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**A SURVEY OF INFORMATION LITERACY SKILLS  
OF FACULTY AND STUDENTS OF  
GOVERNMENT AND GOVERNMENT AIDED  
POLYTECHNIC INSTITUTIONS IN HARYANA**

# A Survey of Information Literacy Skills of Faculty and Students of Government and Government Aided Polytechnic Institutions in Haryana

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**Abstract – Information Literacy is the key competency for the information age. The paper discusses different definitions, need and importance of information literacy to promote the use of effective information services. Information literacy is a survival skill in the information age irrespective of status and in the society. An attempt has been made in this paper to know the awareness of e-resources and e-learning technology to learn and adopt new learning methodologies.**

## 1. INTRODUCTION

Knowledge is growing at a very fast pace. This growth is visible in all spheres of human life in the form of rapid changes in our surrounding. The pace of change is so fast that by the time one becomes accustomed to some device, it becomes obsolete and a new device enters the scene.

This change has severely affected the information availability and tools of its handling. The scarce printed sources are now more easily accessed in digital form. In addition, a number of new born-digital types of sources have come into existence. Today, most of the sources existing in print form are also available in digital form. In fact, the digital revolution has overshadowed all other formats of information sources.

## 2. INFORMATION LITERACY

Information Literacy (IL) is the process of knowing when and why information is required, where to find it, and how to evaluate, use and communicate it in an ethical way. It is the combination of all the skills that are required for the effective and maximum use of information. "The evolution of the concept of Information Literacy, since Zurkowski first used the term in 1974, has taken place both within and outside of the field of library science, not only in the United States but also throughout the world, Librarians have been especially sensitive to the so called information explosion and its resultant repercussions" (Eisenberg, Lowe and Spitzer 2004, 13).

### 2.1. DEFINITIONS OF INFORMATION LITERACY

A number of authors have defined IL in different ways. Some important definitions are given below:

Paul Zurkowski first defined information literacy in 1970s as "People trained in the application of Information resources to their work can be called information literates. They have learned techniques and skills for using the wide range of information tools as well as primary sources in molding information solution to their problems". (Quoted in Jayaprakash, and Gupta 2005, 293). Lexon and Walker also define "Information Literacy by characterizing information literate person : one who has the analytical and critical skills to formulate research questions and evaluate results and the skills to search for and access a variety of information types in order to meet his or her information needs." (Quoted in Jayaprakash and Gupta 2005, 293). The current and most cited definition for information literacy comes from Association of College and Research Libraries (ACRL) which reads as "Information literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information" (ACRL 2000).

An information literate individual is able to:

- Determine the extent of information needed
- Access the needed information effectively and efficiently
- Evaluate information and its sources critically
- Incorporate selected information into one's knowledge base

(e) Use information effectively to accomplish a specific purpose

(f) Understand the economic, legal, and social issue surrounding the use of information, and access and use information ethically and legally” (ACRL 2000).

## **2.2. NEED FOR INFORMATION LITERACY**

We are living in information age. Information is the basic requirement for every human activity and it is important as food, air and water. Information in itself has no value, but its value lies in its communication and use (Jayaprakash and Gupta 2005). Today, we are surrounded by a growing ocean of information in many formats, which is called Data smog. Data smog is term coined by author David Shank. It refers to the idea that too much information can create a barrier in our lives. This data smog is produced by the huge amount of information, the speed at which it comes to us from all directions, the need to make fast decisions, and the feeling of anxiety that we are making decisions without having all the information that is available or that we need. Information literacy is the solution to Data Smog. It allows us cope by giving us the skill to know when we need information and where to locate it effectively and efficiently. It includes the technological skills needed to use the modern library as gateway to information. It enables us to analyze and evaluate the information we find, thus giving us confidence in using that information to make a decision or create a product. Information literacy equips us with the critical skills necessary to become independent lifelong learners. Keeping in view the various specializations in the area and needs of the polytechnic professionals, it is thus necessary for polytechnic professionals to be equipped with IL competences that can help them to effectively search, locate, evaluate and use the required information.

## **2.3. INFORMATION LITERACY COMPETENCY STANDARDS**

The Association of College and Research Libraries (ACRL) of the American Library Association (ALA) has prepared 5 Information Literacy Standards, 22 performance indicators and a set of 87 outcomes of these performance indicators. Several educational institutions/organizations helped in development of these standards. The American Association of School Libraries (AASL), The Association of Educational Communication and Technology (AECT) and The Association of College and Research Libraries (ACRL) are prominent among them. These IL standards specify the abilities needed to access, evaluate and make use of information critically and serve as guideline to foster IL skills in users.

## **3. STATEMENT OF THE PROBLEM**

The present work includes the study of the information literacy survey of faculty and students of polytechnic

institutions in Haryana. This study would provide the useful analysis of the prevailing situation in the Polytechnic Institutes that might help in planning and managing Information Literacy Programmes (ILPs).

## **4. OBJECTIVES**

Within the broad frame work of IL skills of faculty and students of polytechnic institutions in Haryana, the following specific objectives were intended to be achieved:

1. Expertise in using information technology devices and services;
2. Understanding of IL;
3. Source of IL instruction;
4. Ability to identify appropriate information source;
5. Ability to search databases efficiently using information retrieval tools and techniques;
6. Ability to evaluate the information source before using it;
7. Ability to ethically use information generated by others; and
8. Ability to communicate over electronic media.
9. To ascertain the part played by LIS Professionals in making the respondents information literate.

## **5. HYPOTHESES**

1. There is no significant difference between the IL competencies of faculty and students;
2. There is no significant difference between the IL competencies of faculty of different subjects;
3. There is no significant difference between the IL competencies of male and female faculty and students;
4. There is no significant difference between the IL competencies of faculty and students having attended ILPs and those who have not attended ILPs.

## **6. RESEARCH METHODOLOGY**

Descriptive research method was applied to the study. Descriptive research describes a specific phenomenon at a given point of time. It involves the description, analysis and interpretation of conditions that presently exist. Thus, descriptive research method was found to be the most suitable for the

present study. There are various tools and techniques available for collecting data. In the present study, survey tool and questionnaire technique was used to collect data. The response of the study included 165 faculty members and 168 students of the seven govt. and govt. aided polytechnic institutions in Haryana. Thus, a total of 333 respondents participated in the study. The analysis is mainly based on percentage and means core analysis.

## 7. DATA ANALYSIS

**Table 7.1: Gender of Respondents**

Gender	Status		Total
	Faculty	Student	
Male	92	68	160
	27.6%	20.4%	48.0 %
Female	73	100	173
	21.9%	30.0%	52.0 %
Total	165	168	333
	49.5%	50.5%	100.0 %

Table 7.1 presents gender wise analysis of respondents. Total 333 respondents participated in the study, of which 160 (48 percent) were male and 173 (52 percent) were female. In all the level of respondents the same trend was visible.

**Table 7.2: Expertise in Use of Technology by Respondents**

Sr. No	Option	Status		Total Mean (S.D.)
		Faculty Mean (S.D.)	Student Mean (S.D.)	
A	Computer	3.28	2.62	2.95
		1.27	1.39	1.37
B	Windows	3.32	2.79	3.05
		1.21	1.30	1.28
C	Ms word	3.45	2.87	3.16
		1.27	1.36	1.34
D	Ms Excel	3.41	3.02	3.21
		1.26	1.37	1.33
E	Ms Power Point	3.38	3.08	3.23
		1.25	1.47	1.37
F	WWW	3.71	3.24	3.37
		1.20	1.48	1.37
G	E-mail	3.79	3.33	3.56
		1.34	1.49	1.43

Table 7.2 presents analysis of response regarding ability of respondents to use different devices, software's or facilities. On this question the users were asked to rate their ability on a 5 point scales 1-5, representing novice (1) to expert (5). Mean of the

response of each category along with Standard Deviation (S.D.) has been presented in this table. The higher mean value within the range 1-5 represents respondents' expertise in using the concerned device. The table shows that among various options the respondent's were more comfortable in using e-mail. The faculty response of 3.79 Mean Score (M.S.) was quite encouraging. The (M.S. 3.33) students' response was also relatively satisfactory. The second highest positive response was shown in the use of websites (M.S. 3.37). The faculty (M.S. 3.71) was more comfortable in using websites than the students. Moreover, students (M.S. 3.24) were more expert in using websites. The table reveals that the respondents were somewhat comfortable in using M.S Excel. The faculty members (M.S. 3.41) and (M.S. 3.02) students' response was also relatively satisfactory. M.S. Word is used today by almost everyone who uses computer for academic purposes. But the mean score of 3.16 on a 5 point scale of 1-5 is not very encouraging for M.S. word users. Again the faculty response (M.S. 3.45) was more positive than the response of students (M.S. 2.87). The student's response is also more consistent (S.D. 1.36) than the faculty. M.S. Power Point is an essential tool for making presentations. Faculty and students frequently need to use Power Point for academic purpose. But the response of M.S. 3.23 is not satisfactory. However the faculty (M.S. 3.38) and (M.S. 3.08) students were more comfortable in using PowerPoint than the students. Windows operating system is used in almost all personal computers. Awareness of its functions makes the job of a computer user quite easy. But except faculty (M.S. 3.32) no other category of respondents could even touch the mark of mean score 3. The respondents were least comfortable in using computer (M.S. 2.95). Although the general pattern of faculty (M.S. 3.28) and students (M.S. 2.62) response in decreasing order of expertise was also visible there, but none of the category felt comfortable in using computer

**Table 7.3: Computer Related Course of Respondents**

Response	Status		Total
	Faculty	Student	
Yes	78	78	156
	23.4%	23.4%	46.8%
No	87	90	177
	26.1%	27.0%	53.2%
Total	165	168	333
	49.5%	50.5%	100.0 %

Table 7.3 presents analysis of response regarding computer related course 156 (46.8 percent) respondents responded that they had done some computer related course. 78 (23.4 percent) faculty members and 78 (23.4 percent) students responded that they had done computer course. Interestingly, 177 (53.2 percent) respondents indicated that they had not done any computer course, which is very strange. Among those who have done some course, more than one-third (i.e. 120) did some basic course, while 20(12.6 percent) had done Diploma in com Sc. 10 of them had done P.G Degree and 8 (of which were faculty) had done MCA. 5(3.1 percent) faculty members had done O'level Diploma.

**Table 7.4: Instructions on the use of Electronic Databases**

Response	Status		Total
	Faculty	Student	
Yes	28	43	71
	8.4%	12.9%	21.3%
No	137	125	262
	41.1%	37.5%	78.7%
Total	165	168	333
	49.5%	50.5%	100.0 %

Table 7.4 presents response on the provision of instruction on use of electronic databases. 262(78.7 percent) respondents had not received any instruction while only 71(21.3 percent) stated that they had received instructions. The pattern of response was similar among both the categories. Slightly more number of students 43 (12.9 percent) had received instruction than faculty members.

**Table 7.5: Instructions Received On the use of Electronic Databases**

Resource of Instruction	Status		Total
	Faculty	Student	
Librarian	19	34	53
	5.7%	10.2%	15.9%
Fellow Student/Coll eague	47	50	97
	14.1%	15.0%	29.1%
Faculty	54	52	106
	16.2%	15.6%	31.8%
No Instructions	45	32	77
	13.5%	9.6%	23.1%
Total	165	168	333
	49.5%	50.5%	100.0%

Table 7.5 shows response on the providers of instruction. Interestingly, 77(32.1 percent) respondents clearly stated that they had not received any instruction from anybody. Among those who received some help from others cited their colleague/students 97 (29.1 percent) as the main source of the instruction. 5(15 percent) students received instruction from their classmates, while faculty member i.e.19 (5.7percent) received help from the librarian.

**Table 7.6: Meaning of Information Literacy**

Sr. No.	IL Meaning	Status		Total
		Faculty	Student	
A	Read Complex Documents	12	15	27
		3.6%	4.5%	8.1%
B	Locate, Evaluate and use Information Effectively	113	64	177
		33.9%	19.2%	53.2%
C	Search the "Free Web" for Information	20	22	42
		6.0%	6.6%	12.6%
D	Summarize Information you Read	13	33	46
		3.9%	9.9%	13.8%
E	Don't Know	7	34	41
		2.1%	10.2%	12.3%
Total		165	168	333
		49.5%	50.5%	100.0%

Table 7.6 indicates that 113 (33.9 percent) faculty members considered IL as the ability to located evaluate and use information effectively. The same views were expressed by 64 (19.2 percent) Students. Interestingly, the response of majority of respondents spread over three other options and a small number i.e. 41(12.3 percent) had no idea of IL at all. Thus, more than 60 percent respondents did not have a clear concept of IL.

**Table 7.7: Source of an Introductory Article**

Sr. No	Source of an Introductory Article	Status		Total
		Faculty	Student	
A	Library Catalogue	23	32	55
		6.9%	9.6%	16.5%
B	Encycloped ia	54	43	97
		16.2%	12.9%	29.1%
C	Search Engine	62	55	117
		18.6%	16.5%	35.1%
D	Periodical index	18	16	34
		5.4%	4.8%	10.2%
E	Don't know	8	22	30
		2.4%	6.6%	9.0%
Total		165	168	333
		49.5%	50.5%	100.0%

Table 7.7 reveals that 117 (i.e. 35.1 percent) respondents consulted search engine for location of a brief introductory article. 97 (29.1 percent) consulted encyclopedia for this purpose. Interestingly, more than 55(16.5) percent respondents used library catalogue or periodical index. This clearly indicates that quite a larger number of respondents were unaware of the appropriate source.

**Table 7.8: Content of Scholarly Articles**

Sr. No	Article Content	Status		Total
		Faculty	Student	
A	An abstract to contents of the article	25	13	38
		7.5%	3.9%	11.4%
B	The author's affiliation or credentials	30	33	63
		9.0%	9.9%	18.9%
C	A bibliography or a list of works cited	25	24	49
		7.5%	7.2%	14.7%
D	All the above	63	74	137
		18.9%	22.2%	41.1%
E	Don't Know	22	24	46
		6.6%	7.2%	13.8%
Total		165	168	333
		49.5%	50.5%	100.0%

Table 7.8 shows that 38 (11.4 percent) respondents considered scholarly articles generally contain an abstract to the contents of the article, the author's affiliation or credentials and a bibliography or a list of works cited. 49 (14.7 percent) felt scholarly articles generally contain only bibliography/references. Interestingly, 25(7.5 percent) faculty was of the view that scholarly articles contained only an abstract. It is clear from the above response that only one fourth of the respondents were having a clear idea of the content of scholarly articles.

**Table 7.9: Source of Scholarly Article**

Sr. No	Scholarly Article Source	Status		Total
		Faculty	Student	
A	General Interest Magazines	12	20	32
		3.6%	6.0%	9.6%
B	Online Research Database	49	36	85
		14.7%	10.8%	25.5%
C	Internet	63	74	137
		18.9%	22.2%	41.1%
D	Reference Books	23	31	54
		6.9%	9.3%	16.2%
E	Don't know	18	7	25
		5.4%	2.1%	7.5%
Total		165	168	333
		49.5%	50.5%	100.0%

Table 7.9 indicates that 137 (41.1 percent) respondents considered Internet the best place to find a scholarly article. 85 (25.5 percent) respondents stated that online research database was the best place to find a scholarly article. Interestingly, 63 (18.9 percent) faculty members and 74 (22.2 percent) students opined that Internet was the best source for the scholarly articles. More than 54 (16.2 percent) respondents considered reference books and general interest magazines to be the source of scholarly articles.

**Table 7.10: Word Truncation**

Sr. No	Option	Status		Total
		Faculty	Student	
A	Economic	37	46	83
		11.1%	13.8%	24.9%
B	Ec*	14	14	28
		4.2%	4.2%	8.4%
C	Economi*	35	11	46
		10.5%	3.3%	13.8%
D	Eco*	46	76	122
		13.8%	22.8%	36.6%
E	Don't know	33	21	54
		9.9%	6.3%	16.2%
Total		165	168	333
		49.5%	50.5%	100.0%

The respondents were asked certain questions to know their understanding of search tools and techniques. Table 7.10 presents their response regarding use of truncation. The results show that 122 (36.6 percent) respondents stated that Eco\* is the best way to truncate the word Economics so that the words economically, econometrics and economy are also retrieved. This response was more or less similar in all categories. 46 (13.8 percent) faculty stated that Eco\* was the best way to truncate the word Economics, similarly 76 (22.8 percent) students also expressed the same view. Interestingly, table further reveals that 54(16.2 percent) did not have any idea.

**Table No 7.11: Full-Text Database and Citation Database difference**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	Full - Text Database includes some full text articles, while citation database includes only Bibliographic Information	47	55	102
		14.1%	16.5%	30.6 %
B	Full - Text Database includes an abstract while citation Database doesn't	64	62	126
		19.2%	18.6%	37.8 %
C	Full - Text Database Does Not Include Citations	11	11	22
		3.3%	3.3%	6.6%
D	Citation Database includes abstracts	8	11	19
		2.4%	3.3%	5.7%
E	Don't know	35	29	64
		10.5%	8.7%	19.2 %
Total		165	168	333
		49.5%	50.5%	100.0 %

The respondents were asked to state the difference between full-text database and a citation database. The result as analysed in table 7.11, indicates that 126 (37.8 percent) respondents felt that a full text database includes an abstract for each article; the citation database does not include an abstract. 102 (30.61 percent) respondents stated that a full text database includes articles some of which are full text. The citation database includes only bibliographic information about the article. Interestingly, 64 (19.2 percent) respondents responded that they did not have any idea about the difference between the full-text database and a citation data.

**Table 7.12: Boolean Operators**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	Journals OR Magazines	39	42	81
		11.7%	12.6%	24.3%
B	Journals AND Magazines	70	57	127
		21.0%	17.1%	38.1%
C	Journals NOT Magazines	18	14	32
		5.4%	4.2%	9.6%
D	Journals	17	18	35
		5.1%	5.4%	10.5%
E	Don't know	21	37	58
		6.3%	11.1%	17.4%
Total		165	168	333
		49.5%	50.5%	100.0%

Table 7.12 presents response of the question regarding use of Boolean operators. The results show that 127 (38.1 percent) respondents considered 'Journals AND Magazines' keyword should be used to retrieve the maximum results in an online database. Only 81 (24.3 percent) responded that 'Journals OR Magazines' Keyword should be used to retrieve information in an online database. Although 39 (11.7 percent) faculties responded for this option but it was still the second highest rated option for them. This shows that only 24.3 percent respondents were aware of use of Boolean operators. Interestingly, 58 (17.4 percent) respondents did not have any idea of which Boolean operator should be used.

**Table 7.13: Keyword Search Scope**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	Search only titles	32	37	69
		9.6%	11.1 %	20.7 %
B	Work even if you spell a word wrong	32	26	58
		9.6%	7.8%	17.4 %
C	Search title, contents and subject areas	75	62	137
		22.5 %	18.6 %	41.1 %
D	Search reference material only	16	20	36
		4.8%	6.0%	10.8 %
E	Don't know	10	23	33
		3.0%	6.9%	9.9%
Total		165	168	333
		49.5 %	50.5 %	100.0%

Table 7.13 reveals that 137 (41.1 percent) respondents stated that keyword search includes title, contents and subject areas. 58 (17.4 percent) responded that keyword search would work even if they spell a wrong word. 69 (20.7 percent) were of the view that keyword search would search only titles. 33 (9.9 percent) respondents did not have any idea about keyword searching, which is very strange.

**Table 7.14: Keyword Search Tips**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	Limit keyword search entry to just a few words	29	20	49
		8.7%	6.0%	14.7%
B	Use very broad, general terms (i.e. Animals)	40	23	63
		12.0%	6.9%	18.9%
C	Check search words for mistyped or misspelled words	34	43	77
		10.2%	12.9%	23.1%
D	Use wildcard symbols to find both singular and plural	23	56	79
		6.9%	16.8%	23.7%
E	Don't know	39	26	65
		11.7%	7.8%	19.5%
Total		165	168	333
		49.5%	50.5%	100.0%

There are some guidelines for conducting keyword searches. The respondents were asked to tick the statement not conforming to these guidelines. Table 7.14 indicates that 63 (18.9 percent) respondents considered the use of very broad general terms (i.e. animals) as the in appropriate tip. 77 (23.1 percent) respondents responded that checking of search words for mistyped or misspelled words was not a good tip for keyword searching. 65 (19.5 percent) respondents did not have any idea about keyword searching, which is very strange

**Table 7.15: Document Evaluation**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	Title and intended audience	18	38	56
		5.4%	11.4%	16.8%
B	Currency and available in a full text data base	34	36	70
		10.2%	10.8%	21.0%
C	Title, date and country publication of	23	42	65
		6.9%	12.6%	19.5%
D	Relevancy, currency, publisher, and author's credential	73	42	115
		21.9%	12.6%	34.5%
E	Don't know	17	10	27
		5.1%	3.0%	8.1%
Total		165	168	333
		49.5%	50.5%	100.0%

All the students and faculty use books and periodical articles for academic purpose. They were asked to mention how they evaluated these sources before deciding to use them. Table 7.15 shows their

response that 70 (21.0 percent) respondents would use a document if it was current and available in a full text database. 65 (19.5 percent) responded that a document is evaluated on the bases of title, date and country of publication. 115(34.5 percent) evaluated a document by its relevance, currency, publisher and author's credentials. And 7(8.1 percent) did not have any idea about document evaluation. The above analysis shows that only 34.5 percent respondents which includes 21.5 percent faculty, had an understanding of which document to use.

**Table 7.16: Use of References**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	Locate and Read the sources	17	22	39
		5.1%	6.6%	11.7%
B	Credit to Author's	18	22	40
		5.4%	6.6%	12.0%
C	Credibility of sources	54	42	96
		16.2%	12.6%	28.8%
D	All A + B + C	62	72	134
		18.6%	21.6%	40.2%
E	Don't Know	14	10	24
		4.2%	3.0%	7.2%
Total		165	168	333
		49.5%	50.5%	100.0%

Table 7.16 presents analysis of response regarding use of references. The results indicate that 40 (12.6 percent) respondents included references in their research paper because references give credit to authors. 96(28.8 percent) included references because references help in locating the document, giving credit to authors and determine the creditability of their sources. Faculty response 54 (16.2 percent) was relatively more for this option than any other category. 28.8 percent were of the view that use of references allows readers to only determine credibility of their sources.

**Table 7.17: Selection of Web Based Information**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	“Can I order products from this site?”	21	42	63
		6.3%	12.6 %	18.9 %
B	“Are these Pictures / Graphs / Charts colorful enough?”	24	29	53
		7.2%	8.7%	15.9 %
C	“Is all the spelling and grammar correct in this text?”	30	40	70
		9.0%	12.0 %	21.0 %
D	“Who is the author of this information and is it accurate?”	77	39	116
		23.1 %	11.7 %	34.8 %
E	Don't Know	13	18	31
		3.9%	5.4%	9.3%
Total		165	168	333
		49.5 %	50.5 %	100.0 %

It was intended to know respondents' awareness about suitability of Internet based information for class project. Their response has been analysed here. Table 7.17 shows that 63 (18.9 percent) respondents considered the question "can I order products from this site?" as most essential. 70 (21.9 percent) stated that the most essential question to ask was whether "all the spelling and grammar correct in this text?" 53(15.9 percent) stated that they would consider the colorfulness of pictures/graphs/ charts as most essential. Interestingly, 116(34.8 percent) were of the view that they should consider the author and accuracy of information.

**Table 7.18: Internet Based Information**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	"Is far more reliable than books and magazines?"	9	52	61
		2.7%	15.6%	18.3%
B	"Is factual because the Internet is constantly monitored by world educational organisations?"	46	47	93
		13.8%	14.1%	27.9%
C	"Is required by law to be accurate, timely and appropriate?"	41	33	74
		12.3%	9.9%	22.2%
D	"Comes from many varied sources such as business, the Government or Private Citizens"	54	28	82
		16.2%	8.4%	24.6%
E	Don't know	15	8	23
		4.5%	2.4%	6.9%
Total		165	168	333
		49.5%	50.5%	100.0%

When the respondents were asked about reliability of Internet based information, their views were again not very clear. Table 7.18 indicates that 93 (27.9 percent) respondents considered that Internet based information was factual, because the Internet is constantly monitored by world educational organizations. 61(18.3 percent) responded that Internet based information was far more reliable than books and magazines. 74(22.2 percent) responded that Internet based information was required by law to be accurate, timely and appropriate. 82(24.6 percent) felt that Internet based information comes from many varied sources such as business, government or private citizens. Table further indicates that 23(6.9 percent) respondents did not have any idea.

**Table 7.19: Meaning of Plagiarism**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	"Failing to use the correct format when citing your sources."	14 4.2%	23 6.9%	37 11.1%
B	"Using the idea of another person in your work instead of using only your own ideas."	41 12.3%	62 18.6%	103 30.9%
C	"Improperly interpreting the authors in your source."	18 5.4%	19 5.7%	37 11.1%
D	"Including the ideas of another person in your writing and failing to cite them properly."	30 9.0%	18 5.4%	48 14.4%
E	Don't know	62 18.6%	46 13.8%	108 32.4%
Total		165 49.5%	168 50.5%	333 100.0%

There was one question to know respondents understanding of the concept of plagiarism. The response was not encouraging. Table 7.19 shows that 103 (30.9percent) respondents stated that meaning of plagiarism was using the idea of another person in their work instead of using only their own idea. 37(11.1 percent) responded that meaning of plagiarism was improperly interpreting the source. 108(32.4 percent) responded that they did not know meaning of plagiarism, which is very strange. And 48(14.4 percent) considered plagiarism to include the idea of another person in one's writing and not citing the person properly.

**Table 7.20: Use of Web Based Information**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	"You only have to cite text sources."	18 5.4%	20 6.0%	38 11.4%
B	"You can assume that all of the data or text is copyrighted."	40 12.0%	65 19.5%	105 31.5%
C	"You may use the text graphics freely unless they are specifically labeled as being copyrighted."	60 18.0%	34 10.2%	94 28.2%
D	"You do not have to give credit to your sources since Information on the web is not copyright protected. "	34 10.2%	33 9.9%	67 20.1%
E	Don't know	13 3.9%	16 4.8%	29 8.7%
Total		165 49.5%	168 50.5%	333 100.0%

Table 7.20 indicates that 105 (31.5 percent) respondents assumed that all of the data or text in the web is copyrighted. 94 (28.2 percent) felt that they might use the text, graphics freely unless they are specially labeled as being copyrighted for this purpose. Interestingly, less than 10.00 percent respondents stated that they had no idea of how to use web based information.

**Table 7.21: In-Text Citation**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	"Include only the author's last name and the Year, but leave the page number blank."	21 6.3%	32 9.6%	53 15.9%
B	"If there is no page number you do not have to cite the Information."	38 11.4%	44 13.2%	82 24.6%
C	"Includes the author's last name and the year, write 'No Page' for the page number."	37 11.1%	32 9.6%	69 20.7%
D	"Include the author's Last Name, the Year and the Paragraph no. where you found the quotation."	45 13.5%	49 14.7%	94 28.2%
E	Don't know	24 7.2%	11 3.3%	35 10.5%
Total		165 49.5%	168 50.5%	333 100.0%

Table 7.21 shows that 53 (15.9 percent) respondents stated that they would include only the author's last name and the year, but leaves the page number blank in an in-text citation if the quotation has no page number. 82 (24.6 percent) opined that they would not cite the information in an in-text citation if the quotation has no page number. Interestingly, only 37 (11.1 percent) faculty members included the author's last name, the year and the paragraph number where they found the quotation in an in-text citation if the quotation has no page number.

**Table 7.22: Electronic Communication Etiquettes**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	It is Normal	48 14.4%	32 9.6%	80 24.0%
B	Shows shouting	18 5.4%	27 8.1%	45 13.5%
C	Message may be forwarded to others	34 10.2%	45 13.5%	79 23.7%
D	Message very Important	49 14.7%	53 15.9%	102 30.6%
E	Don't know	16 4.8%	11 3.3%	27 8.1%
Total		165 49.5%	168 50.5%	333 100.0%

Table 7.22 deals with typing in all capitals in electronic communication. The analysis shows that 80(24.0 percent) respondents found nothing special in typing in all capitals. And only 45(13.5) percent respondents understood that it meant shouting and thus should be avoided. Interesting, about 80 percent response for in appropriate options shows that respondents did not have proper understanding of electronic communication etiquettes.

**Table 7.23: E-Mail Message Forwarding**

Sr. No.	Statement	Status		Total
		Faculty	Student	
A	"The message is typed in all capitals."	28 8.4%	31 9.3%	59 17.7%
B	"It does not contain any copyrighted material."	50 15.0%	36 10.8%	86 25.8%
C	"The author of message has not marked it confidential."	36 10.8%	20 6.0%	56 16.8%
D	"The author of the message has given you permission to forward or post it."	35 10.5%	60 18.0%	95 28.5%
E	Don't know	16 4.8%	21 6.3%	37 11.1%
Total		165 49.5%	168 50.5%	333 100.0%

Table 7.23 indicates that 59 (17.7 percent) respondents would forward a message if it is typed in all capitals. 56 (16.8 percent) would forward the message if its author had not marked it confidential. 37 (11.10 percent) respondents responded that they had no idea for e-mail message forwarding. And only 95(28.5 percent) said that they would forward a message only if its author had given them permission to do so.

## 8. FINDINGS OF THE STUDY

A summary of findings and significant conclusions drawn, have been presented in the following sections:

1. The faculty felt quite comfortable in using e-mail (M.S. 3.79), computer (M.S. 3.28 and M.S. Word (M.S. 3.45) while the students were comfortable in using M.S Power point (M.S. 3.08). This response was mainly due to the fact that 49.7 percent faculty and 50.3 percent students had done some computer courses. The expertise of the respondents in using other software and services like WWW, M.S. Power Point, M.S. Windows and M.S. Excel was not much encouraging.

2. Only 21.3 percent respondents had received instructions on use of electronic databases. And this response was similar in both the categories. 12.9 percent students received these instructions from their fellow classmates while faculty (8.4 percent) received instructions mainly during studies from their faculty.

3. Less than half the number of responding faculty i.e. 33.9 percent and 19.2 percent students had an understanding of the concept of IL.

4. An important aspect of IL is identification of location of required information. There were two questions on this aspect, one question asked the respondents, where they would find an introductory article on a topic. Only about one-fourth of the

respondents (29.1 percent) cited encyclopedia as a source while more than 35.1 percent cited search engine. Similarly regarding the source of scholarly article 41.1 percent opted for internet and only 25.5 percent stated that they would consult online research database.

5. Appropriate understanding and use of various search tools help in retrieval of accurate information. Interestingly, 36.6 percent respondents were able to use word truncation appropriately, but correct used of Boolean operators was made by only 24.3 percent respondents. Similarly, only 41.1 percent respondents were able to make appropriate use of keyword search facility.

6. All the web-based information on a topic is not of same quality it needs to be evaluated before use. An information literate person should know how to evaluate the information. Only 21.0 percent respondents were able to cite the proper criteria for evaluation of a document. The same response was visible on the issue of web-based information. Only 24.6 percent respondents were able to state clearly the nature and source of Internet based information and 18.3percent respondents knew how to evaluate web-based information.

7. Use of information needs a proper understanding of information ethics. When we use an idea of some other person we must be able to acknowledge it appropriately and present the same in a proper way. It was not at all encouraging that less than 40 percent respondents know the meaning of plagiarism. Majority of the respondents did not know clearly about in text-citation. Moreover, a large majority did not have a clear understanding of the purpose of given references. Regarding copyright of web based information also, only 31.5 percent had a clear concept.

8. There were two questions related to e-mail messages. Only 17.7 percent respondents knew that typing in all caps meant shouting. The response on e-mail forwarding was also not encouraging as only 28.5 percent stated that they would forward a message only after the authors' permission.

## 9. SUGGESTIONS

Suggestions for the improvement of the state of IL among students and faculty members are made:

1. Librarian should play an active role in improving IL skills of the faculty and students by organizing IL courses. If possible, a separate course on IL may be started. It may cover all the aspects of IL competency standards formulated By ALA.

2. The librarians may co-ordinate with faculty in deciding students assignments, projects etc. In this way students may be asked to prepare assignments using library resources by taking help of the librarian.

3. Use of ICT in preparation of students' assignment and projects may be encouraged and proper ICT infrastructure may be provided to all the faculty and students.

4. If a full course on IL is not possible, short term orientation programmes on use of library software, use of Internet resources and techniques of database searching may be organized.

5. Special short term programmes on ethical use of information generated by others may be organized on priority basis.

6. Since, the librarian is the only professionally qualified person in all the colleges except engineering, it is suggested that at least one professionally qualified assistant librarian may be provided in each of the colleges. Only then the librarian will be able to devote attention to IL teaching and liaison with faculty on this issue.

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