

Redeeming the information overload: A case study on Doon University , Dehradun

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Higher education in India is in a process of transition, from traditional, colonial and static system to a more competitive system based on global market philosophy. The present survey provides an insight to the status of information awareness and literacy among the students of Doon University. Thus, there is a pressing need for empirical analyses to identify the extent to which university students are information-literate. Therefore, an investigation of university students from Doon University , Uttarakhand was carried out in order to determine how they evaluate the information literacy standard .

Introduction

Higher education, in the 21st century has the objective of helping students to meet the challenges of a competitive environment, thus developing them into global citizens who are able to stand firm in an ever changing, dynamic society.

In order to stand up to the required standards, a student must be able to refine and handpick the requisite amount of optimum information from the existing resources. Unfortunately, these sources are often ambiguous and overloaded, though widespread. Availability of information both in print and electronic forms provides seekers with tools and access to resources where they can access almost any type of information with a click of mouse. Such a virtual world has made information and knowledge at the disposal of individuals whose queries are reciprocated with exponential answers.

Shapiro and Huges (1996) pressed upon the fact that the scenario has emphasized the needs of an information literate who, apart from operative knowledge, is equipped with skills to access information that helps him to do so, and to explore that information in a scientific, technological, cultural, economic and philosophic context.. Thus, information literacy is an important process of modern education which leads to people learn effectively and redeem themselves.

Traditionally, Libraries have been engaged in teaching and disseminating information and literacy skills, in collaboration with academic departments and universities. Over the years, the world over, all sorts of academic and professional

education curricula and policies have accepted information literacy as an integral part of the pedagogic framework. In the Indian context, however, teaching of information literacy is yet to be accepted as an integral part of higher education. Albeit it has more or less been restricted to library education and library orientation programs. This paper attempts to assess and identify the information capabilities and requirements of students as an ambitious initiative in the higher education.

India's higher education system is ranked the third largest in the world, next to the United States and China. Since the last few decades, higher education system has shown a remarkable growth in terms of many new universities, Institutions of national importance, and a number of enrolments in these institutions. As of 2011, India has 42 central universities, 275 state universities, 130 deemed universities, 90 private universities and 33 Institutes of National Importance. In a globalized world, education has found a key position. As a result of globalization, the opportunities in India in the field of higher education have now grown exponentially.

Review of Literature

Since its inception, information literacy has come a long way as one of the most researched and talked about topics in information science and pedagogic studies. This review shall take a look at some important findings and outcomes pertaining to Information literacy skills development in higher education.

One of the most remarkable study 'Presidential Committee on Information Literacy: Final Report' has defined information literacy as "To be information literate a person must be able to recognize when information is needed and have the ability to locate , evaluate and use effectively the needed information " (ALA, 2000).

Information literacy skills has always been a topic of discussion since ACRL (2004), published "Information Literacy Competency Standards for Higher Education" wherein it has categorically distinguished "fluency" in information technology and computer literacy from a more inclusive set of skills called "information literacy".

Rader (1995) and Bruce (2004) endorsed the need of integrating these skills with ongoing curricula of students so that need-based information requirements of the students can be identified. Bruce (1997) stated that "information literacy cannot be learned without engaging the discipline specific subject matter" and thus should be synchronized with curricula needs . Betsy Barefoot discusses the perception of first year college students takes time to get acquaintance with Libraries as campus libraries are largely irrelevant to their lives and suggested to make library instructions an integral part of the courses.

Stevens and Campbell (2006) and Holliday and Fagerheim (2006) are one of the few examples of information literacy implementation with the curriculum that has shown appreciating results.

The higher education system in India is in its transition phase as the government has started recognizing the importance of the role of higher education toward inclusive growth of the country. In Indian universities, to a large extent, Information Literacy teaching and enhancement has been limited to Library orientation and

user education. At large, core Information literacy standards and practices are still to find place in the curriculum in any of the Undergraduate, Postgraduate or Doctoral courses. A few exceptions worth mentioning, according to Neena (2012) are agricultural universities established across India, which had their philosophical inspiration from agricultural science institutions of United States of America. Indira Gandhi Krishi Vishwavidyalay, Raipur was the first to formally introduce Information Literacy course in the form of Library education courses.

Singh (2008) attributed traditional educational system, over-population and a low literacy rate as the root cause of ignorance, against the globally recognized new developments in pedagogy and information literacy.

The last decade marked many initiatives taken by government of India to identify the urgent need of information literacy as an important facet of learning process and need to impress upon the urgency to take steps in invoking peoples' awareness to information. Right to Information Act is one such program worth mentioning which is considered as a benchmark by Indian government "to provide for setting out the practical regime of right to information for citizens" by means of making information under public domain as a right of its citizens.

National Knowledge Commission (2010), in its recommendations emphasized the need for a proactive role of libraries in education, knowledge dissemination and information literacy. It is imperative to mention the role of independent library associations and academic database vendors in propagating the information literacy.

C.R. Karisiddappa and Rajgoli (2010) in their case study of selected library and information centers of higher learning and research at Bangalore City discussed various aspects of Information Literacy in India and emphasized on active role of Librarian in delivering it. He also impressed upon the role of "teaching librarians function as an educational professional, that is as one who can engage in educational debate and decision-making process, influence policy and decision making processes, influence policy, forge strategic alliance and demonstrate diplomatic sensitivity".

Lately, some of the Indian Universities have identified the role of Information literacy teaching and have integrated it into their curricula as both credited and non credit subject. A recent example is Delhi University which has introduced online courses and regularly organizes short term course on "Information Literacy for Research Competency" and keep improving upon its methodology and tools by being proactively engaged in getting feedback analysis programs. Likewise, Indian Institutes of Technology organizes various workshops and lectures to help keep students and faculty abreast with the contemporary information techniques, systems and database.

TAV Murthy (2006) in his study provides detailed overview of the various information literacy initiatives taken up by INFLIBNET through UGC-Infonet and E-Journals consortium by making academicians and users aware on the e-resources available through consortium.

Significance and Objectives

The present study draws its significance from the very objective of establishment

of the Doon University, established by the Government of Uttarakhand. It was the huge deficit in the area of excellence in higher education felt by the state of Uttarakhand which prompted the formation of Doon University. This was followed by grooming it as 'benchmarked with the best in the country and globally by providing value-based learning, offering state-of-the-art educational programmes in cutting-edge disciplines of regional, national and international relevance, conducting high quality and multi-disciplinary research by providing environment for scholar-researchers to engage in pursuit of excellence'.

In order to achieve the goals the stakeholders of the institution i.e. students and teachers, they need to be provided with the best of infrastructure and nurturing them with tools and techniques, to be used in the best possible manner. In this context, it becomes pertinent for the university to embrace the globally recognized skills sets on Information literacy which one must possess for an effective and intelligent participation in information society.

Travis (2008) states that "A number of shifts in academia have created an environment that is more receptive to including information literacy in discussions of student learning". As of now, Doon University does not recognize information literacy skill learning as part of its course curricula, although university does provide students and researchers with information technology, internet usage and library orientation workshops. The workshops, however, do not confer to any formal information literacy standards.

The objectives of the current study are:-

1. To evaluate the information literacy standard of the students and research scholars.
2. To ascertain if students need to enhance their information literacy.
3. To suggest steps to improve the information literacy skills among students.

Methodology

Survey method based on close ended questions was used for the study. The student population for the study was 787 students, including research scholars pursuing their pre PhD course work. Random sampling techniques were used to select respondents across the university. A total of 100 students responded completed and returned. Descriptive statistics such as frequency and percentage tabulation were used in the analysis the data.

Analysis

The ACRL standards are extremely popular the world over, being widely accepted and tested. It includes the expected outcomes under each performance indicator, which are developed for "the purpose of providing guidance in the development, assessment methods, instruments and strategies for measuring students' learning outcomes" (Bhatt, 2011).

The questionnaire was deliberately prepared with an eye on the "Information Literacy Competency Standards for Higher Education" which precisely specify

standards, performance indicators and possible outcome among various stakeholders in higher education. Therefore, analysis of the data collected is analyzed in accordance with the indicators and possible outcome of the standards specified by ACRL. For the sake of convenience in analysis “partially capable” and “to certain extent” were considered at par with “quite capable”.

1 The information literate student defines and articulates the need for information:

While examining the usage and need of searching information in the curricula, 50% of the students responded that they were involved in writing research paper. On the contrary, 35% students showed an inclination toward browsing information by way of personal interest. It is worth mentioning that the remaining 15% students responded that, while searching they found a piece of information and, on finding it unreliable, they rejected the same. A majority of students (95%) showed understanding of internet as an ambiguous medium of information and a need to be careful on selection of online resources.

Table 1: Information related activities

Opinion	Total Responses/ Percent
Written a paper which required research.	40 (50%)
Given a speech which required research.	0 (0%)
Researched an area of personal interest.	28 (35%)
Rejected a piece of information because the source was unreliable	12 (15%)

In spite of the widespread popularity of Wiki sites being easily accessible to editing, being naive on the fact that even an unauthorized and unreliable piece of information can be uploaded, a considerable 50% students considered Wikipedia and other Wiki stuff as an ‘up-to-date’ and reliable source of information, while 30% students were unable to reach at any conclusion.

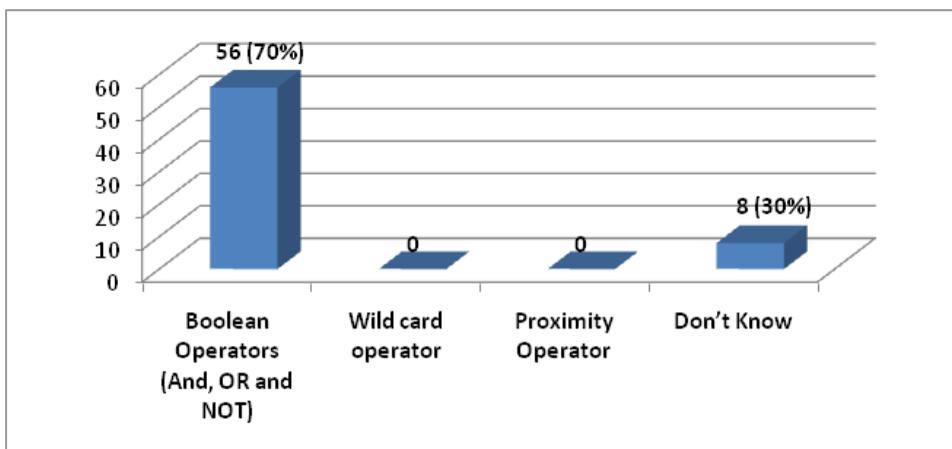
Table 2 : Various perceptions about Wikipedia

Opinion	Total responses
Because anyone can edit the articles in Wikipedia, the information is always up-to-date, accurate and reliable.	40 (50%)
Because anyone can edit the articles in Wikipedia, the information is not necessarily accurate and reliable.	0(0%)
Wikipedia is a good place to start when you want to find general information about a topic.	16 (20%)
Wikipedia should not be used without verifying the information in reliable sources such as primary research articles, review articles, field guides, websites and databanks that are produced by recognized research organizations.	0(0%)
All of the above	0 (0%)
I don't know	24(30%)

It is evident from the data analysis that the classroom teaching does persuade the students to seek and value information. An overwhelming majority of students are quite fluent in the use of computers, internet and information technology. In the wake of a widespread indulgence of majority of students in internet browsing and surfing, a considerable portion of them is not aware of the authoritative limits on it. The habit of hunting for information on the internet seems to reflect on their perception of understanding the resources of learning on internet. A considerable portion of students were not aware of differentiation between website domains (.in., gov ac., etc.) which might make them vulnerable to seeking un-authoritative information from innumerable heap of information.

The information literate student accesses needed information effectively and efficiently :

In spite of having a classified library collection, and a provision for library orientation program at the start of academic calendar, almost 98 % of the students were unaware of the concept of call number and the same percentage of students were surprised to find that the collection available in the library can be searched on the in-house online database software. A mere 70% of students knew the utility of Boolean operators (AND, OR, NOT). It happen to be the same case with wildcard operators and proximity search tools as no student was found to be aware of them.



Graph 1:Utility of Role of operators

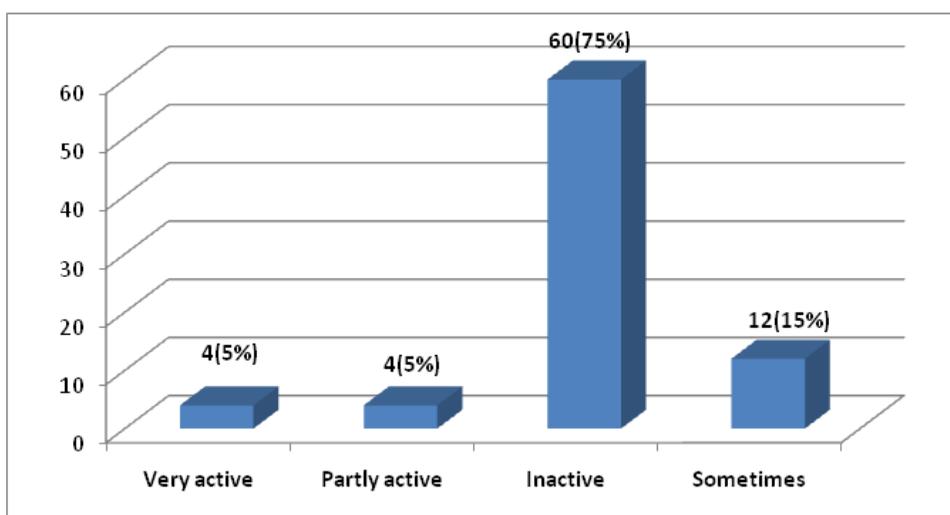
In spite of having organized library orientation programs for newly introduced students, the data generated shows a lack of continuing such initiatives from the library so as to make the students aware of the availability and usage of resources available in library. It is evident that students rarely expend efforts on the internet to search the information retrieval tools, as they are expected to provide search output the way most scholarly databases do. As a condition coined by As a condition coined by James Morris "infobesity" , to represent junk information that users love to consume, is catching amongst information seekers to prefer more (including

junk) then having optimum yet organized and authentic information. In order to get the students acquainted with the exhaustive use of available e-journals and databases, the library needs to play a proactive role, by making them learn basic search strategies and retrieval methods.

The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system.

While responding to the question of comparing between primary and secondary information, 70% students were aware of the difference between them.

In response to the question of blogging and being interactive on internet, 5% of students replied 'as very active' and 5% said 'partly active', 5% said they sometimes do blog and about 75% said they are either rarely active or 75% totally inactive on blogging activity.



Graph 2 : Involvement of students in Blogging activities

Almost all (99%) of the students were not aware of any discrimination between website domains (.in., gov ac., etc). About 60% users responded as being pretty skilful in using information technology. In comparison to this, 30% students responded as not being very proficient with the use of Information Technology. On the question of acquaintance with the latest technologies and equipments, 50% students stated that they get it immediately, whereas 50% stated that it takes them a reasonable amount of time.

The ultimate goal of education is to train thinking individuals who will eventually turn into self -learners. The pre-requisite of any educational system is to make individuals search, perceive, organize and criticize idea and logic inside him/ her. Activities like participating in discussion, debate and contribution to talks are healthy signs of these qualities being groomed in the right direction. In addition,

computer and information technology skills comes to rescue the individuals' capacity by providing them with tools to organize, evaluate and analyze raw data into meaningful information. The analyzed data embraces the students' and research scholars' capabilities of computer and information technology.

The information literate student, individually or as the member of a group, uses Information effectively to accomplish a specific purpose.

When asked whether they can convert documents of one file extension to other programs that use different file extensions (word processor into pdf, tiff into jpg, etc) 10% students stated they are not capable of doing so and importing pieces of data from one format to other in comparison to mere 25% says they are somewhat capable and 65% of students responded that they are good enough in doing so.

Table 3: Converting documents of one file extension (such as .doc, .pdf, .xls) to other programs that use different file extensions

Opinion	Total responses
Not very capable	8 (10%)
Somewhat capable	20 (25%)
Most capable	52 (65%)

On the question whether they are capable of creating a multimedia presentation/file (having interactive sound, basic animations/video) in 75% students responded that they are quite capable of doing it.

Table 4: Creating multimedia presentation/file(having interactive sound ,basic animation/video

Opinion	Total responses
Not very capable	8(10%)
Somewhat capable	12(15%)
Most capable	60(75%)

The standard emphasizes upon the need to communicate, organize and synthesize new and existing information to create unique information packages to accomplish the required solution to a problem. The capability required from information literates is to possess communication and inclusive computer techniques to work with number of digital media, to come out with a package that represents one's intentions and extensions of understanding the concepts in the best possible manner. The analysed data shows that majority of students have these capabilities. A well laid program in future to actually teach, analyse and polish digital literacy will go a long way in improving information literacy among students.

Quality to determine etiquette; legal social issues related to use of information

On the question of making copies of a copyrighted digital media, 70% percent

students stated that it is illegal to make copies, 20% said that it is absolutely legal and 10% said they do not know .

Table 5: Awareness regarding Copyright material

Opinion	Total responses
Yes	56(70%)
NO	16 (20%)
Don't Know	8 (10%)

On the issue of understanding plagiarism 75% students that 'using someone's original words, ideas or line of thought without acknowledgement' is plagiarism and 25% students consider that 'copying word by word' constitutes plagiarism.

Table 6: Issue related to plagiarism

Opinion	Total responses
The use of someone's words, ideas or line of thought without acknowledgment.	0(0%)
Copying out of an encyclopedia without citing a source.	60(75%)
In correct use of footnotes in documentation.	0(0%)
To copy another's work word for word.	20(25%)

When asked whether one can use the 'outline of the paper found on the web if he/she has the permission of the creator', 30% of students responded positively, 47.5% of students responded negative , while 22.5% students said they do not know about it. On the question of providing citations to the seminar, assignments, project or research papers, 52.5% students said that were aware of it and practiced it, 32.5% students said that they are aware of it but never bothered , and rest 15% were not aware of it at all. Although a considerable number of students follow the practice of providing citations, it was surprising to see that 50% of students had heard of Chicago manual style, or any other standard citation styles.

Table 7: Perception on citing references and giving credits to original authors while preparing seminar, assignments, projects or research papers.

Opinion	Total responses
Yes I know I should and always does	42 (52.5%)
Yes I know I should but don't bother about	26 (32.5%)
No, I don't think there is any need to do so	12 (15%)
Don't Know	0 (0%)

On their view on need of any course/workshop offered by university, useful to them for searching, organizing and incorporating information more effectively and efficiently in context of their subject domain, 85% of students said they strongly need it, 15% said they do not think it was required .

An information user and consumer must be aware of the ethical and legal use of information, and should adhere to the prescribed standards. One must respect the etiquette surrounding the ethical intellectual property, copyright, and fair use of the copyrighted material. In India it is quite common to find a lack of awareness among academic fraternity, with cases of deliberate or unintentional indulgence to the unethical use of information.

Information users must be sensitized to the issue to plagiarism which means not using the words or ideas of someone else as your own, without duly acknowledging the source and author by documenting and citing references their resource in globally recognized standards. The analyzed data clearly shows a lack of clarity among a considerable number of student surrounding ethics and etiquettes on the use of information.

Viewpoints of Teachers and Librarians

Teachers and faculty from all departments were also interviewed to share their experience and perception on the response of students to various active ties where any kind of information fetching, organizing, optimizing activity like giving seminars, assignments and projects are exercised. Faculty and teachers in higher education are instrumental in encouraging the students to know the importance, need and desire of utilization of information and knowledge resources on the respective knowledge domain.

When teachers from various faculties were asked to share their experience, most of the teachers were concerned about the issue of plagiarism by way of the practice of copy-pasting a considerable amount of text from books and journals without even citing the original author. The teachers were also very concerned about the exaggerated practice of 'Googling' , and having a mindset that, when it comes to citing statistical and factual data, they will find 'anything' on internet instead of using more credible books and electronic databases in university library.

The Library staff although was satisfied with the usage of library of books and other reading resources from the library by both students and research scholars. Journals in print and electronic forms were mostly being used by students. However despite library orientation program being provided to all the students at the start of their course, only a few students use OPAC and personal library account to search books and managing their library account.

Information Literacy: The solution and path ahead

In European and western countries, there have been numerous Teacher-Librarian collaborations, and effectiveness studies done on implementation of Information Literacy teaching. The studies have duly recognized the role for librarians to collaborate with faculty in order to add value to the teaching and learning process. Learning from each-others' experience, both Faculty and librarian

can utilize their domain knowledge and value system to favour a new regime of information literacy teaching.

It is the high time the institutions must take initiative not only to teach the respective subjects to students but also to inculcate skills to lifelong learning pertaining to that subject.

The libraries also need to go beyond their role of books and knowledge keepers and information retrieval centers, to a more proactive role of information literacy teaching institutions and role of Librarians as information experts.

There have been instances Meulemans (2013) and Travis (2008) where implementation of information literacy programs failed due to lack of proper 'collaborative efforts' on part of both Librarian and faculty. If not properly embedded with sincere effort from faculty, Librarian and administration, the programs are a near failure. All stakeholders need to respect each other's contribution to the cause beyond collaboration and needs well laid policies, role and assessment methods leads to success information literacy missions.

CONCLUSION

Higher education in India is in a process of transition, from traditional, colonial and static system to a more competitive system based on global market philosophy. The present survey provides an insight to the status of information awareness and literacy among the students of Doon University. Doon University, being in its nascent stage of development, can learn from global developments. Consequently, it can set an example for other universities in India and everywhere else where the concept of information literacy is yet to be recognized as an imperative part of a wider learning process.

The university needs an immediate attention toward making students aware about the optimum and judicious use of information. The key to this is to come up with a well-laid framework where information experts and librarians can collaborate with respective curriculum to achieve pre-documented goals. The case of Doon University cannot be confined to a single institution or system, and is a reflection of lack of awareness of the system towards information literacy skills development among higher education institutions in India. The present technology promises to offer opportunities for exploiting the ocean of information and knowledge. It is high time that Indian university administrators start exploiting these oceans.

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