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Assessing Digital Literacy Competence among the Undergraduate Students in Rural Area: A Survey

Dr. Nutan Joshi[1], Raghvendra Tripathi[2]

[1,2]Librarian, Govt. KRG PG Autonomous College, Gwalior (M.P.)

ABSTRACT

This paper aims to assess the level of digital literacy skills of undergraduate students of the arts and science streams and attempts to examine their awareness of digital resources, frequency of using digital resources, awareness of online sharing tools, and purpose of using digital resources. The paper uses a survey research approach to carry out this investigation. The study reveals that the majority of the students of all three streams are awareness of digital resources, online sharing tools and there is no difference among students regarding in awareness of digital resources.

Keywords: Digital Literacy, Information Literacy, Undergraduate Students, Online sharing tools

1. INTRODUCTION:

In the recent decades we have been witnesses of a rapid growth in the field of information and communication technologies (ICT) development. New technologies have been infiltrating all parts of everyday life, changing and modifying the ways people communicate, work, spend their leisure time and also study. The trend of development is so intensive that we are confronted with the constant increase of new technologies every few years. It is impossible to predict what will be the direction of development in the future, but it is certain that we will have to adapt and learn new things brought by new technologies. The development of new technologies results in a requirement for improvement of new human capacities. Different social and technological discoveries redesign almost every aspect of human life, generating the need for new literacies such as Information and Communication Technology (ICT) literacy, digital literacy, computer literacy, technological literacy, media literacy, information literacy, and other (Ivankovica *et.al.*)[1]

The traditional definition of literacy is the ability to read and write, listen and speak and enumerate. As various technologies proliferate in all sphere of society, the term digital literacy is receiving prominence. The term 'Digital literacy' was first defined by Gilster[2] as "the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers."

Wikipedia[3] defined Digital literacy is the knowledge, skills, and behaviors used in a broad range of digital devices such as smart phones, tablets, laptops and desktop PCs, all of which are seen as network rather than computing devices.

In the technological dominant era, digital literacy skills are an important part of everybody life in 21st century. Most careers demand some level of understanding of how to use compute, how completely navigate the internet, and find reliable information, how communicate electronically and how to manage

data. Therefore it is an important for an individual to be aware digital technology and to realize that digital literacy is an ongoing process that depend the need of the situation. Those who are not digital literate will be at distinct disadvantage as the world is being significantly impacted on by digital technologies.

2. REVIEW OF LITERATURE:

There have been many studies focused on different aspects of ICT literacy, computer literacy, use of internet and e-resources by the students of various colleges and universities in India and outside India. However, this review focuses primarily on the studies related to digital literacy among students. Bansode[4] reported the ICT literacy skills of the research students of University of Pune to access information from the web and found that they require developing some skills such as of copyright and plagiarism so as to use the information in a proper way. Parvarthamma and Pattar [5] carried out the study among management students in six institutions of higher education in Devanagere district in Karanataka state shows that respondent have own personal computer and 73.33% of them of internet connectivity. Laptop, smart phone, I-Pod and digital camera are widely used tools. A study of Tabusum, *et.al.*[6] was undertaken in the Tiruvallur District of Tamil Nadu to understand the digital competency of Arts and Science Students found that arts and science students are digitally literate. Majority students are average in computer literacy level. Dubey[7] studied the digital competency, use of digital resources and the proficiency in the using digital information among commerce and science students. Saleem, *et.al.* [8] studies found that majority of male students spend daily on computers and majority of the female student's usage computer weekly. Majority of students can usage MS-Word among various offices software. Excel is more used by female students whereas power point is used more by male students. Ezinne & Eberechukwu[9] investigate gender differences in the computer literacy levels among undergraduate students of Faculty of Education, Kogi State University, Anyigba. Findings revealed that students with computer literacy were inclined to access and use of e-resources and e-library facilities better. Moreover, differences exist in digital/computer usage and software applications. Sevukan and Gomathy [10] made an attempt to assess the digital literacy skills of post-graduate students from management institutions in Puducherry. The result revealed that 72.6% of the respondents were aware of digital sources and 24% of students used digital sources always for academic and entertainment purposes. Online sharing tools like Email, Facebook, Google+, Youtube and Skype were very familiar among the respondents. Elsevier, Blackwell, Springer, INFORMS, CMIE were found to be familiar among the PG students of the institutions under study. Deepthi *et.al.*[11] assesses the internet literacy level among the medical college students of Bijapur city. A structured questionnaire is used for data collection. Investigators found that a vast majority of the students learnt to use Internet by themselves or with the assistance of their friends and preferred to use it in their home on their mobile phones.

3. OBJECTIVES OF THE STUDY

The main objective of the study is to is to know the digital competence among graduate students in arts and science faculty. Specifically the study found out;

1. To find out the awareness of digital resources among undergraduate students.
2. To find out frequency of using the digital resources among undergraduate students
3. To identify different purposes that the digital resources used for by the undergraduate students.

4. METHODOLOGY, SCOPE AND LIMITATIONS:

This study was carried out during the June-July 2022 academic session and was limited to undergraduate students from the Govt. MJS College Bhind and Govt. PG College Datia of Madhya Pradesh. The data collection instruments used for this study were a questionnaire and observation. The questionnaire was structured to identify important measurable variables associated with the awareness and use of digital tools and resources. A random sampling technique was used to select students from these two colleges. One hundred fifty copies each of the questionnaire were distributed to students. Out of 150 copies of the questionnaire administered, 130 copies were returned, constituting an 86.17% response rate. The gathered data was processed through Excel programming package for analysis and subsequent interpretation. It adopted simple percentage analysis.

5. RESULT AND DISCUSSION:

1. Demographic Information:

A total of 130 out of 150 respondents returned the giving response rate 86.67%. Among 130 respondents, there were 85 (65.38%) male and 45 (34.61%) female respondents.

All the respondents fall in the age group of 19-25 years. Among the respondents, 51 (39.23%) were from Science, 48 (36.92%) were from Arts and 31(23.84) from commerce faculty.

Table 1. Demographic Profile of Respondents

Characteristics	No. of Respondent	%
Gender		
Male	85	65.38
Female	45	33.84
Total	130	100
Age		
19-20	39	30.00
21-22	34	26.15
23-25	31	23.84
Above 25	26	20.00
Total	130	100
Faculty		
Arts	48	36.92
Commerce	31	23.84
Science	51	39.23
Total	130	100

2. Awareness of digital resources:

In view of the benefits and relevance of digital resources to the students in their educational activities in the emerging electronic environment, the respondents were asked to indicate their awareness of digital resources as in Table2. From the results, out of 130 students 105 (80.76%) of them had awareness about desktop and majority of 89 (68.46%) students were aware of laptop. Further, 94 (72.30%) students were aware about smart phone, 69 (53.07%) students were aware of mobile through internet access, 81 (62.30%) students had awareness about pen drive, 62(47.69%) students had awareness about CD-ROM.

However, only a small number of 45 (34.69%) and 41 (31.53%) students had awareness about scanner and digital camera respectively. This reveals that students are familiar and comfortable with the latest technology that provides them with quick and timely access to information.

Table 2. Distribution of awareness of digital resources

Digital Resources	Yes	%	No	%	Total
Desktop	105	80.76	25	19.23	130
Laptop	89	68.46	41	31.53	130
Smart phone	94	72.30	36	27.69	130
Mobile with internet access	69	53.07	78	60.00	130
Pen drive	81	62.30	49	37.69	130
Scanner	45	34.68	85	65.38	130
Digital Camera	41	31.53	89	68.46	130
CD-ROM	62	47.69	68	52.30	130

3. Frequency of using of digital resources:

The frequency of using digital resources among respondents ranged from daily use to occasional use. The analysis shows majority of the respondent use the Internet frequently, as evidenced in Table 3. Hence, it could be inferred that all respondent are found to be making use of the digital resources more frequently.

Table 3. Frequency of using of digital resources

Digital Resources	Always	%	Frequently	%	Occasionally	%	Never	%
Desktop	43	33.7	37	28.46	34	26.15	16	12.30
Laptop	21	16.15	35	26.92	35	26.92	39	30.00
Smart phone	69	53.7	23	17.69	17	13.07	21	16.15
Mobile phone with internet access	49	37.69	30	23.07	39	30.00	12	09.23
Pen drive	59	45.38	33	25.38	28	21.53	10	07.69
Scanner	34	26.15	22	16.92	43	33.07	31	23.84
Digital Camera	32	24.61	16	12.30	25	19.23	57	43.48
CD-ROM	48	36.92	21	16.15	29	22.30	32	24.61

4. Purpose of using of digital resources:

The digital technology is a major learning and research tool with a lot of academic resources and information to support students in their day-to-day academic endeavors in the college. The respondents were asked to indicate different academic purposes that they use the digital technology for in support of their activities as shown in Table 4. According to the data, entertainment (83.07%) and personal reasons (81.53%) was the main purpose of using the digital resources followed by study (68.46%) and finding general information (60.76%). Faculty-wise analysis clearly indicates that the respondents belonging to faculty of Science are ahead of Arts and Commerce among those who use the digital resources.

Table 4. Purpose of using of digital resources

Faculty	Purpose

	To study	Entertainment	General	Personal	Others
Arts	23	36	29	32	28
Commerce	21	32	24	29	22
Science	45	27	25	38	23
Total	89	108	79	106	73
%	68.46	83.07	60.76	81.53	56.15

5. Awareness on online sharing tools:

Online sharing is a new way of communication on the Internet. It is a form of interactive communication between persons or groups of persons or organisations. The students were asked to indicate the awareness about social networking sites and the responses have been summarised in Table 5. The analysis shows that a majority (75.4 per cent) of the students were aware of email (86.15%) and Face Book (89.34%). More than 90% respondents were aware of new emerging online tool i.e. WhatsApp. Nearly 75 % respondents were of You Tube, Picasa and Google+. More than half of the students were aware of Blogs (56.15%), Wikis (60.73%) and LinkedIn (64.61%). Only a small per cent of the students were aware of the sites like Flickr (36.15%), Twitter (46.15%).

Table 5. Distribution of awareness on online resources

Online Tools	**Arts**		**Commerce**		**Science**		**Total**			
	Yes	No	Yes	No	Yes	No	Yes	%	No	%
E-mail	39	9	28	3	45	6	112	86.15	18	13.84
Blog	22	26	19	12	32	19	73	56.15	57	43.86
Face Book	41	7	29	2	45	5	116	89.34	14	10.76
Twitter	15	33	22	9	23	28	60	46.15	70	53.84
You Tube	31	17	26	5	40	11	97	73.84	33	25.38
Picasa	34	14	25	6	39	12	98	75.38	32	24.61
Wikis	21	27	20	11	38	13	79	60.73	51	39.23
Flickr	11	37	15	16	21	30	47	36.15	83	63.84
Google+	32	16	24	7	37	14	93	72.30	37	28.46
LinkedIn	28	20	22	9	34	17	84	64.61	46	35.38
WhatsApp	42	6	30	1	48	3	120	92.30	10	07.67

6. Usefulness on online resources:

As regards the usefulness of online resources, 76.15% respondents said that online resources play the role of an sharing ideas, 73.07% respondent indicate that it has interactive medium of communication, 62.30% respondents said that social media acts as a source of information, 56.92% respondents said that social media bridges communication gap.

Table 6. Usefulness on online resources

Online Tools	**Arts**	**Commerce**	**Students**	**Total (n=130)**	**%**
Interactive medium	33	23	39	95	73.07
Source of Information	24	21	36	81	62.30
Bridge communication gap	29	18	27	74	56.92
Sharing Ideas	31	25	43	99	76.15

Crisis communication tool	25	12	22	59	45.38
Others purpose	30	17	20	67	51.15

6. FINDINGS:

The present study aimed at ascertaining Awareness and Use of online resources among undergraduate students of Faculty of Arts, Commerce and Science taking the samples from UG students. It was found that most of the UG students of Arts, Commerce and Science faculty are very much aware of digital resources and use most of the applications of online tools. The study reveals that among 130 respondents, 48 are students of Arts, 31 are commerce and 51 are science faculty. Based on the analysis of the survey, the findings of the study have been summarized below:

1. It indicates that almost all of the respondents are well aware of the online resources applications in all three the faculties, which table 2 indicated.
2. From this study it was evident that all the respondents are aware of desktop computer, laptop, mobile phones, pen drive, internet surfing. It indicated the students from all three streams had no difference in awareness of digital resources.
3. Most of the respondents use digital tools i.e. Computer, smart phone, pen drive, CD-Rom frequently. However, few of them respondents use scanner occasionally and near about half of the respondents never used digital camera.
4. After analyzing the frequency of using digital tools, it is found out that majority of respondents are using digital tools for entertainment and personal purpose rather than study and finding information relating to course or general knowledge as shown in table IV.
5. It is observed that majority of respondents of all faculty have been aware of Email, Face Book, You Tube and WhatsApp tools in comparison to other resources viz. twitter, flickr of online tools.
6. It was found that science streams students are more familiar in with online tools in comparison to arts and commerce faculty. These include email, face book, blog, You Tube, Wikis, WhatsApp. It was found that near about ninety percent respondents are aware and use WhatsApp tool which seen the popularity among students community.

7. CONCLUSION:

The present study seeks to examine the awareness of digital resources by the students in college. The survey reveals that all the respondents are aware of digital resources such as computer, laptop, smart phone etc. From this survey, the investigator has been able to find out that majority of respondents are using frequently digital resources. Among digital resources, respondents frequently use mobile phone for accessing information on internet. It is found that most respondents use digital resources for entertainment and personal use while few respondents use for study and updating their knowledge. Moreover, majority respondents are aware about online sharing tools like email, face book, blog, WhatsApp. Less number of respondents is aware about online sharing tools such as twitter, flickr, LinkedIn. Data shows that science students are more familiar with online sharing tools compared to arts and commerce students. The overall finding of the study is that the science students showed higher level of computer literacy, which seems to be less among the arts and commerce students. This finding shows that the science students have better exposure to online resources. Due to the availability of huge amount of information over the web, it is important for UG students to be computer or digital literate. This finding illustrates the importance of digital literacy to students in educational institutions in general.

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