access OMICS)	Yes	0.0%	89.2%	0.01
		No	100.0%	10.8%	

The table above shows that there is significant difference in the awareness level of databases and of useful websites prior and post intervention. Most of the respondents prior to the intervention are aware only of Wikipedia but after intervention most of them are aware of all others. The impact is significant with p-value 0.0001 of Wikipedia, 0.01 of Google Scholar, <0.001 of JSTOR, <0.01 of National Digital Library of India, 0.01 of Direct Open Access Journals, 0.001 of http://www.e-journals.org/ and 0.01 of Open Access OMICS. The change is seen particular with regards to Google Scholar from 20.8% to 100.0% and Open Access OMICS from 0% to 89.2%. Thus the intervention made a huge difference in the awareness of useful websites among the respondents.

Table 7: Consumption of databases and useful websites (n=120)

Sl No	Websites	Pre-Intervention		Post-Intervention	P-Value
1	Wikipedia	Yes	85.8%	100.0%	<0.01
		No	14.2%	0.0%	
2	Google Scholar	Yes	15.8%	75.8%	0.01
		No	84.2%	24.2%	
3	JSTOR	Yes	4.2%	90.0%	0.001
		No	95.8%	10.0%	
4	National Digital Library of India	Yes	5.8%	60.8%	<0.01
		No	94.2%	39.2%	

From the table above it is seen that there is significant change in the consumption of databases and websites post intervention with Wikipedia p-value of <0.01, Google Scholar 0.01, JSTOR 0.001 and National Digital Library of India with <0.01. The change is seen

particular with regards to Google Scholar from 15.8% to 75.8%, JSTOR from just 4.2% to 90% and National Digital Library of India from 5.8% to 60.8%. Hence, the intervention has made a significant impact in the consumption level.

Table 8: Awareness of databases and e-books websites (n=120)

Sl No	Websites	Pre-Intervention		Post-Intervention	P-Value
1	World-ebooks Library	Yes	17.5%	100.0%	0.001
		No	82.5%	0.0%	
2	Ebrary-ebooks	Yes	2.5%	100.0%	0.002
		No	97.5%	0.0%	
3	Archieve.org	Yes	15.8%	100.0%	0.001
		No	84.2%	0.0%	
4	http://www.readprint.com	Yes	8.3%	70.0%	<0.001
		No	91.7%	30.0%	
5	https://www.gutenberg.org	Yes	6.7%	75.0%	<0.01
		No	93.3%	25.0%	
6	https://www.bookyards.com	Yes	8.3%	71.7%	<0.01
		No	91.7%	28.3%	
7	https://bookboon.com	Yes	2.5%	74.2%	<0.001
		No	97.5%	25.8%	

The table above shows that there is significant impact in the awareness level among all the respondents post intervention of databases and e-books websites such as World-ebooks Library, Ebrary-ebooks, Archieve.org, http://www.readprint.com, https://www.gutenberg.org, https://www.bookyards.com and https://bookboon.com with p-value of 0.001, 0.002, 0.001, <0.001, <0.01, <0.01 and <0.001 respectively. The intervention has made significant change particularly with World-ebooks Library from 17.5% to 100%, Ebrary-ebooks from 2.5% to 100% and Archieve.org from 15.8% to 100%.

Table 9: Consumption of databases and e-books websites (n=120)

Sl No	Websites	Pre-Intervention		Post-Intervention	P-Value
1	World-ebooks Library	Yes	0.0%	63.3%	0.001
		No	100.0%	36.7%	
2	Ebrary-ebooks	Yes	0.0%	70.8%	0.001
		No	100.0%	29.2%	
3	Archieve.org	Yes	.8%	72.5%	0.001
		No	99.2%	27.5%	
4	http://www.readprint.com	Yes	0.0%	65.0%	0.01
		No	100.0%	35.0%	

5	https://www.gutenberg.org	Yes	0.0%	61.7%	0.01
		No	100.0%	38.3%	
6	https://www.bookyards.com	Yes	0.0%	63.3%	<0.01
		No	100.0%	36.7%	
7	https://bookboon.com	Yes	0.0%	60.8%	<0.001
		No	100.0%	39.2%	

From the table above it is seen that there is significant change in the consumption of all e-books post intervention with World-ebooks Library p-value of 0.001, Ebrary-ebooks p-value of 0.001, Archieve.org p-value of 0.001, http://www.readprint.com p-value 0.01, https://www.gutenberg.org p-value of 0.01, https://www.bookyards.com p-value of <0.01 and https://bookboon.com p-value of <0.001. The change is particularly seen of Ebrary-ebooks from 0% to 70.8%, Archieve.org from 0.8% to 72.5% and the others as well.

Table 10: Purpose of Consumption of internet (n=120)

Sl No	Purposes	Pre-Intervention	Post- Intervention	P-Value
1	For education	21.7%	0.0%	
2	For entertainment	13.3%	0.0%	
3	For information	23.3%	0.8%	
4	For relaxation	0.8%	0.0%	<0.001
5	Two of the above	29.2%	17.5%	
6	All of the above	7.5%	31.7%	
7	Any other	4.2%	50.0%	

From this table above it is seen that the intervention has made a significant impact on the purposes of consumption of the internet with p-value <0.001. Prior to the intervention the respondents mainly consume the internet for information with 23.3%. But after the intervention there is a change in the purposes for consuming the internet. The change is seen as some of the respondents started using for all of the mentioned purposes from 7.5% prior to the intervention to 31.7% post intervention and others used for many other purposes from just 4.2% prior to the intervention to 50% post intervention.

Table 11: Time spent in surfing the internet (n=120)

Sl No	Time	Pre-Intervention	Post- Intervention	P-Value
1	Less than 1 hr	29.2%	10.8%	
2	1-2 hrs	36.7%	46.7%	0.007
3	2-3 hrs	26.7%	42.5%	
4	Any other	7.5%	0.0%	

There is significant impact in the time spent surfing internet among the respondents post intervention with p-value 0.007. Prior to the intervention the respondents most spent less than 1 hours and between 1-2 hours with 29.2% and 36.7% respectively. However, after the intervention the respondents mostly spent in between 1-2 hours and 2-3 hours with 46.7% and 42.5% respectively. This shows that the intervention made significant impact.

Discussion of Major Findings

It is said information is power. The greatest challenge today in this digital era is to keep pace with the rapid growth of information. There is galore of information of various forms in the internet. Hence, to have the ability to identify and access the e-resources, evaluate and determine the relevance of these e-resources, consume responsibly, constructively create them and effectively use for our benefits is becoming very challenging. E-literacy can provide the solution. Yet very little is being done to provide e-literacy. E-literacy is not provided in schools, colleges, in the society or even in the family at present. So the present and future generation is bereft of the most needed e-resources for their growth. The study done reveals clearly that if there is proper guidance in the form of e-literacy the youth can have better consumption of e-resources.

The ELRP was grouped into e-books, e-newspapers, e-library sites, e-journals, search engines, useful websites and online databases. The above resources were imparted to the experimental group to create awareness, understanding and conviction. This was done with an aim to provide e-literacy among the respondents and thus in turn impact their literacy level and their consumption pattern. The impact was obvious in every area of ELRP.

There was significant change in the awareness and consumption of all the e-newspaper, namely, vernacular, local English and national. The motivation by which they consume the e-resources (p-value <0.001) and the time spent (p-value 0.001) affirmed the impact.

The impact in awareness and consumption is seen after the intervention in other areas of the ELRP as well. In the area of awareness among the search engines there is significant impact in Google scholar (p-value 0.01) from just 20.8% it jumped to 100%, among the databases there is significant change in JSTOR (p-value <0.001) from 5% to 95% and National Library and Information services (p-value 0.001) from 5% to 96.7%. The same pattern is seen in the consumption level too.

Among the e-libraries and e-books there is significant impact on the level of awareness on World-ebooks Library (p-value 0.001), Ebrary-ebooks (p-value 0.002) and Archieve.org (p-value 0.001) and in the consumption the significant impact is also seen on the same e-resources mentioned above with p-value of 0.001 in all the three.

As with any study, this study has some limitations. One possible weakness is that the ELRP is limited to some e-resources only. It is not an exhaustive of all useful e-resources and the implementation and assessment is done only once. Furthermore, this study took just a small sampling size which may not reflect the overall population. The research findings should therefore be generalised with caution.

This study shows that younger generation do not have sufficient knowledge about the availability of e-contents and lack the judgement to scoop the best from the sea of e-contents for their own benefits. With the guidance of experience and knowledgeable persons they can become e-literate and thus consume e-resources more fruitfully.

Furthermore, this research paves a way and provides a starting point for longer-term and larger-scale studies on the impact of e-literacy on various fields and on a personal level. It provides indicators on the importance of one-on-one inter-personal communication for better results. As more and more high-quality online contents are available and most data is being converted to digital, e-literacy is becoming a basic need for a human person.

10. Recommendations and Conclusion

All types of data are becoming digital today. The e-resources are increasing enormously every second. It is becoming the preferred format for everyone. Hence, e-literacy should be provided at all levels and in every section of the society so that people could navigate fruitfully in this sea of e-resources. This in turn could empower individuals, society and nation and thus create an information society.

On the other hand, e-literacy is an emerging field. There is no e-literacy being provided in schools or colleges. Neither do we have any institution that cater to this important field. At the same time the youth today spent hours of their time engaging in e-resources. Therefore, it is the need of the hour that e-literacy should be made part and parcel of the educational system from the school up to the university level so that the youth know the proper and

responsible use of e-resources for their own advantage. Policies should be formulated to streamline this need. Information providers including libraries too need to incorporate e-literacy as part of their services to users.

It is recommended that parents and teachers too need to acquire e-literacy so that they could impart the same to their ward. Children consume e-resources right before they start schooling and hence e-literacy should begin at home. Guidance and instructions should be provided first and foremost by parents at home so that their wards become e-literate. The findings of the present study further enable us to know the e-resources consumption pattern of the respondents. It is, therefore, recommended that proper guidance should be given to young people for better consumption of e-resources as they grow up. This could be done through e-literacy. Moreover, a comprehensive research needs to be done in this area so that appropriate models could be formulated for the benefit of all.

E-resources are becoming the new format of resources particularly during pandemic. As resources are growing exponentially every second it is difficult to keep track of them and to navigate the important resources. Guidance from parents, teachers and information learned persons can help people particularly children and youth become aware and consume e-resources for their advantage. For this, they must acquire e-resources literacy. Hence, e-resources literacy is very important today than ever.

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