

Information Flow Management in Higher Education Institutions

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Abstract

In this information age, information literacy and its management has gained importance with the rapidly changing technological environment and proliferation of information resources. Information literacy and its management became significant for students, academicians, and professionals involved in Higher Education especially in terms of need, access and preservation. Information in the higher education system is available through libraries, community resources, and internet along with various other resources in a much unfiltered form. This research paper provides an insight of 'Probability', 'Expertise', 'Efficiency' and 'Accountability' of information management in Higher Education Institutions in order to 'Identify', 'Classify' & 'Rectify' the information. Further this paper examines the flow of information at different levels and the importance of information literacy for information management in Higher Education Institutions (HEIs).

Keywords: *Information Management, Information Literacy, Higher Education Institutes, Technology*

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”(Information literacy competency standards for higher education, 2000). In the contemporary information age of “Data Dinosaur”(Robson, 2015), Information literacy & Information Management are becoming increasingly important because of rapid technological changes and proliferating information resources. Due to changing data dynamics; in terms of need, access, and preservation;

Information Literacy & Information Management are important for students, academicians, and professionals involved in Higher Education. Individuals are faced with diverse, abundant information choices—in their academic studies, in their workplaces, and personal lives. Information is available through libraries, community resources, special interest organizations, media, and the Internet—and increasingly, information comes to individuals in unfiltered formats, raising questions about its authenticity, validity and reliability.

To keep in mind the dynamics of information flow and information overflow, it is important to analyze the 'Probability', 'Expertise', 'Efficiency' and 'Accountability' of information management in any system like Higher Education Institutions. In absence of these skills, one may not be able to 'Identify', 'Classify' & 'Rectify' the information. Information literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, verify and evaluate, and use effectively the needed information (Information literacy competency standards for higher education, 2000). These eight aspects i.e. (a) Locating (b) Verifying (c) Evaluating (d) Classification (e) Rectification (f) Archival (g) Retrieval are the basic components of information literacy.

Locating / Identifying - Today there are an umpteen number of channels where one can get information from, there are archives, libraries, research papers and then there is the internet. With these many options, it is important that one knows where to look for the information as it is very easy to get lost in the sea of this information jungle. Another significant aspect related to this is to identify which data is required and which is of no use.

Verifying- While one has been spoiled for choices with the internet and other forms of media, one needs to keep in mind that not every source would have the exact correct information. Thus, verification of any information is very important. One needs to confirm the information at least from one or two credible sources.

Evaluating - While information is precious but without proper knowledge of how to process it is nothing but raw data. One needs to evaluate what information is really important and what is not. This segregation of information is crucial as a lot of unnecessary data which is not needed but would get eliminated and save us the hassle of storage and processing.

Classification - In any institution, information is received in the form of bulk raw data. Before further processing this data, one needs to classify the different forms of data, in order to make the process more efficient.

Rectification - After classification has been done, the next component is to look for the discrepancies and then rectify them. Once the wrong data is fed into the system, it would require a whole new procedure for its correction, that is why rectification is required beforehand.

Archival - Data archiving is the process of identifying and moving inactive data out of current production systems and into specialized long-term archival storage systems. Moving inactive data out of production systems optimizes the performance of resources needed there while specialized archival systems store information more cost-effectively and provide for retrieval when needed.

Retrieval- This is the end objective. It is the process of getting any particular information from the sea of information. If this process is quick and efficient, a lot of problems with information management would be solved.

In the 21st century, man has never known as much as he knows today. But that is just half the work done. The other half can only be fulfilled by Information Literacy. All the above-mentioned components of information literacy are fundamental requirements for any Higher Education Institutes. The amount of information fed into our servers every year is huge and with all this information, it is imperative that the people dealing with this information are equipped with the knowledge of Information Management and the process of Information accesses and distribution.

It is also important in this line of action that one should acquire the knowledge of various information flows in any Higher Education Institution. This knowledge will fulfill the requirement of information literacy up to a certain level. These stratified literacies create awareness, which can be translated into intelligence later on. American psychologist Howard Gardner states that the traditional view of intelligence is too narrow. Rather than conceiving of intelligence as a single, relatively fixed entity, Gardner's emphasis was on intelligence as comprising a number of relatively independent faculties. Gardner proposed facets, like, bodily/kinesthetic, linguistic, logical/mathematical, interpersonal (understanding others) & intra personal (understanding oneself) etc. He further suggests that these aspects of

intelligence are modifiable. This again contrasts with the traditional view of intelligence, which conceptualized it as relatively fixed (Johnston & Anderson, 2005). It means to provide information literacy among stakeholders, it is required to tighten the information channels and spreading the awareness of the information flow in any institution.

Information literacy empowers people in all walks of life to seek, evaluate, use and create information effectively to achieve their personal, social, occupational and educational goals. Information-literate people are able to access information about their education and work, and to make critical decisions about their lives and profession (UNESCO, 2018). Obviously, the information literacy of the stakeholders of Higher Education Institutions are of various levels, and thus their intelligence level is also varied in nature. That is why information literacy is called the “basic skills set of the 21st century.” This is widely recognized and accepted for all types of workers—entry level to top executives (Eisenberg, 2008).

In any Higher Education Institution, flow of information includes the information related to library, classroom learnings, co-curricular & extra-curricular activities, administrative affiliations, examination & student support system, dues and credits etc. In this sequence, information about the library system is of great importance. In the developed world, during the twentieth century and at the beginning of the twenty-first century, academic and school librarians developed the concept of information skills instruction from library orientation to library instruction to course-integrated user instruction. Librarians developed teaching materials, guides, teaching methods, library skills tests, web-based tutorials and other online teaching modules. Although the information skills teaching units were often separate from the academic curriculum and not integrated into instructional programs for students, librarians have continually tried to integrate the teaching of information skills modules into the curriculum (Rader, 2002). In recent years, India has taken a leap in information technology and is now looking to achieve the same level of information literacy that exists in the first world countries. Information literacy has become the foundation for learning in our contemporary environment of continuous technological change. As information and communication technologies develop rapidly, and the

information environment becomes increasingly complex, educators are recognizing the needs for learners to engage with the information environment as part of their formal learning processes (Bruce, 2004) and improved management procedures. Nowadays, in the era of converged technological environment (Jenkins, 2016) information literacy is inextricably associated with information practices and critical thinking in the information and communication technology environment (Virkus, 2003).

Information literacy practices in Higher Education Institutions are limited to their traditional modes of communication like: Annual orientation programs, physical notices, informed/uninformed opinions etc. but after a lot of development of information clusters, it is important to denote and reflect information flow and information practices at various levels. In this regard we can classify the flow of information in the following manner for any HEI.

D2D - Department to Department

S2D - Stakeholders to Departments

D2S - Department to Stakeholders

SPs2D - Service Providers to Department & Vice Versa

D2D- Department to Department

This facilitates the exchange of any Information from one department to another department. It helps the departments to interact with each other and provide necessary details. It includes communication channels between authorities, institutions, various colleges, funding agencies etc. with respect to various information necessary for their functioning and working. It also reflects the passage of information flow from university to colleges and reversal of the same.

S2D - Stakeholders to Departments

This facilitates various forms of notices, projects etc. from the department to the students of the same department. This also includes teachers and employees. The various information that the employees and the teachers are meant to provide to the college are categorized in this channel.

D2S - Department to Stakeholders

This facilitates various forms of notices, projects etc. from the department to the stakeholders of the same department.

SPs2D - Service Providers to Department & Vice Versa

This caters to the flow of necessary information from service providers to the college and also makes it possible for the college to avail services from the providers.

Challenges in Ensuring the Information Flow at Various Levels

In order to ensure information literacy among stakeholders who need an access to information, it is paramount to overcome the hurdles that come in the way. With so many people and procedures involved in the process of collecting, evaluating, classifying and retrieving information, there would be a few challenges. No one would disagree with the fact that even the slightest gap can lead to a huge mis-communication and data misinterpretation. In our study, 'Assessing the information flow and its management in HEIs, following challenges were observed at various levels of information flow.

University to College (U2C)

1. University to college communication must be strong and flawless. Sometimes, due to some barrier in flow of information, the updated information does not reach the college from the University and this affects the smooth working of the college / university. For example, Maharaja Agrasen College, University of Delhi shifted to its new building in Vasundhara Enclave in the year 2010. The new address of the college was not updated in the university records. Though the normal academic procedures and functions were in order, but the college could not receive travel grant, research grant, and other facilities from the funding agencies like UGC. It could have been updated in February 2017 but it was only after several efforts of the college that UGC was able to approve and incorporate the new address of the college in August 2017.
2. The information of the examination comes directly from the University on the University Website. Since there are 79 colleges and 86 academic

departments in the University of Delhi, there may arise a lot of confusion regarding the examination dates. For example, in the academic year 2016-17, two dates of AECC / EVS exams were announced by the University. This led to a huge chaos among the students. Since there is no direct information flow between students and the university, it took a while for the administrative department to solve the problem.

College to College (C2C)

A connection between the digital libraries of different colleges would have built a strong bridge of information exchange among the students but there isn't really any communication system between any two given colleges. An interconnected library would mean more resources. Also, if the colleges are associated, the students would get to know about the other academic activities of their interests.

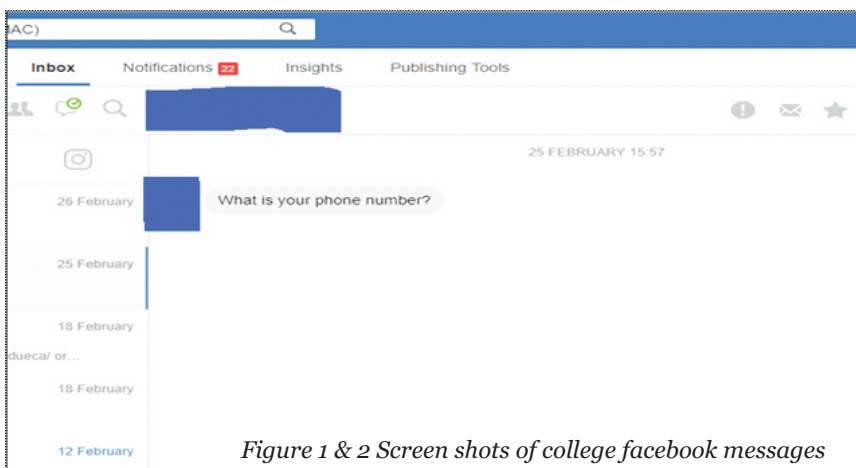
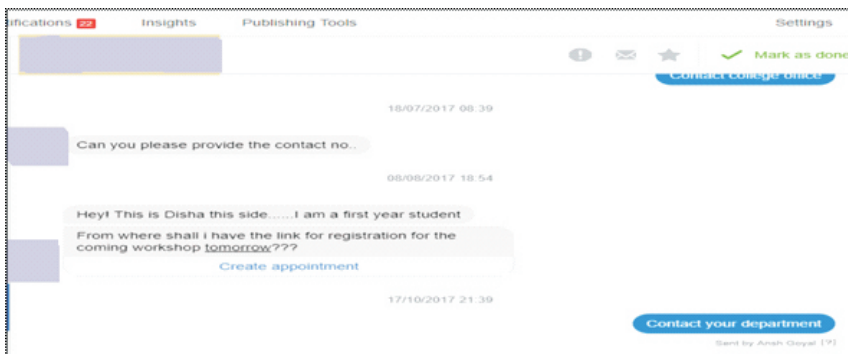
Department to Department (D2D)

1. There are so many departments working simultaneously in a college / university. There are a few departments which are responsible for providing some specific facilities. Even if there are resources, people don't get the access and that is where the need for information literacy arises. Due to lack of a proper information channel, people don't get to access the facilities. For example, the Department of Journalism has cameras and all the other equipment that can be used in different activities of different departments but there are a few people who are aware of this fact. Likewise the same for ICT, Abdul Kalam Centre etc.
2. There is a slight inaccuracy between the data filled by the students in the admission form and other forms related to their family background, address, contact details etc., different departments have no common platform to share, retrieve and rectify the information. For example, the details filled in the form of Students Aid Fund, sometimes happen to be different from the admission form. Student Aid Fund helps the students in financial need. But due to this discrepancy, it gets difficult to distribute the funds based on the given details and a new information bank is created in the process.

Stakeholders to Department (S2D)

Following shortcomings were observed in the research process about information flow from the stakeholders.

1. Updating information such as address or phone numbers, publication details, research activities, visits, participation in various national / international activities, consultancy etc. proves to be a daunting task because of the lack of awareness regarding the procedure of initiating an updating process.
2. Students seem to have no idea about where one should ask for a particular information. Information literacy is not just about accessing all sorts of information but also about the sources where one could get the right information. For example, the Facebook page of Maharaja Agrasen College has been bombarded with questions that a Facebook page isn't



supposed to answer. Undoubtedly, the website is the right place to go to for any kind of official notice or information. Following are the types of queries the page receives.

The queries raised by students in their messages over Facebook were found undirected and inappropriate. This is just another example of information literacy lacuna.

Departments to Stakeholders (D2S)

There are various traditional media vehicles between stakeholders and departments like, notice boards, help desk, letters etc., but they are not sufficient to communicate to satisfactory outcomes due to limitations of the medium and changes of consumption pattern of the stakeholders. Therefore, the new communication channels are required to maintain information & communication flow between departments and stakeholders. For this specific purpose websites are considered as the primary source of information for the students, teachers and parents. One can access desired information if one is aware about the information flow and is subject to availability of the information over websites. Information literacy not only leads to access of desired information from any online source but also to place information in appropriate places. It was found that the websites of Higher Education Institutes were designed in away information arises instead of the way in which information is accessed. Tabs visible on such websites are not properly linked with their content and normally site maps are also absent which can create an ease of access to stakeholders. Different pages of the website are not interconnected, even if the information is available, students do not get an easy access to the same.

Another major issue with the website is the lack of space because of which the website does not have enough details and information. The website runs under the domain of the University of Delhi and there are 78 other college websites running under the same domain. And thus, not much space has been allocated to an individual college website which becomes a hindrance to the smooth functioning and information load of the website.

A feedback form is supposed to take into consideration the student's point and their grievances, but the feedback forms and their redressals reach a dead end because of the lack of information literacy.

There is no such established communication channel between department to parents except the traditional media vehicles i.e. letters and notices published online. Several times, letters are not delivered to parents because of change of address and lack of update of the address by the students. Last semester, letters were sent to the parents of students who were short on attendance, out of which 40% letters found their way back to the college. Not much information is passed about the remedial system either. There is a provision of arranging remedial classes for the students who really require it in any subject. But the remedial classes do not function properly due to improper flow of information.

Service Providers to Department (SPs2D)

Information channels between service providers and departments are not effective enough, even certain services provided by different cells of the university itself are not known and thus not accessed. Information gap in various administrative and financial procedures are evident enough in their course of action.

Government e-Marketplace has facilitated online procurement of common use goods and services required by various Government Departments and organizations. It aims to transform the way in which procurement of goods and services is done. This is a very recent phenomenon as it started in 2016, this is why not many people in government bodies have the information about procurement of goods and other services. Government e-Marketplace (Gem.gov.in) is efficient, transparent, safe and secure but the potential customers are not aware about the same.

Suggestions and Conclusion

Based on the studies conducted at various stages of information flow mentioned earlier in this paper, it was observed that:

1. There should be a flawless information network between one department to another and all responsible individuals should be given appropriate training of all communication and information flow. There should be an Information Management Software such as ERP, CMS etc. to manage information. It was found that human resources of the institutions who are using any kind of ERP or CMS are not trained enough to manage the information flow.

2. Stratified training programs and refresher programs related to information literacy need to be organized. Apart from contemporary practices of orientation to stakeholders, participatory workshops of stakeholders should be organized for the literacy information flow at various stages. Regular publications and information flow manuals may be published for stakeholders. E- Learning materials and site maps should be uploaded.
3. Various departments who are close to stakeholder communication channels should be given a facility to register their information directly over websites. All tabs of similar links should be hyperlinked and directed towards a single content to avoid multiplication of data and repetition of messages.
4. Classroom participation and performance along with beyond classroom activities should have flexible channels of information flow, where we can introduce multi-directional communication channels. If we can establish a multi-directional communication channel between stakeholders to department, it will help in establishing information flow networks from department to stakeholders. Departments should have access to associated communication networks to disseminate information to their stakeholders. Software like CMS and literacy of the same may go a great deal in bridging the gaps.
5. Various functionaries of the institution should be aware about norms, practices and procedures of various institutions and bodies. They should be apprised and reinforced about the same. There is a huge time constraint as the stakeholders in any HEIs do not have a provision of professional training for longer durations. Also, the administrative, financial, teaching and other duties are in itself a very time-consuming job and taking out time for any extra activity proves to be rather difficult. Along with the same, the country is on its way to great educational development, and thus it is important that we are equipped to provide the stakeholders with the best facilities that we can. The utilization of these various facilities can only be fulfilled through information literacy at various levels. Through our project, we would be working towards the challenges to information literacy and their probable solutions.

This project is fully in line with UNESCO's mandate as it aims to raise awareness of the significance, role and scale of media and information literacy and improve policies and professional strategies at international, regional and national levels. But applying these norms and standards at a Higher Education Institute is problematic. Adapting the International standards to our professionals would not be as effective as it is meant to be.

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