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\textit{A Journey from Librarian to Cybrarian}

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27 Conducting Information Literacy programmes for Teaching, Learning and Research

: A case study of Shree M. & N. Virani Science College, Rajkot

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Abstract

This is a case study on the type of Information literacy programmes conducted at the college for teaching, learning and Research. The seven component model of Shapiro & Hughes, 1996 is being used for a holistic approach towards Information Literacy for various levels of readers. It also mentions about the cultural and Institutional factors we need to consider before conducting these programmes at our institute.

Keywords: Information literacy Programme, Course integrated instruction, Librarian- faculty collaboration, Curriculum integrated information literacy.

Introduction

Change in policies of Higher education system in the country in the last decade and making education more and more outcomes based has created a need for the Faculty and students to approach the Library and involve the Librarian into their curriculum design, implementation and evaluation too. The Librarians welcome this opportunity to co-partner the process in the role of the Information Specialist, Knowledge Manager, technology experts, project and research assistant and also Educators at large. One service that has been actively taken by Librarians across the globe from a few decades since the advent of Digital Era is the Information Literacy Programme. The paper gives the details of a few examples of Information Literacy Programmes conducted at the Shree M & N. Virani Science College, by the Library and Learning Centre.

The setup
Shree Manibhai Virani and Smt. Navalben Virani Science College (VSC) Rajkot is managed by Sarvoday Kelavani Samaj and was established in 1968. It has been accredited at ‘A’ Level by NAAC, has the ‘STAR College Department’ Status by MST-DBT, declared as “A College with Potential for Excellence - CPE (Phase-II)” and recently given an Autonomous college status by UGC. The College is affiliated to Saurashtra University and provided grants by UGC. The College offers under graduate and post graduate courses in the field of Basic and Applied Sciences, Life Sciences, Computer Science and also Management Sciences.

Library and Learning Centre of this college is considered as “the Life-line for the academic activity of the Institute”. The Library is known for its rich collection, with ample of resources for conducting R & D activities. It has access to a number of e-resources (e-books, e-journals) under the NLIST Program and also to subscribed e-resources of its sister institutes on the campus including IEEE and Elsevier. It is well equipped and ICT enabled following all international standards, it is continuously updated with Collection & technology with all modem facilities to cater to the Information & Knowledge needs. The Library is well networked with other libraries through INFLIBNET and DELNET kind of memberships. It also conducts many user orientation and education programs for its users to take the maximum benefit of collection and memberships available.

**Information Literacy Programmes (ILP)**

(Rader, 2002) in the selected review conducted has provided a background of the practice as “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.” [1].

Information Literacy Competency Standards for Higher Education by ACRL, 2000 defines “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”[3],[2]”

Information literacy is a key component of, and contributor to, lifelong learning. Information literacy competency extends learning beyond formal classroom settings and provides practice with self-directed investigations as individuals move into internships, first professional positions, and increasing responsibilities in all areas of life. Because information literacy augments students’
competency with evaluating, managing, and using information, it is now considered by several regional and discipline-based accreditation associations as a key outcome for college students. [4]

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
- Use information effectively to accomplish a specific purpose
- Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally [2]

The Boyer Commission Report, Reinventing Undergraduate Education, recommends strategies that require the student to engage actively in "framing of a significant question or set of questions, the research or creative exploration to find answers, and the communications skills to convey the results..." [5]

(Shapiro & Hughes, 1996) have suggested seven important components of a holistic approach to information literacy:

- **Tool literacy**, or the ability to understand and use the practical and conceptual tools of current information technology relevant to education and the areas of work and professional life that the individual expects to inhabit.

- **Resource literacy**, or the ability to understand the form, format, location and access methods of information resources, especially daily expanding networked information resources.

- **Social-structural literacy**, or understanding how information is socially situated and produced.

- **Research literacy**, or the ability to understand and use the IT-based tools relevant to the work of today's researcher and scholar.

- **Publishing literacy**, or the ability to format and publish research and ideas electronically, in textual and multimedia forms ... to introduce them into the electronic public realm and the electronic community of scholars.
• **Emerging technology literacy**, or the ability to continuously adapt to, understand, evaluate and make use of the continually emerging innovations in information technology so as not to be a prisoner of prior tools and resources, and to make intelligent decisions about the adoption of new ones.

• **Critical literacy**, or the ability to evaluate critically the intellectual, human and social strengths and weaknesses, potentials and limits, benefits and costs of information technologies [6]

There are a large number of Information Literacy, Research, or Information Problem Solving models available for teachers to use with pupils to name a few the Big 6 Model given by Eisenberg & Berkowitz, 2000, The Research Cycle by McKenzie and so on a detail listing is provided on the website http://ictnz.com/infolitmodels.htm [7].

(Hinchcliffe & Wong, 2015) have given a simple for Assessment asked questions like these:

• Did students learn what we wanted them to learn?

• If so, how well did they learn? Is their understanding very basic or more advanced? Can they use their knowledge or skills in new situations?

• If they did not learn, why not? What points were confusing? What skills were difficult to master?

• How can the instruction be changed to improve learning? [8]

ILP's designed and conducted at the College

The ILP’s are designed strategically as per the need of the community the Faculty, the Undergraduate Students, the postgraduate Students and the research Scholars. With the help of online resources and the case studies course integrated Instruction Programmes the Librarian designs and develops a customized ILP for the community. There are many cultural and Institutional factors we need to consider before conducting these programmes. To list a few:

• Language of Instruction
• Type of Curriculum (Theory vs practical vs vocational)

• Every discipline needs a different approach

• Management perspective of involvement of Library in teaching, learning and research

• Faculty usage of library

• Library team and its leadership, enthusiasm, skill expertise, updating and collaboration attitude

• Faculty and Students perception on going beyond syllabus

• Faculty, PG students and Research Scholars attitudes towards doing and publishing good research

• Policies at the Institute level on performance indicators and use of Library resources

• The Generic skills expected to be developed by students should be well defined

All the above factors have been listed purely based on our own experience of years at our group of institutions and various libraries operating under one management.

At VSC, we are very fortunate that our management has high regards for the Library and its role in education. The Principal, the faculty members are very cooperative and the students are enthusiastic to go beyond syllabus too. Thus these factors have helped us over the years to conduct many ILPs on various topics for different types and levels of Information users.

Throughout we have followed the seven dimensions of literacy by Shapiro & Hughes, 1996; based on the level of users we consider the contents under each of the components.

**For Teaching**

As (Gorman and Dorner, 2006) have expressed “We believe that Bloom’s taxonomy (1956)[9] is used as a framework for constructing information literacy education programmes without thought being given to cultural aspects of education. Indeed, according to Anderson (2005)[10] the original purpose of Bloom’s taxonomy was to reduce the amount of work involved in preparing annual comprehensive
examinations. The reduction of labour in education was extended through the taxonomy to teaching in general by establishing an heuristic approach for teachers to produce the learning objectives needed for specific curricula, courses or classes, the learning activities required to achieve those objectives, and the forms of assessment/evaluation tasks needed to determine how well the students achieved the learning objectives. The taxonomy and its derivatives are, as mentioned earlier, used extensively in information literacy education programmes.” [11]

At our college we have a few departments following Anderson blooms taxonomy applied for a few subjects of study for example in Biotechnology department. In this department we support the faculty very closely in terms of their curriculum needs and pedagogy needs. Sometimes the Librarian is able to conduct this on her own and sometimes in collaboration with other department faculty on the campus.

Sessions conducted for Faculty are :

1. Teaching tools that a college teacher can use especially (STEM teaching tools for e-learning etc.). Sessions on Moodle, Edmodo etc. Some sessions are also conducted with the support of Spoken tutorials, IIT Mumbai on Camatasi studio, Virtual Labs by Amrita University and MOOCs - Swayam.

2. Resource literacy on resources for teaching especially the Sage E-books on teaching, learning, Pedagogy. Especially Case studies on pedagogy for teaching specific topics in the curriculum. Sessions on existing Opencourseware and creating one.

3. Social-structural literacy – Especially how to search for resources from countries that have English as a Foreign Language and how the teachers have developed the competencies of the students in the context despite the language Barriers.

4. Research Literacy – Regular sessions along with PG students in Literature search and survey. A exclusive session on deep web and the resources useful for the research in the specific discipline.

5. Publishing literacy - The Faculties are supported with Author Webinars with the help of Publishers on “How and where to publish Good research?” Sessions on Impact factors, H-Index, Choosing the journal appropriate for the research, information on Author guidelines and also interpreting the same. Concept of Landmark papers and Article networks, teh citation analysis and its importance. Sessions on Plagiarism are also conducted along with Ethics in Research.
6. Emerging technology literacy – Sessions on Use Apps the faculties can use, the case studies on BYOD (Bring your own device), Softwares that can support created CMS and LMS and also on Mobile apps useful for communication with Students (e.g. Moodle)

7. Critical literacy – We conduct sessions on trend analysis for teaching tools and methodology. Case papers on implementation and evaluation to help them assess the methodology. We also provide them literacy on conducting research on the internet for support related to developing Systems for Quality assessment in the teaching learning process. E.g. TQM in TLE. This sessions are conducted with the core team who basically decide the policies of the college on TLE.

For learning

There are various case studies available for Librarians who want to conducted ILP's integrated in the Course namely – (Bordonaro and Richardson, 2004) - describe the “integration of library Instruction into Undergraduate education course as an effort to expose students to concept and practices of IL” [13]. (Stowe, 2010) has provided an excellent description of the efforts of library faculty “to design and implement continuum of curriculum-integrated, outcome-assessed library instruction in Undergraduate writing-intensive courses” [14]. (Cmor, Chan and Kong, 2010) have provided methodology to assess student learning with respect to basic database searching..[15]. (Fiegen, Cherry and Watson, 2002) have provided a case study and model for Business curriculum integrated Information Literacy [16].

At our college we have students mostly coming from Gujarati Medium with medium digital literacy skills. Thus this provides us an opportunity to conduct various Information Literacy Programmes for them as follows:

1. Tools – Information Literacy on using tools such as Microsoft Office – PowerPoint, Excel for Analysis of Data and Graphical Representation, Internet Basics, Search Engines like Google and Bing and various tools of Google for 1st year Students.

2. Resource literacy – From 2nd year resource literacy on NLIST e-resources, E-books search and usage. How to use Deep web – Google Scholar, and various Publisher websites. Also indepth resource literacy on various search options and details about fields of search. Especially focus on Html page to show them the linking of references and various support provided for image, table and support documents.
3. Social-structural literacy – As the library is also coordinating the Gandhian Study Centre, during our first year sessions we do let them know about Ethnographic studies and Gandhian thoughts and Indian Innovation needed through TED videos of Anil Gupta, Dr. Marshalkar, Bunker Roy and various websites such as Honeybee network, IGNITE, NIF, techpedia and so on. Talking about Social Innovation through Human Values perspective. Books of Rashmi Bansal specifically on Social Innovations and also Indian authors like Sudha Murthy talking about the Culture in her stories.

4. Research Literacy – The PG students and 4 semester UG Students have sessions on Literature search and survey and Literature review writing. A exclusive session on deep web and the resources useful for the research in the specific discipline with special emphasis on areas of research of the department. The Research Methodologies are briefly discussed and a indepth resource has been made available on our Library website – Research Commons. Sessions on Reference Management tools such as Mendely, Zotero are conducted. The Sessions are also conducted with the help of Spoken Tutorial, IIT Mumbai support on Latex and other research tools.

5. Publishing literacy – These sessions are simultaneously conducted as “How to read a research paper and how to write one” with special emphasis on the domain. Academic writing related resources are also informed in one of the sessions along with print documents available for support. The Session on types of Research papers – concept paper, Review paper, Proposal papers, Case study etc are explained with examples. Publishers are invited in board for some sessions on what to take care on choosing a journal. Sessions on IPR are also conducted with the help of Faculty on campus.

6. Emerging technology literacy –These sessions for students are conducted in collaboration with IT faculty on campus, Technology Vendors and also in the form of Webinars and video shows. Especially for Presentations, Data representations, Data Analysis and Note taking.

7. Critical literacy – As mentioned by (Grafstein, 2002) [12] about the Generic Information Skills – as Searching skills and Generic Critical thinking skills as understanding the timeliness, authority, bias, verifiability and logical consistency as far as source evaluation skills are concerned. We also help them understand the concepts of Landmark research and its network of articles and how the field has developed. Also some details on the controlled vocabulary the taxonomy to understand the relationship between concepts and so on.

For Research

Inorder to conduct ILPs in Research aspect it is very important as noted by (Grafstein, 2002) - “Disciplines have different epistemological structures and for this reason the research process is not identical across disciplines” [12]. We believe this statement and thus Research related literacy
programme are custom made keeping in mind the discipline of research and very specifically areas of research in the discipline for a more precise and useful session.

Along with all the sessions as mentioned in the For Learning section, a indepth homework is done by the librarian in collaboration with the faculty and the sessions are customized depending on the broad areas of research for instance, in Medical Lab and Medical Diagnostics course we do a session separately for student working on Oral Oncogology, Breast Cancer and so on and provide a indepth information literacy on – National Websites they should visit, specific research laboratories, Centres of Specialization in the field, researchers they can trace, institutes on research in this areas, library and resource pages they should explore regularly and Ethics for this area of research. Protocols to maintain, Diagnostic methods and technologies in place, Virtual Labs or Softwares for calculations or simulations in this aspect. Funding agencies and Hospitals specialized in this areas in the region, state, Nation and Internationally. Useful contact information for Collecting data and communication strategies are also provided.

Conclusion

Information Literacy programmes can become a great way to interact with the user community as mentioned in this paper the seven components approach is a great way to begin and has a holistic approach. Depending on the type of institute and involvement of the Librarian various ILP's can be designed and delivered across the discipline and more over it can also be planned more systematically when it is course integrated or curriculum embedded. It all depends on our own aptitude and interest to serve our user community. Believe me, opportunities are not always available readily, sometimes we may have be create one ourselves and then it may instil the faith in our capacity and expertise. Thus collaborate, perform, take a feedback and perform better each time.

References:

4. Several key accrediting agencies concerned with information literacy are: The Middle States Commission on Higher Education (MSCHE), the Western Association of Schools and College (WASC), and the Southern Association of Colleges and Schools (SACS).


