

# INFORMATION LITERACY AMONG UNDERGRADUATE STUDENTS: A SURVEY OF WOMEN'S DEGREE COLLEGE ANANTNAG, J&K- INDIA

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**Abstract** *With the evolution of digital media, libraries and information centres are flooded with digital information. Due to the increasingly complex nature of digital information, users are bombarded with dynamic and surplus information alternatives for their professional pursuits. Also, in today's digital information environment, information profoundly reaches to the end users in various forms; hence, the cause for its originality, value and integrity remains a big challenge before the information scientists. To address this malady, the information literacy comes into picture, which refers ability to identify information need and skill to locate, analyse and ultimately use the required information. The paper attempts to analyse the information literacy skills of the students from the selected college of higher learning. Survey method has been adopted to carry out the study wherein closed questionnaire has been framed-up to get the required data, which was analysed vis-a-vis the objectives of the study. One wide-range finding of the study being that, most of the students are not well versed with the concept of information literacy and utilization of modern day ICT-based information resources.*

**Keywords:** *Digital Information, Digital Media, Information Literacy, Under-Graduate Students, Information Communication Technology (ICT), Library & Information Centres (LICs)*

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## INTRODUCTION

The present-day human civilization has been transformed in all the aspects by the rapid growth and dispersal of Information and Communication Technology (ICT). In this age of information explosion, the society is undergoing numerous transformations due to rapid development and transmission of technological revolution in all the sections of human life. Information has become a must for right decision-making in today's knowledge society. As a result of these complexities, ICT has marked ahead concurrently at a rapid pace to facilitate the dissemination of information in digitized media from unimaginable sources and unique formats (Asadullah, 2014). Earlier, if it was the scarcity of information that was the main cause for under-development; but in the present-day information age, the scenario has overturned and it is the abundance of information that is the cause of under-development. The last two decades have witnessed more information being generated than what was recorded prior to that in entire history. The access to this information by such means has changed the perception of

people about the world, we call it now 'Global Village' and the age we are living in is often termed as 'Information Age'.

The tremendous growth of information resources and communication means have put a new challenge before the scientists across the globe as the access to information can no longer serve the problem. It rather is the effective use of information that promises the solutions. The need therefore arises for people to be information literate (Farmer & Henri, 2008). The mere abundance of information cannot create an information-based society unless people are equipped with complementary cluster of abilities essential to use information effectively. Information literacy forms the foundation for many innovative concepts of knowledge gathering such as Life Long Learning, MOOCs, Distance Education and many more. It provides a common platform for all disciplines, in all learning environments and at all levels of education. It enables learners to become self-directed and master content and extend their investigations to have full control over their own learning (ACRL, 2000).

Information literacy is basically a skill that involves the knowledge and use of proficiency or capability

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that collectively make the effective and proper use of information. An information literate person is one who knows how to identify information need, find and critically evaluate how genuine that that information is. This skill set of information literacy is, therefore, highly essential among students especially at undergraduate level that would enable them during their course to do various assignments, projects, seminar and presentations which demand filtered and distilled information (Dorvlo, 2016).

### Information Literacy Conceptual Approach

The term Information Literacy (IL) was first introduced in 1974 by Paul Zurkowski in a report to the National Commission on Libraries and Information Science (NCLIS) (Kour, Sohal & Walia, 2009). American Library Association (ALA, 1989) defines information literacy as,

*“A set of abilities required by individuals to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information”.*

(Ranaweera, 2010) states Information literacy as,

*“Gaining the necessary skills required to access, process and Present information for learning, Research, problem solving and Carrier Development”.*

(Glister, 1997) calls it Digital Literacy and defines it as,

*“A set of skills to access the Internet, find, manage and edit digital information, join in communications, and otherwise engage with an online information communication network”.*

To sum up, information literacy means the lifelong ability to recognize the need for, to locate, evaluate and effectively use information.

### INSTITUTE PROFILE

Government Degree College for Women, Anantnag, is one of the premier institutions of higher learning for women in District Anantnag of J&K state. It was established March 1979 as an arts college with a motive to give a push to the woman empowerment in the region. Since its establishment, the college has witnessed growth in all respects of education and standards and is moving fast ahead in pursuit of excellence. The college is now offering education in many streams apart from Arts. It was the first college in South Kashmir to introduce Science Stream exclusively for girl students in April 1984. With the passage of time, Sericulture and Home Science subjects were also introduced to fortify the needs of the girl students in the region. Later on in 2005,

a full-fledged stream of Computer Science and Application was introduced to bring the education in the college on modern lines. The College has its own website and internet facility is available to the students through ICT lab attached with the library of the institution. The College has been accredited with B<sup>++</sup> Grade by the National Accreditation and Assessment Council (NAAC) in 2004. The college has been re-Accredited with Grade B<sup>+</sup> by NAAC in 2015 with CGPA of 2.81.

### College Library Profile

The college library serves as the key centre and resource of information. There is a separate double-story library block for the library in the institution, the ground floor houses of Reading Room, Language Section, Carrier Corner, Circulation Section and Librarian Chamber while as the first floor houses the Reference Section, Science Section, Arts Section and Browsing Centre. The library is fully automated, uses KOHA automation software and is enriched with recent titles of books, encyclopaedias and other reading material. The library has a total collection of more than 30,000 titles. Library also subscribes a large number of national newspapers and magazines and some journals. The library is manned by a professional Chief Librarian along with eight staff members to provide information services to the students. The library has installed an OPAC terminal to facilitate the searching of books.

### OBJECTIVES OF THE STUDY

- To assess the Digital Information Literacy Competency level among the Students of the target institution.
- To identify areas of strengths and weakness in Digital Information Literacy levels among the target community.
- To find out how far the undergraduate-students are able to evaluate the retrieved information.
- To make recommendations for promoting Information Literacy in students at college level.

### HYPOTHESES

- All the undergraduate students are fully aware about the various Digital Information Resources and there is no significant difference in the Information Literacy levels of male and female students.
- All the undergraduate students are able to evaluate the retrieved information fully and there is no significant difference in the information evaluation between male and female students.

## SCOPE AND LIMITATIONS OF THE STUDY

The undergraduate students of Government Degree College for Women Anantnag, J&K, India, were selected for this study. The study mainly focuses on the Digital Information Literacy skills of targeted research sample in identifying, locating, searching, accessing, retrieving and usage of information from different media. The major limitation of the study being that the study is qualitative, using a small number of sample from a large population.

## METHODOLOGY

There are various methods doing a survey research, for present study, Survey Method has been adopted. To collect the primary data, a well-structured questionnaire was designed and distributed among the chosen sample of students. After data collection, relevant statistical methods were employed for analysis, interpretation and presentation of data. The results and conclusions were deducted and analysed vis-à-vis, the objectives and purpose of the study. The data collected was tabulated systematically using SPSS software. Chi Square Test and Mann Whitney U Test (also called Wilcoxon Rank Sum Test) were used for testing of hypotheses.

## Population Profile

The total population under study is 7576 among which the highest number of students is enrolled under the Arts Stream, followed by the Medical Stream, while as the lowest number of students are enrolled under the Management Stream.

**Table 1: Showing Stream-Wise Distribution of College Students**

Sr. No.	Name of the Stream	No. of the Students		
		Male	Female	Total
1	Arts	2695	3219	5914
2	Medical	718	597	1315
3	Non-Medical	73	44	117
4	Commerce	15	13	28
5	Bachelor of Computer Applications	42	51	93
6	BBA	08	06	14
7	Home Science	21	74	95
Total		3572	4004	7576

## Sample Size

For present study, sample size was statistically determined by using Krejcie and Morgan (1970) formula:

$$S = X^2NP(1 - P)/d^2(N - 1) + X^2P(1 - P)$$

S = required sample size

X<sup>2</sup> = the table value of chi square for 1 degree of freedom at the desired confidence level (1.96 × 1.96 = 3.841)

N = population size

P = The population proportion (assumed to be 0.5 since this would provide the maximum sample size)

d = degree of accuracy expressed as proportion (0.05)

The population of the students under study was 7576. Further, to ensure an optimal sample size, the 95% confidence level was pre-assigned and a small sampling error (0.05) was fixed. Let the population distribution be 50%, and then applying the above formula following sample size was calculated as:

$$S = 3.841 \times 7576 \times 0.5(1 - 0.5) / 0.0025(7576 - 1) + 3.841 \times 0.5(1 - 0.5)$$

$$S = 365.76$$

$$S = 366$$

Thus, the sample size for the present study is 366.

## Administration of the Tool

As the present study is a survey-based research work, sampling method was adopted for data collection. The total sample size was divided into two equal parts and as such 183 questionnaires were administered among male and 183 questionnaires were administered among female students. Stratified sampling method was adopted for administration of the tool among the students of various faculties and then simple random sampling was followed in each stratum. The response rate was 100% as the researcher himself interacted with all the respondents and personally distributed and collected back all the questionnaires. As such the study is based on the data collected through 366 questionnaires.

## REVIEW OF LITERATURE

Various studies have been carried out till date underlying the basic concept of information literacy. The findings and analyses from the published literature and search on Digital Information Literacy reveal some useful and interesting facts that assist in planning, designing and implementing programs to develop as well as measure Information Literacy skills of specific user communities. A Digital Information Literacy programs at University of Texas and Austin serve as a case study for implementing information literacy skills into traditional library services and collaborative activities

(Dupuis, 1997). Davitt Maughan, (2001) carried out survey of Information Literacy Competencies of graduate students of University of California–Berkeley, which examined the extent of which undergraduate students are information literate, similar attempt was made in the present study under table no 3. (Parker, 2003) conducted a study which focused on online information literacy course called MOSAIC (Making Sense of Information in the Connected Age), and recommended that information literacy is considered as a strategic level in higher education sector, the present study lead to the similar recommendation under recommendation (Table 1). Mittermujer and Quirion (2003) conducted a study to assess the information literacy skills of the first-year students of Quebec Universities. The findings of the study show that more number of students lack the knowledge of basic skills about the information search process and strongly recommends integrating the Information Literacy Programs in the University curriculum. Similar results were shown by the preset study under Table 2. Kemparaju (2004) in his study highlights the range of education programs developed by academic libraries such as literacy campaign, functional literacy and library instructions to make library users as intelligent users of information and explained the need of information literacy and information technology literacy programs in higher education institutions in the present digital environment. The present study also came to the similar conclusion that information literacy is the prime need of students at all levels of higher education. Bavakutty and Nasirudheen (2008) carried out a study to assess the Information Literacy Competency of Research Students of Kerala University and implied that adequate measures are to be taken in higher educational and research institutions to equip the students with information skills during their graduation/postgraduation period. Hadimani and Rajgoli (2010) conducted a survey to assess the information literacy competency of undergraduate students at college of Agriculture, Raichur. The findings of the study revealed that though majority of the respondents have the ability to locate the needed information but lacked the competencies in assessing electronic information. Similar results were shown by the present study under Table 2. Issa, et al., (2015) investigated the Information Literacy competency of the Undergraduate Students from University of Ilorin, Kwara State, Nigeria. The study found that majority of the respondents have low level of Information Literacy Competency; the researchers expressed their dissatisfaction with their present status of information availability, accessibility and usage. The study recommends that authorities should consider the teaching of information literacy as a course to fresh students. Similar results were shown by the present study under Table 2. Birader, et al.

(2010) conducted a study to know the information literacy perception of the bioscience students at Kuvempu University. On the basis of the findings, researchers recommended to introduce an effective Information Literacy Program by collaborating librarians and faculty in universities.

## DATA ANALYSIS AND INTERPRETATION

The primary data collected during the survey using apposite data collection tool was tabulated and analysed using appropriate statistical techniques. Chi Square Test and Mann Whitney U Test (Wilcoxon Rank Sum Test) were used for hypothesis testing.

### Digital Information Sources Used by the Students

Table 2 indicates that most number of students prefer Google as their source of Digital Information followed by the Social Media; however, least preference is given to the E-Journals.

**Table 2: Digital Information Sources Used by the Students**

Gender	E-Books	E-Journals	Google	Social Media	Others	N
Male	23 (12.56)	03 (01.63)	78 (42.62)	71 (38.79)	08 (04.73)	183 (100)
Female	17 (09.28)	02 (01.09)	92 (50.27)	58 (31.69)	14 (07.65)	183 (100)
Total	40 (10.92)	05 (02.73)	170 (46.44)	129 (35.24)	22 (06.01)	366 (100)

(Figures in the parenthesis represent percentages)

### Awareness About the Various Digital Information Resources Among the Students

Chi square test was applied to the Likert scale to test the hypothesis. Two groups were taken for the test, excluding the 'Neutral' option. It was found that the calculated value 1.85 is less than the table value 3.84 at 5% significance level with degree of freedom 1. As such the Null hypothesis is rejected; this indicates that there is a significant difference in the two categories of users regarding the awareness of Digital Information Resources. Hence, we conclude that the user population is widely distributed in their opinion about the awareness of Digital Information Resources.

**Table 3: Awareness About the Various Digital Information Resources Among the Students**

Gender	Fully Aware	Partially Aware	Neutral	Partially Un-aware	Fully Unaware	N
Male	43 (23.49)	69 (37.70)	36 (19.67)	29 (15.84)	06 (03.27)	183 (100)
Female	32 (17.48)	54 (29.50)	47 (25.68)	39 (21.31)	11 (06.01)	183 (100)
Total	75 (20.49)	123 (33.60)	83 (22.67)	68 (18.57)	17 (04.64)	366 (100)
<b>Chi Square Test</b> <i>Chi-square</i> = 1.85 <i>d. f.</i> = 1 <i>Table Value</i> ( $\chi^2\alpha$ ) = 3.84			<b>Mann Whitney U Test</b> <i>U stat</i> = 11 <i>U critc</i> = 2 $\alpha$ = 0.05			

(Figures in the parenthesis represent percentages)

Mann Whitney U test was applied to the test whether the two groups of users, i.e. male and female students differ in awareness of Digital Information Resources. It was found that the  $U_{stat} = 11$  which is greater than the  $U_{critc} = 2$  at  $\alpha = 0.05$  as such the Null Hypothesis stands accepted for the test, which proves that there is no significant difference between the two groups of users. Hence, the two groups do not show a significant difference in their awareness of Digital Information Resources.

### Frequency of Use of Digital Information Resources for Academic Purpose by the Students

Chi Square test was applied to the Likert scale to test the hypothesis. Two groups were taken for the test, excluding the 'Neutral' option. It was found that the calculated value

0.47 is less than the table value 3.84 at 5% significance level with degree of freedom 1. As such, the Null hypothesis is rejected; this indicates that there is a significant difference in the two categories of users regarding the use of Digital Information Resources for academic purpose. Hence, we conclude that the user population is widely distributed in their opinion about the use of Digital Information Resources for academic purpose.

Mann Whitney U test was applied to the test whether the two groups of users, i.e. male and female students differ in awareness of Digital Information Resources. It was found that the  $U_{stat} = 12$  which is greater than the  $U_{critc} = 2$  at  $\alpha = 0.05$  as such the Null Hypothesis stands accepted for the test, which proves that there is no significant difference between the two groups of users. Hence, the two groups do not show a significant difference in their pattern of use of Digital Information Resources for academic purpose.

**Table 4: Frequency of use of Digital Information Resources for Academic Purpose by Students**

Gender	Very Frequently	Frequently	Neutral	Rarely	Very Rarely	N
Male	34 (18.57)	79 (43.16)	12 (06.55)	35 (19.12)	23 (12.56)	183 (100)
Female	11 (06.01)	37 (20.21)	19 (10.38)	78 (42.62)	38 (20.76)	183 (100)
Total	45 (12.29)	116 (31.69)	31 (08.46)	113 (30.87)	61 (16.66)	366 (100)
<b>Chi Square Test</b> <i>Chi-square</i> = 0.47 <i>d. f.</i> = 1 <i>Table Value</i> ( $\chi^2\alpha$ ) = 3.84			<b>Mann Whitney U Test</b> <i>U stat</i> = 12 <i>U critc</i> = 2 $\alpha$ = 0.05			

(Figures in the parenthesis represent percentages)

## Impact of Digital Information Resources on the Academic Performance of Students

Chi Square test was applied to the Likert scale to test the hypothesis. Two groups were taken for the test, excluding the 'Neutral' option. It was found that the calculated value 2.08 is less than the table value 3.84 at 5% significance level with degree of freedom 1. As such, the Null hypothesis is rejected; this indicates that there is a significant difference in the two categories of users regarding the Impact of Digital Information Resources on the academic performance of students. Hence, we conclude that the user population is

widely distributed in their opinion about the Impact of Digital Information Resources on the academic performance of students.

Mann Whitney U test was applied to the test whether the two groups of users, i.e. male and female students differ in awareness of Digital Information Resources. It was found that the  $U_{stat} = 11$  which is greater than the  $U_{critic} = 2$  at  $\alpha = 0.05$  as such the Null Hypothesis stands accepted for the test which proves that there is no significant difference between the two groups of users. Hence, the two groups do not show a significant difference in their opinion about the Impact of Digital Information Resources on the academic performance of students.

**Table 4: Impact of Digital Information Resources on the Academic Performance of Students**

Gender	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N
Male	59 (32.24)	84 (45.90)	06 (03.27)	26 (14.20)	08 (04.37)	183 (100)
Female	53 (28.96)	68 (37.15)	19 (10.38)	28 (15.30)	15 (08.19)	183 (100)
Total	112 (30.60)	152 (41.53)	25 (06.83)	54 (14.75)	23 (06.28)	366 (100)
<b>Chi Square Test</b> <i>Chi-square</i> = 2.08 <i>d.f.</i> = 1 <i>Table Value</i> ( $\chi^2 \alpha$ ) = 3.84			<b>Mann Whitney U Test</b> <i>U stat</i> = 11 <i>U critic</i> = 2 $\alpha$ = 0.05			

(Figures in the parenthesis represent percentages)

## RECOMMENDATIONS

In light of the abovementioned findings, following recommendations can be underlined for consideration:

- Information literacy should be incorporated at the undergraduate as well as postgraduate curricula,
- It is also recommended that the college management should commit itself to provide the necessary infrastructure and guidelines for the implementation of information literacy programs in the campus,
- The college library should be adequately staffed and funded, so as to enable them to assist the students to search for information from different media,
- There is urgent need to conduct the user awareness programs such as on-hand workshops, training programs and user education programs on using digital information resource, which are most useful for study and research.

## CONCLUSIONS

With the world experiencing new horizons and dimensions in the fields of expansion of information and technology, the world is changing at an enormous pace. In such an environment, it is highly unlikely for a non-information literate student to find the variety of information sources and to filter the information source of his need. Digital technology and information explosion provides new opportunities for students to pursue their interests, find educational resources and experiences anytime and anywhere. In such a digital environment, delivery of information literacy instructions to students has become vital due to the propagation of electronic resources and the increased use of the Internet as an information source. As such, information literacy is a significant component of any higher educational library system, because of its role in academic achievement and lifelong learning. Consequently, it is argued that a deficiency in information literacy skills has an adverse impact on

academic achievements as well as personal and professional developments of students in any environment. It can be concluded that the majority of the students are not able to access relevant information, because they lack the basic information literacy skills.

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