Information Literacy for Teacher Education

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Abstract

In the present information society, the world is changing into global village, classrooms are changing into virtual class rooms and libraries are changing to information centers. Students are more technology oriented and so the whole teaching-learning process. The students are expected to learn beyond the syllabus and teachers should play a role of facilitator. This is due to advent of information and communication technology. Every aspect of education is changed. e-learning, e-resources, etc. are the common words. Every one in the education system is depend upon the information. As a result of it, we are facing new challenges like information overload, information poverty, etc. To face this challenges the librarians and educationist must think collaboratively to impart information literacy among the students so as to survive in this information age. The teachers should be information literate so that they can implement the information literacy programme in their schools. But there is a need to impart the information literacy skills among the teachers during their pre service teacher education. This paper tries to suggest a model and a draft programme with teaching and learning techniques which will be suitable to impart information literacy skills among the teachers during their pre-service teacher education in India. And it demands collaborative efforts of librarians, teachers, educators, educationists and policy makers.

Keywords: Information Literacy, Pre service Teacher Education, Information Literacy Model.

1. Introduction

Imparting the information literacy is the need of time. Many efforts are now undertaken in all over the world. Many professionals and professional associations are associated with this burning issue. The association like ACRL, SCONUL have issued the guidelines and standards for the Information Literacy, many models of information literacy are also suggested. The main objective of Information Literacy is to bridge the information gap. But the information gap in all over the world is not similar. It has various dimensions. It changes as per the changes in profession, users, education system and overall environment. Therefore one common model is not the solution. Many models of information literacy are available. But all these models are not suitable in all professions and user groups. The model of information literacy should be developed according to the needs of the different users groups, the education system and the education environment.

2. Information Literacy

The term "Information Literacy" is first used by Paul Zurkowski, the President of Information Industry Association, in his proposal to National Commission on Library and Information Science in 1974. In his proposal Zurkowski described information literate individuals as those *"who are trained in the application of information resources to their work"* and campaigned for a national programme to teach the necessary skills, which would eventually yield an information literate population a decade later.

Many experts have defined the Information Literacy as under:

Doyl(1992) : "Information Literacy is an ability to : recognize a need for information; identify and locate appropriate information sources, know how to gain access to the information contained in those sources; evaluate the quality of information obtained; recognize the information; and use the information effectively."

Association of College and Research Library(2000) "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".

US National Commission on Library and Information Science(2003) "Information Literacy encompasses knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize and effectively create, use and communicate information to address issues or problems at hand; it is prerequisite for participating effectively in the information society, and is part of the basic human right of life long learning" (Webb and Powis,2004)

American Library Association(2003) " Information Literacy is the set of skills needed to find, retrieve, analyze and use information"

Lexon and Walker : "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"

When we go through above definitions , we can say that Information Literacy is a set of abilities to

1. Identify the exact need of information
2. Identify the correct source of required information
3. Access the required information from selected source
4. Evaluate the accessed information
5. Apply the evaluated information

3.   Need of Information Literacy For Teachers

Present age is an information age and present society is an information society. Information is power as well as wealth in the society. We must have information to survive in this information society. Therefore Information Literacy is needed because of following reasons:

1. Rapid increase in the stream of information due to information revolution
2. Advent of information and communication technology
3. Vast variety of information sources
4. Wide dispersal of information
5. Increase in number of users
6. Research on complex and interdisciplinary topics.

In the present information society, the whole teaching-learning process is changing and pedagogy technology are being used. The students are expected to lean beyond the curriculum and teachers should play an important role as a facilitator. Teachers must be aware of all the resources available in the library and beyond. The teachers must be able to access the information from various sources of information and should teach the student by using this information. In knowledge transfer, teacher is the key person on whom all students trust. Therefore teachers should be knowledge oriented. They should keep them always busy in acquiring new knowledge, information, innovations in their respective subjects. Therefore teachers should be information literate. This can only possible if an information literacy programme is implemented during their pre-service teacher education course.

4. Information Literacy For Teacher Education : Global Efforts

Many associations and professions organizations have taken initiatives in information literacy and teacher education related activities.

National Forum on Information Literacy (NFIL) submitted "Progress Report on Information Literacy" in 1998. One of its recommendation (Recommendation No.5) was : "Teacher Education and Performance expectation should be modify to include Information Literacy concerns."

National Educational Technology Standards Project(NETS) has begun an effort to effectively support use of technology for teaching learning and administration(Thomas,1998, P.11). Their first step of standards focuses on a technology foundation for students and includes the use of technology research tools to "to locate, evaluate and collect information from variety of sources" (Thomas, 1998, P.22).

American Association of School Librarians (AASL) and the Association for Educational Communications and Technology released "Information Literacy Standards for student learning" which addresses issues in information literacy independent learning and social responsibility as a guide for "school library media specialists and other K-12 educators as they cultivate and refine their students' information literacy skills in print, non print and electronic format". (Information Literacy Standards, 1998)

The Education and Behavioral Sciences Section (EBSS) of the ACRL have emphasized on conceptually based skills for searching, retrieving and evaluation information for learners for different groups viz. graduates, undergraduates, practitioners and researchers. EBSS identified a sequence of skills that begins with understanding that the generation and communication of knowledge in education includes recorded and unrecorded sources and formats that differ in publication cycles and authority.

In India, initiatives are now taken in the field of information literacy. Many conferences, seminars, workshops are organized. Delhi University, Madras University, etc have started Information Literacy programmes. But these initiatives are not sufficient to cope-up with the need. All the programmes are limited up to their institutions and standards and models of these programmes are not equally applicable.

The field of teacher education in India is far away from these activities. None of the national association, universities and regulatory bodies like NCTE (National Council for Teacher Education) in the field of education and library and information science has taken initiatives in this regard. No model and standards are available for information literacy in teacher education is point of view. Whatever the guidelines and standards are available on global level are not fit for our education system. Therefore there is a need to develop a need based model and programme of information literacy for teacher education in India.

5.   Information Literacy Model For Teacher Education

Before thinking about information literacy model for teacher education in India, we should consider several dimensions.

1. Most of the students admitted for pre service teacher education in India are from rural areas.

2. Most of the students admitted are not aware about the use of library in teaching profession.

3. Most of the students admitted are not familiar with library except only transaction of text books. (Not even reference books, periodicals, etc)

4. Most of the students admitted are not familiar with computer and Internet as they have come from rural area.

5. Though the students are graduates, few of them are post graduates, they can not express their need of information in proper way.

6. Most of the students are not aware about the resources of their subjects, even through, they have completed graduation or post graduation in that respective subject.

7. A lack of seriousness about teaching profession.

After considering the above facts, how can we expect the student-teachers to be a global teacher. The general definition, almost all, emphasis on acquiring the required information from electronic resources. But our students have not visited their own library, never seen catalogues, never referred encyclopaedias, dictionaries, directories. Even they are not aware about the use of news papers in teaching learning process, how can we expect them to find the information from electronic resources? Therefore the definition of Information Literacy needs to be modify as

"Library and Information Literacy" is a set of abilities to

1. Identify the need of information

2. Be familiar about the resources available in the institutional libraries

3. Be able to find the resources available in the institutional libraries

4. Be able to suggest new resources as per the requirement.

5. Be able to evaluate the resources

6. Be able to handle computer and Internet.

7. Be able to access information from all the resources.

8. Be able to make use of accessed information according to level of students to whom it is to be transferred.

Along with information literacy, critical and cognitive thinking of the students should be developed. Therefore, general methods of teaching should be avoided. Instead of that, innovative teaching-learning techniques should be used so that there will be equal balance in teaching and learning. The model should be developed on the foundation of psychological dimensions of developing skills i.e. problem based learning, self directed learning, collaborative learning, peer tutoring. These techniques emphasis on self learning and develops the real world problem solving skills. This will improve the thinking process about various dimensions of the information.

The model should be based on teaching learning practice of the students. Therefore author has suggested following model.

5.1   Need Identification

1.1.   Student should understand the scope of the topic/lesson to be taught.

1.2.   Students should consider the understanding level of students for which standard the topic is to be taught.

1.3.   What extra information related to the topic can be given

1.4.   Should understand the level of information on the topic.

5.2   Resource Identification

2.1   should be able to find the suitable resource available in the library. i.e. reference books, story books, educational models, charts, maps, clippings.

2.2   should be able to find the suitable resource for current information from various sources i.e. news papers, periodicals.

2.3   should be able to identify various web resources.

2.4   should be able to keep tract of identified resources for further use.

5.3   Access And Evaluation

3.1   should be able to decide search strategy i.e. identifying keywords, creating strings,   using various search techniques.

3.2   Should be able to evaluate the accessed information according to topic requirement, students' level of understanding, authenticity, currency etc.

5.4   Analysis and Synthesys of Information

4.1 should be able to analyze the accessed information and synthesize it according to need.

5.5   Organization And Transformation Of Information

5.1. should be able to organize the accessed information according to need.

5.2 should be able to transfer information in appropriate manner.

All these activities requires analytical ability, critical thinking and cognitive thinking. Therefore, the students are directed to think in proper and systematic way. This requires adaptation of teaching-learning techniques and methods. This model is a guideline for preparing a programme, but the information literacy programme should be developed according to the needs of the students.

6.   Information Literacy Programme For Pre Service Teacher Education

The information literacy Programme should be need based. By considering the present level of Information Literacy Skills of the students, the need of profession (teaching profession) must be assessed . the draft information literacy programme suggested by author is as follows:

6.1   MODULE 1   Basic Library Literacy

6.1.1 Awareness about the library

6.1.2 Familiarity with the library tools

6.1.3 Knowledge organization in the library

6.1.4 Various sections of the library.

6.1.5 Services provided by the library.

6.2   Module 2   Resource Literacy

6.2.1 Types of resources

6.2.1.1   Books

6.2.1.2   Periodicals

6.2.1.3   Reference books

6.2.1.4   Web resources

6.2.1.5   Electronic resources

6.2.1.6   Other (abstracts, patents, clippings, statistical, historical, etc.)

6.2.2 Organization and structure of resources.

6.2.3 Importance and usability of various resources.

6.3   Module 3   Computer And Internet Literacy

6.3.1 Basics of Computer

6.3.2 Basics of Internet

6.3.3 Web resources

      6.3.3.1   Search engines
      6.3.3.2   Subject gateways
      6.3.3.3   Subject directories
      6.3.3.4   e-journals /e-books
      6.3.3.5   Databases in Education
      6.3.3.6   Social networking resources
      6.3.3.7   Keeping update about information.

6.3.4 Search Techniques

      6.3.4.1   Identifying key words
      6.3.4.2   Making of strings
      6.3.4.3   Use of boolean operators
      6.3.4.4   Alternative search strategies
      6.3.4.5   Advanced search techniques

6.3.5 Evaluation of resources

      6.3.5.1   Evaluation of print and non-print resources
      6.3.5.2   Evaluation of electronic and web resources

6.3.6 Netiquettes and ethics.

6.4   MODULE 4   Application of information

    4.1   Organization of information
    4.2   Effective transfer of information
    4.3   Keeping track of retrieved information
    4.4   Security of information
    4.5   Copyright and IPR issues.

7.   Collaborative Implementation

Who should implement the Information Literacy Programme? A Librarian? A Teacher? Or Both? Whose responsibility is this?

While implementing the above mentioned programme, there should be collaboration between teachers and librarians. Breivik and gee advocated that the library does not bear the exclusive responsibility of information literacy. An effective programme involves a shared responsibility among librarians, academic administration, and classroom faculty. According to Breivik and Gee, although librarians have in one form or another, been teaching information literacy for many years. There will be a minimal success if the programme is implemented only by the librarian and supported only within the confines of the library. They argued that such programmes can meet with success only when

they are developed within an explicit statement of philosophy from the highest levels of academic administration that establishes Information Literacy as part of the educational mandate of the institution.

This explanation derives the need of collaborative effort of librarians, educators. Policy makers and teachers in imparting information literacy programmes.

8.   How To Implement

The Information Literacy Programme can be implemented thoroughly if it is integrated with the curriculum. Short term course will not fulfill the needs. One year integrated course with practices should be implemented. As information literacy demands critical thinking, problem solving ability, innovative methods and techniques of teaching and learning must be adopted. The students are directed towards the real world problem solving, so that it will be helpful for life long learning. Some of the techniques are given as follows:

9.   Self Directed Learning

Self directed learning is an approach to teaching and learning that actively engages students in the learning process to acquire outcomes at the higher levels of behavioral complexity. Self directed learning helps students construct their own understanding and meaning from textual content, and helps them to reason, problem solve, and think critically about the content. Self directed learning required us to perform several unique teaching functions:

1. Provide information about when and how to use mental strategies for learning.

2. Explicitly illustrate how to use these strategies to think through solutions to real world problems.

3. Encourage your learners to become actively involved in the subject matter by going beyond the information given to restructure it in their open way of thinking and prior understanding.

4. Gradually shift the responsibility for learning to your students through practice exercises, question-and-answer dialogues, and/or discussions that engage them in increasingly complex thought patterns.

We can use this self directed learning technique in teaching " ACCESSING INFORMATION" especially from web resources.

To access the information from Web resources.
1. Students are expected to search for the keywords
2. Students are expected to build a String by using keywords.
3. Students are expected to make use of Boolean operators to make the search narrower or broader.
4. Students are expected to evaluate the source as well as information accessed.
5. Students are expected to use accessed information in appropriate manner.

All the above activities are required to think, analyze and understand. We can give the specific search query to the students and can ask the student to search information or answer of that query. This is the process of cognitive thinking. The students directed themselves towards the solution of the particular problem. We should act as a scaffolding.

10. The Heuristic Method

Prof. Armstrong advocated Heuristic Method half a century ago, by which the students were to find the answer to their own unaided efforts. It is contended that acquiring of knowledge is to be a pursuit after truth and outcome of personal experience. The purpose is to utilize the instinct of curiosity in students and prompt them to make a fact-finding approach to all aspects of learning. A spirit of enquiry and adventure is to be awakened through self observation and experimentation. The method throws the whole weight of the teaching process on to the process of growth of mind rather on putting cooked material into the empty vessels.

In Information Literacy point of view, we can ask the students in a class to work on the same problem simultaneously, and each student may be made to feel responsible for finding out something for himself. The students are free to move, to discuss, to question. The burning desire is to be created in the pupils to seek, to find and not to yield. Self observation and experimentation observe facts correctly, to systematize the knowledge learnt and to arrive at generalizations-all through their own efforts.

We can assign the task to find a specific information, the students are provided all the resources available to the library or ask them to find information, images, pictures from the web.

Besides these techniques, there are many other techniques like project based learning, cooperative learning, peer tutoring, collaborative teaching etc. all these techniques can be applied for the teaching-learning process of information literacy.

11. Conclusion

Information literacy is the need of time. Variety in definition, concepts, models, standards and programmes are available. But blind application of existing Information Literacy models and programmes will not lead to correct destination. Therefore the need is to design a need based and subject specific model and programme which can be beneficial to the students. Imparting information literacy is not only a set of information which is to be transmitted, but it demands proper psychological foundation and needs to inculcate critical thinking ability through self directed learning and other teaching learning techniques which will be beneficial for life long learning. Imparting information literacy skills among the students should be integrated in the curriculum of pre service teacher education. The educationists, librarians, teachers, universities and regulatory body like NCTE should take collaborative decisions and efforts to start the Information Literacy movement.

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