

Are They Really Aware? A Digital Venture for Addressing "Digital Literacy" among the P.G. Students at the University of North Bengal

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The ability to locate, organise, assess, analyse, and utilise using digital technology is referred to as digital literacy. It entails having a working knowledge of several technologies as well as understanding how they might be employed. The study's main objective was to determine the literacy of using digital resources by postgraduate students of the University of North Bengal, West Bengal. The present study also determines the student's level of ICT skills, frequency of internet use by the respondents, determines their awareness of various databases, as well as their expertise with various search algorithms for retrieving E-resources. The study also highlights the Mann-Whitney U Test on the Digital literacy level of the P.G. Students with a two-tailed result where "Male" higher than "Female" or "Female" higher than "Male" doesn't matter. The significant findings of the study highlight the association between "Frequency of use of the library" and "Satisfied with services provided by the library" with a p-value: 0.2496, Pearson's Chi-Square statistic as 10.224 and Degrees of Freedom (df) as 8. It was also found that P.G. students rated their digital skills as High (a total mean of 3.809). The parameter with the highest mean (4.33) was "Learning may be enhanced by employing digital tools and resources," and the parameter with the second highest mean (4.26) was "training in technology-enhanced language learning should be incorporated in language education programs."

Introduction

In today's global academic system, digital literacy skills are essential for good academic performance and professional effectiveness. It lessens the challenges of using and accessing electronic information resources, which have evolved into a preference for effective learning and research in educational institutions throughout the world's developed nations. Universities in wealthy countries are constantly revising their digital literacy curricula to keep up with the quickening pace of technological advancement. There are varieties of digital devices that are expertly handled and controlled by librarians to give excellent services to users. The library users can now access curriculum, library, and course materials through educational software, digital tools, and resources. The spread of information, globalization, and the usage of digital technology has transformed the globe into a community where everyone has access to and uses these tools regularly. Unfortunately, digital literacy abilities are underutilized in many libraries. The acquisition of hybrid information resources, their categorization, retrieval, and dissemination to all types of potential users for their accessibility and usage are just a few of the numerous issues that librarians worldwide confront on the job.

- ❖ Respect for diversity and local context
- ❖ Through this study, we sought to determine the extent to which students were aware of the library's digital literacy programme.
- ❖ This study sought to ascertain the extent to which students could use online services provided by the library, such as WebOPAC and institutional repositories.
- ❖ It has been established how keenly the students were interested in the RFID system in the library and in understanding how to develop their digital literacy skills.
- ❖ This study demonstrates how competent the students were at utilizing the library's electronic resources.
- ❖ This study demonstrates to the students their level of competency with various digital gadgets.

2. University of North Bengal

The University of North Bengal was founded in 1962 by an Act of the West Bengal Legislature with the mission of "encouraging and providing instruction for teaching, training, and research in various branches of learning and course of study; promoting advancement and dissemination of knowledge and learning and extending higher education to meet the growing needs of society." Since its founding in 1962, the University of North Bengal has provided higher education and research to this socioeconomically underdeveloped region. The university has taken on the hardship of knowledge dissemination in response to global advancements and requirements in the fields of higher education and research by carefully expanding its role in cutting-edge, unconventional, applied, and job-oriented areas while maintaining the quality of education at par with global standards at an affordable price. The university has made efforts to achieve excellence while fostering qualitative growth. The Departments have been awarded academic distinctions and recognitions and are well-equipped with research programmes from various agencies.

2.1. The University Library

The University Library was founded in 1962 to serve the academic and research requirements of students, researchers, and teachers. The university library offers books, journals, and current information on various topics to assist various university community members, including teachers, academic researchers, students, and officials. The university library has acquired a significant collection of books in every field of science, literature, commerce, and management. The library is a member of the E-Shodhsindhu Consortium, which offers online journal subscriptions. The library is automated utilizing INFLIBNET's integrated library management software SOUL 3.0, which incorporates RFID technology.

3. Literature Review

Before completing the survey and drafting this paper, few studies were consulted. Prakasha & Muniyappa (2017) studied digital literacy among students and research scholars at Bangalore University's Faculty of

Science. According to the study's findings, 75% of respondents require electronic information in addition to traditional print sources. It was also evident that the library would lead to the development of university students' information literacy. Prakasha, S. N. and Muniyappa, K. N. (2017). A Study on Digital Literacy among Students and Research Scholars of Faculty of Science in Bangalore University and providing undergraduate students of Library and Information Science with additional insights into the notion and imperatives of digital literacy abilities concerning the use of electronic information resources, According to Emiri (2015), Martzoukou and Elliott (2016), and Kaeophanuek, Na-Songkhla, and Nilsook (2018), digital literacy skills encompass a wide range of knowledge, competencies, skills, attitudes, and behaviors required to work with and utilise digital devices such as smartphones, tablets, laptop computers, and desktop computers as a network of technologies in performing tasks competently and effectively. Furthermore, Obaseki (2014) confirmed that electronic information resources are available online and accessible through technological devices. Krishnamurthy and Shettappanavar (2019) stated that The ability of an individual to discover, organise, evaluate, and utilise essential information utilising digital technology is referred to as digital literacy. It includes a working knowledge of several technologies. The study's goal was to measure the literacy of female postgraduate students at Karnatak University in using digital resources. Female Postgraduate students of Karnatak University and Kaeophanuek, Na-Songkhla, & Nilsook (2018); Sharpe, (2010) explained digital literacy skills have become sine-qua-non and play fundamental roles for university students in this digital. According to Udoh, Ekpenyong, and Olowookere (2020), information literacy skills on using information resources by future teachers. To know the level of information literacy among future teachers, further Neogi and Partap (2019) focused on the issue of how much information competencies are universal in the globalized, internet-connected world and to what extent their perception depends on local conditions and individual needs and the comparative study covered subgroups of humanities and social science students from Poland and Spain. G³owacka, Kisilowska, and Paul (2020) explained a well-established need for academic libraries to demonstrate their impact on student learning, mainly through the application of measurable outcomes in information literacy instruction. Erlinger (2018) sought to investigate the perspectives of Thai university library and information sciences instructors and students on teaching and learning environments for the development of digital literacy skills, and Kaeophanuek al. (2018) explored the impact of librarian-student interaction on the perception of the librarian as competent and available, using library services, and information literacy competence in small universities and colleges.

4. Objectives

The main objectives of the study were:

1. To know the level of ICT skills of the respondents.
2. To find out the frequency of use of the internet by the respondents.
3. To examine the information search strategies adopted by the respondents.

4. To assess the awareness of databases among the respondents.
5. To ascertain the awareness of Plagiarism among the respondents.
6. To know respondents' problems while accessing the electronic information resources.

5. Materials and Methods

The study's findings apply to the University of North Bengal students' levels of digital literacy who are library patrons and may or may not use by students at other universities.

The questionnaire has been designed only for the students who are members of the University of North Bengal library, and it may or may not be valid for the other postgraduate and undergraduate students of the university.

6. Data Analysis and Discussion

The data analysis was based on the 213 responses received against distributed 300 questionnaires. In addition, statistical measures were taken to substantiate the data from Likert-type Scales, and narrative analytics were made the data collected.

Table 1: Mann Whitney U Test on Digital literacy level of the P.G. Students.

Digital literacy measurement	Abbreviation	Gender	Z	Mann-Whitney U	Two-Tailed P-value
Assessing WebOpac/ Institutional repository services of the University Library	A	Male=92 Female=119	0.837	4730 ^f	0.07722 ^a
Awareness of Digital Literacy Program in the University Library	B	Male=92 Female=119	0.842	4572 ^g	0.03220 ^b
Frequency of use of the library	C	Male=92 Female=119	0.780	4876.5 ^h	0.1638 ^c
Has there been any improvement in your digital literacy because of the RFID system in the library?	D	Male=92 Female=119	0.994	5421 ⁱ	0.9009 ^d
Satisfied with services provided by the library	E	Male=92 Female=119	0.812	3976.5 ^j	0.4168 ^e

From Table-1, Results of Mann Whitney U Test of “A,B,C,D,E “ for Gender “Male” vs. “Female” The Mann-Whitney U test is used to compare whether there is a difference in the dependent variable for two independent groups. It compares whether the distribution of the dependent variable is the same for the two groups and, therefore, from the same population. ^{a,b,c,d,e}p are higher, e.g. greater than 0.01, we can assume that. there is no difference between “Male” and “Female.” The result is a two-tailed one, i.e., based on the likelihood of a difference where the direction (“Male” higher than “Female” or “Female” higher than “Male”) doesn’t matter. ^{F,g,h,i,j} These are based on the results of matches between the “Male” and “Female” groups. In each match, the winner is the one with the highest “A,B,C,D,E,” i.e., half the number of possible matches (i.e., half of 92 x 119 in this case, i.e., 5474.0) the more unlikely the difference is by chance alone and the more statistically significant it is.

Results of ANOVA test of average “How would you rate your digital literacy” for Gender groups from “Female” to “Male.”

Table 2: Analysis of variance table

Source	Sum of Squares	df	Mean Sum of Squares	F	p ¹
Between	7.266	1	7.266	10.705	1.250e-3
Within	141.871	209	0.679		

O’Brien’s test for homogeneity of variance: 0.02623²

Table 3: Group summary details

Group	N	Mean	CI 95% ³	Standard Deviation ⁴	Min	Max	Kurtosis ⁵	Skew ⁶	p abnormal ⁷
Female	119	3.571	3.440 - 3.703	0.732	2.0	5.0	-0.483	0.469	0.05484
Male	92	3.946	3.756 - 4.136	0.930	1.0	5.0	0.636	-0.798	3.842e-3

1. P is greater than 0.01, and we can assume there is no difference between at least two groups and thus is a one-tailed result.
2. The value is greater than 0.01; we can assume there is no difference in variance.
3. There is a 95% chance the population means is within the confidence interval calculated for this sample.
4. Standard Deviation measures the spread of values.
5. Kurtosis measures the peakedness or flatness of values. Between -2 and 2 means kurtosis is unlikely to be a problem. Between -1 and 1 means kurtosis is quite unlikely to be a problem.
6. Skew measures the lopsidedness of values. Between -2 and 2 means skew is unlikely to be a problem. Between -1 and 1 means skew is quite unlikely to be a problem.
7. This provides a single measure of normality. For example, if p is greater than 0.01, we can assume the distribution is strictly normal.

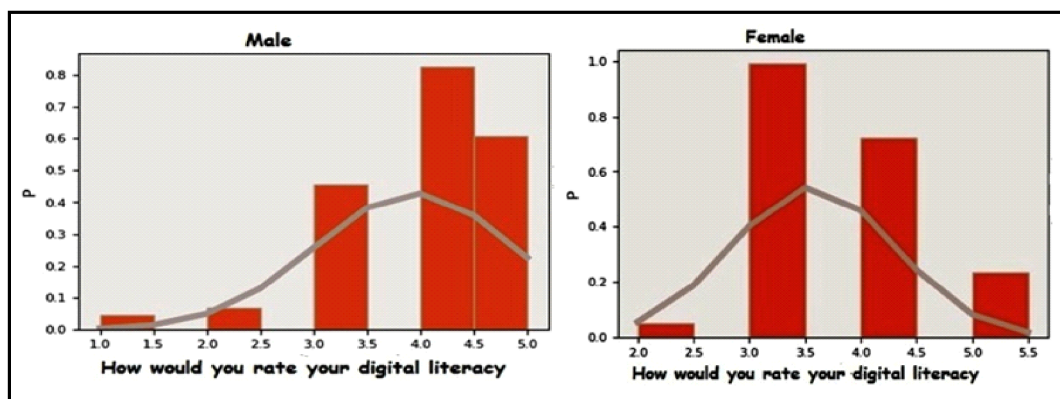


Figure 1. Male Vs. Female digital literacy

Figure -1 illustrates the comparison in digital literacy skills between male and female university students

Results of Pearson’s Chi-Square Test of Association Between “Frequency of use of the library” and “Satisfied with services provided by the library.”

p-value: 0.2496¹

Pearson’s Chi-Square statistic: 10.224

Degrees of Freedom (df): 8

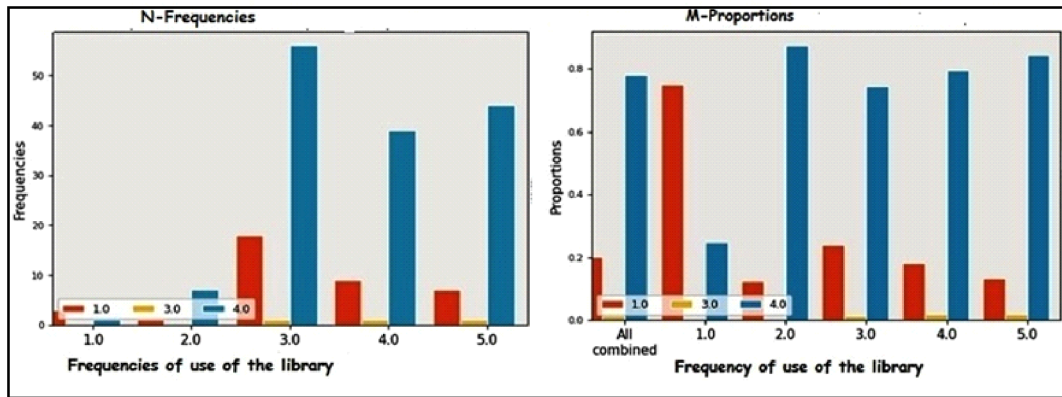
Table 4: Frequency of use of the library vs. Satisfied with services provided by the library

		Satisfied with services provided by the library							
		1.0		3.0		4.0		TOTAL	
		Obs	Exp	Obs	Exp	Obs	Exp	Obs	Exp
Frequency of use of the library	1.0	3	0.8	0	0.1	1	3.1	4	4.0
	2.0	1	1.6	0	0.1	7	6.3	8	8.0
	3.0	18	15.2	1	1.2	56	58.6	75	75.0
	4.0	9	9.9	1	0.8	39	38.3	49	49.0
	5.0	7	10.5	1	0.8	44	40.7	52	52.0
	TOTAL	38	38.0	3	3.0	147	147.0	188	188.0

Minimum expected cell count: 0.064

% cells with expected count < 5: 53.3

The p-value is larger than 0.01, and we cannot conclude that a significant difference exists between “Satisfied with services provided by the library” and frequency of library use. The result is one-tailed as it is based on the likelihood of a difference in one particular direction.



Abbreviation: Frequency of use of the library and satisfaction with services provided by the library=M
 Satisfied with services provided by the library and frequency of use of the library=-N

Figure 2: Frequency of use of the library vs. Satisfied with services provided by the library

In Figure-2, interpreting the Proportions chart - look at the “All combined” category - the more different the other frequency of use of the library categories look from this, the more likely the Chi-Square test detects a difference. Within each frequency of use of the library category, the Satisfied with services provided by the library values add up to 1, i.e., 100%.

Table 5: Assessing different aspects of digital literacy among P.G. students

ITEM	N	MEAN	SD	Meaning
I enjoy using digital devices.	213	3.28	0.837	Intermediate
I feel comfortable using digital devices.	213	4.19	0.639	High
I am aware of various types of digital devices.	213	4.23	0.674	High
I understand what digital literacy is.	213	3.91	0.817	High
I am willing to learn more about digital technologies.	213	3.98	0.690	High
I feel threatened when others talk about digital technologies	213	2.91	1.229	Intermediate
I feel that I am behind my fellow students in using digital technologies.	213	3.00	1.137	Intermediate
I think that it is important for me to improve my digital fluency.	213	4.00	0.748	High
I think that my learning can be enhanced by using digital tools and resources.	213	4.26	0.578	High
I think that training in technology-enhanced language learning should be included in language education programs.	213	4.33	0.604	High
Grand Average		3.809	0.7953	

According to Table 5, this research revealed that P.G. students rated their digital skills as High (total mean of 3.809). The majority of respondents were able to use and enjoy digital devices. The parameter with the highest mean (4.33) was "Learning may be enhanced by employing digital tools and resources," and the parameter with the second highest mean (4.26) was "training in technology-enhanced language learning should be incorporated in language education programmes."

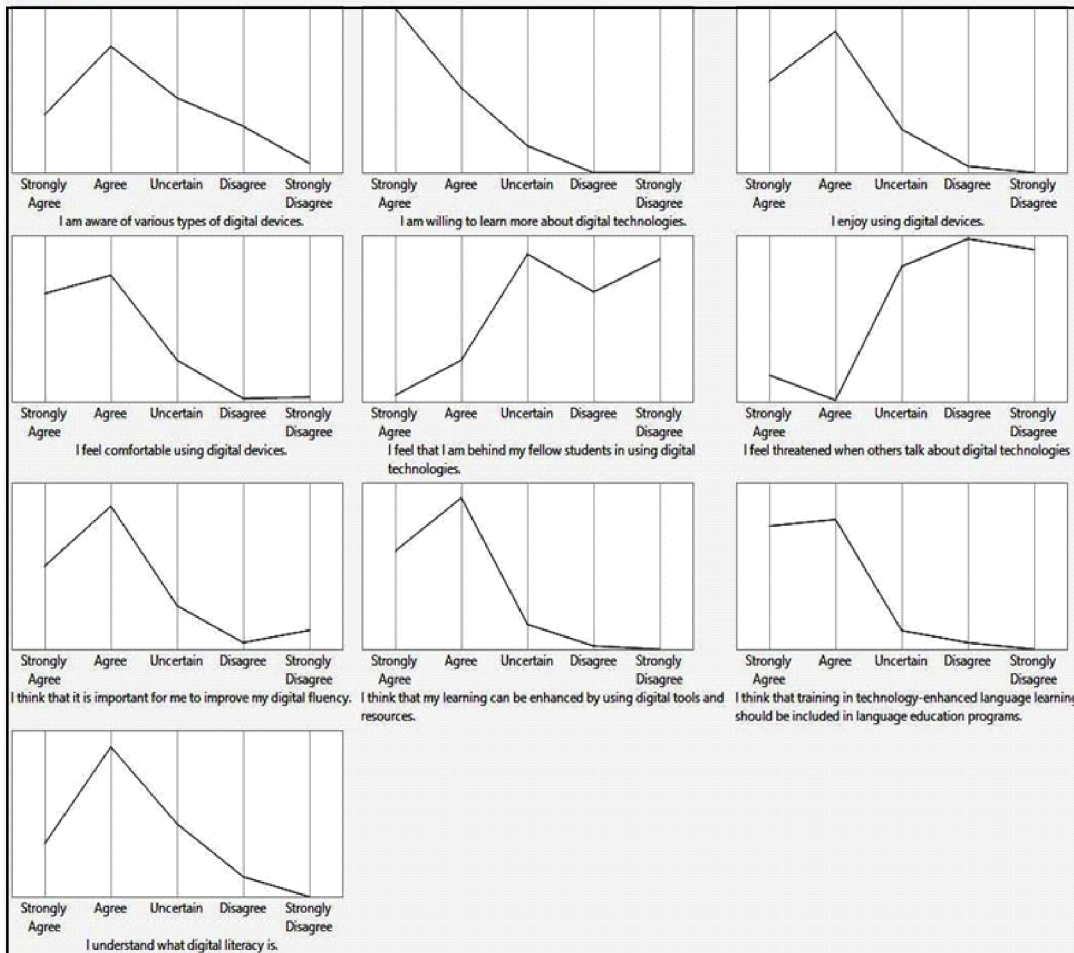


Figure 3: Parallel Plot of digital literacy among the P.G. Students

Figure 3 displays a segmentation of students' digital literacy levels and a graphic representation of distinct aspects of multiple queries. The students choose their selection from the various options available, i.e., Strongly agree, agree, uncertain, and strongly disagree are all options.

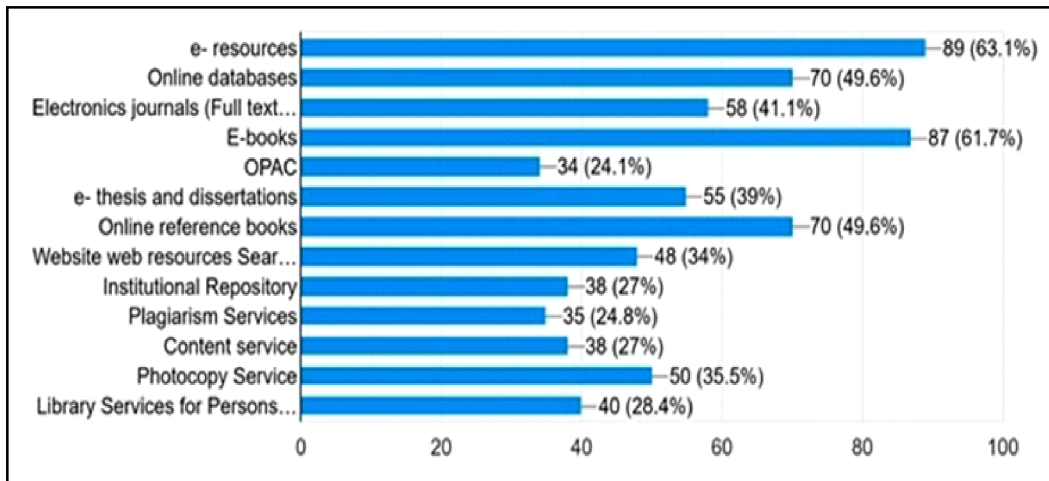


Figure 4: Level of awareness about the e-resources among the P.G.-Students

Figure 4 shows a variety of services offered to library patrons. We subsequently asked the students how familiar they were with these services. Again, the students responded, and it was found that their level of awareness was highest respectively for electronic resources (63.1%), electronic books (61.7%), and online databases (49.6%).

7. Conclusion

Because of the widespread use of electronic information resources, digital literacy is crucial for providing each person with high-quality services pertinent to their needs. Every person in society now needs to be digitally literate due to the increasing invasion of information resources. Students can use various technology, but they cannot do it in a way that will help them learn. Thus, digital literacy is crucial in determining a person's ability to thrive in school. It also creates learning possibilities and fosters innovation in ways that were before unthinkable. The lack of education, awareness, accessibility, affordability, and frequent barriers to leaving home are among the obstacles that individuals still face in the 21st century, making technical empowerment one of the most pressing issues. To help students effectively engage in productive activities and handle technologies, it is vital to develop their capacities. For students to be uplifted and empowered, contributing to creating an empowered society, they must be digitally literate. As with other forms of literacy, digital literacy is growing in importance. More care must be taken to motivate students to learn technology skills and support them in keeping up with new technologies. To assist students in becoming digitally literate, digital resources should be used in instruction and training. As a result, the current study seeks to understand the digital literacy skills of postgraduate students at the University of North Bengal in West Bengal. The study results show that students cannot conduct effective searches to locate information.

Therefore, it is recommended that the university and library professional authorities take action to encourage students to develop their digital literacy abilities by offering appropriate guidance regarding the use of various search tactics.

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