Assessing Information Literacy Competence among the Undergraduate Students of College of Agriculture, Raichur: A Case Study

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ABSTRACT

With the increasing complexity in agriculture education due to the technological developments, developing information literacy competency in students for life-long learning should be the vital element of agriculture education. In this study, an attempt has been made to know the information literacy competency among the undergraduate students of College of Agriculture, Raichur (Karnataka, India). Questionnaire method was used for data collection and results are tabulated and analysed. Outcome of the study has been discussed and necessary suggestions have been made on the basis of the results for implementing proper information literacy competency programmes in the College.

Keywords: Information literacy, undergraduate education, agriculture education

1. INTRODUCTION

Today, information has become a major economic commodity and citizens need to be educated for productive information use from pre-school through post-secondary education. Librarians play an important role in the education of people for effective and efficient information use by teaching them information skills at all levels of education to enable them to be informed citizen of the country. In the information-rich world, where the scope of available information appears limitless, there is a growing need for students to become critical users of information. It not only includes knowing how to locate Internet resources but focuses upon developing the skills necessary in seeking information from a variety of resources. What information is found is not important, but to use that information to complete the assigned task or research is of great importance.

Today’s web savvy students need to make judgments of authority, relevance and accuracy on material that may not have undergone peer review and made available on Internet, and which is blindly used by the students in their assignments and project works. It has been noted that students are increasingly developing the feeling that, for their each and every information need, a search engine (mostly Google and Yahoo) is a one-stop solution. Students increasingly rely upon the Internet as their first and favoured tool for finding information. The educational institutions have an opportunity, and a challenge, to prepare students to meet the demands of the Information Age. Institutions need to identify what graduates should know and be able to do. Recipients of a quality education share certain attributes like critical thinking, problem solving, a global vision and a multicultural perspective, preparedness for work, and good citizenship.

2. INFORMATION LITERACY

Many definitions of information literacy (IL) are available in the literature. Few of these are:

Lenox and Walker¹ noted information literate person is 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 need. Most definitions, in fact, circle around these stages of need
recognition, search formulation, source selection and interrogation, information evaluation and information synthesis and use.

The definition given on the Western Michigan University Libraries² website states “information literacy” as an essential component in the educational development of each student.” The research process has become increasingly challenging with technology contributing to information overload. Students should be aware of the range of print and electronic resources, including networked databases, the World Wide Web and traditional print resources. They need to be prepared to evaluate and make informed choices about the best sources for their needs.

Every institution should foster optimal use of its learning resources through strategies designed to help students develop IL. It is essential to have an active and continuing program of library orientation and instruction in accessing information developed collaboratively and supported actively by faculty, librarians, academicians and other information providers.

Lupton³ opined that IL includes: library research skills and information technology literacy, but it is broader than these. IL is not just about finding and presenting information, it is about higher order analysis, synthesis, critical thinking and problem solving. It involves seeking and using information for independent learning, lifelong learning, participative citizenship and social responsibility.

Where as Lloyd⁴ further extended this definition and felt that “information literate people have a deep awareness, connection and fluency with the information environment. Information literate people are engaged, enabled, enriched and embodied by social, procedural and physical information that constitutes an information universe. IL is a way of knowing that universe.”

3. NEED OF INFORMATION LITERACY

The fundamental goal of IL is to develop critical users of information. IL is considered as a powerful weapon for life-long learning. It is common to all disciplines, to all learning environments, and to all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning. The central mission of educational institutions should be to develop life-long skills and provide the continued growth in the later career of the students.

Information Literacy also aims to teach students how to find information and prepare them for life-long learning because they can always find information needed for any task or decision at hand³. IL has a great significance for economic growth, educational achievement and social, cultural and personal well-being. It emphasises the skills, attitudes and values required to locate, access, evaluate, manage, synthesise and use information effectively. IL links particularly strongly to the digital divide and closing the gaps. It also promotes education initiatives at all levels, the development of skills in the workplace and community, including regional, economic development, e-commerce, and e-government⁴.

4. INDIAN LITERATURE ON INFORMATION LITERACY

Glancing the literature published in India, it is observed that there is very little output as compared to the developed countries. There are no specific standards, reports and policy guidelines for IL brought out either by government, professional associations or the institutes of higher learning. Literature survey of the work done in the field in India shows that, few Indian authors have published some papers/articles related to IL. It is interesting to see that all the authors belong to library profession and are either teachers, research scholars or working professionals. What India lacks today is the forums, reports, standards and policy guidelines for primary, secondary, adult, and higher education.

Karisiddappa has published 15 papers on different aspects of IL during the period 2003-2009. These papers are published/presented in journals and conferences at national and international levels. He strongly emphasised the need of IL in Indian context for students to become life-long learners. Karisiddappa⁷ in his paper strongly recommended that IL and capacity building should be included in the LIS curriculum. He has even mentioned the probable ways of implementing IL programmes in Indian context.

Pawinun and Kemparaju⁸ mentioned the range of education programmes developed by libraries such as literacy campaign, functional literacy and library instruction. They too pointed out the importance of IL and information technology literacy in higher education with the advent of online services and digital libraries.

Kumar, Choudhary and Shah⁹ while explaining the historical, geographical, sociological, political, economical, and educational background of India, emphasised the urgent need of having IL programs for such a diverse country. They have also explained the IL mission that India should have. Karisiddappa¹⁰ brought out a detailed paper and explained the need of IL programs in public libraries, methods of implementing IL programs and the kind of IL movement India should have.

The UGC-INFONET programs of UGC through which universities are getting access to number of national and international journals inspired Ramakrishnegowda and
Walmiki and Devi to study the computer literacy and IL among the fresh entrants in the Kuvempu University and in Andhra University, respectively.

Tella, Gopal and Rajgoli while explaining the importance of IL in digital environment mentioned the IL models developed all over the world. They have further explained the methods of implementing IL programs in higher education sector.

Chagari in her paper presented at the 71st IFLA Conference explained the survey carried out on three public libraries in Visakhapatnam. She concentrated more on the library personnel to know what kind of IL programs they are organising for the general public. She also elaborated the programmes developed for the Women Self Help Groups and Youths in Andhra Pradesh.

Jayaprakash dealt with importance of User Education and IL in promoting and supporting digital information services in modern era. Gupta explored the role of LIS professionals in the advancement of IL and the IL methods that can be used.

Ghosh and Das in their paper presented at ICIL 2006, discussed the IL initiatives in India with special reference to emerging knowledge economy. An interesting paper was brought out by Nair highlighting the relationship between right to information, IL and libraries. Gulati and Dogra explained the interdependence of right to information and IL by highlighting some of the noted initiatives of India.

Karisiddappa and Rajgoli have discussed at length and breadth the importance of IL in higher learning and research environment and the emerging knowledge society contexts. Mishra and Maharana carried out a survey of digital IL of the faculty at Sambalpur University. Chakravarthy discussed the importance of IL in the knowledge society and how it empowers learners for a better tomorrow. Neelameghan and Chester discussed IL for managing community knowledge in a knowledge society. Bavakutty and Nasirudheen carried out a study to assess the IL competency of research students of Kerala University. Professional organisations at regional and national level have been active in organising seminars and lectures on IL. Some of the universities have also taken initiatives and organised the workshops for the library professionals across the nation. UNESCO has been very kind in providing financial support for organising the workshops and playing a pivotal role in IL movement in India.

5. COLLEGE OF AGRICULTURE, RAICHUR

The Agriculture College at Raichur was started in 1984 with an intake capacity of 30 students per year with its functioning in the Regional Research Station and Agricultural Engineering Institute and thereafter shifted to new college building in 1989. The intake capacity has been increased in a phased manner to 55 students at undergraduate level. The Postgraduate programme leading to Master’s degree in six departments was started in 1995 with an intake capacity of 5 students for each department every year. The college has a total strength of 57 teachers and 129 non-teaching staff. The college is headed by the Director of Instruction (Agri.). There are five divisions in the college, namely, Division of Teaching, Administration, Accounts, Academic and others which include Library, Estate Branch, Health Centre and Hostel.

6. COLLEGE OF AGRICULTURE LIBRARY

Central library of the campus caters to the needs of staff and students of Agricultural College and Agricultural Engineering College, as well as scientists and extension personnel of Regional Research Station and Krishi Vigyan Kendra located in the campus. The library provides facilities such as photocopying of scientific papers, compilation of bibliographies and inter-library loan, etc. Campus library has a novel service for the benefit of teachers by providing Agri Current Service weekly, which is a reproduction of contents pages of primary journals received during the week. Another weekly service provided to the staff and students is Agri News, which is the clippings from different daily newspapers concerned to Agriculture in Kannada language. Glance Me file maintained, provides information on advertisements, seminars and conferences. A text book bank exclusively for the benefit of Schedule Caste/Tribe students is maintained and the books for this bank are donated by the Department of Social Welfare, Raichur. Library services are partially computerised and provided with Internet facility.

7. NEED AND LIMITATIONS OF THE STUDY

Information literacy has become an important concept since the arrival of the information age. Research in this area in Asian countries such as India is still in its preliminary stages. The present study is an attempt to know the IL competence of the undergraduate students of College of Agriculture, Raichur. The parameters of the study were:

- Data collection is confined to College of Agriculture, Raichur.
- Data is collected using a questionnaire from the undergraduate students of College of Agriculture, Raichur.
- The study is mainly qualitative, using small number of samples.
- Data analysis and interpretation are entirely based on the feedback received from the respondents.
8. OBJECTIVES

- To know IL competence of the undergraduate students.
- To know whether the undergraduate students are applying information-seeking skills in searching the needed information.
- To understand the ability of students in searching the information resources both print and electronic available in the library.
- To get an insight from the data provided by the students in order to develop IL programmes in future.
- To improve the effectiveness of library instruction by making recommendations to the concerned authorities based on analysis of the data provided by the respondents.

9. METHODOLOGY

Questionnaire was designed using the IL Standards for Higher Education developed by American Library Association, USA. A pilot study was conducted by circulating the questionnaire to 30 randomly selected students. Depending on the output received from the selected sample, the questionnaire was modified. The final questionnaire was circulated to 90 undergraduate students of College of Agriculture, Raichur.

10. RESULTS AND DISCUSSION

10.1 Demographic Information

Filled-in questionnaires were received from 90 students of whom 58 were male students and 32 female students (Table 1). All the respondents fall in the age group of 18-22 years.

<table>
<thead>
<tr>
<th>Response</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>58</td>
<td>64.44</td>
</tr>
<tr>
<td>Female</td>
<td>32</td>
<td>35.56</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.00</td>
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Table 1. Sex-wise distribution of respondents

10.2 Ability to Recognise Need for Information

In the complex information world it is very important to recognize the need for information and have the ability to locate that information. From the data provided by the respondents it is clear that 94.44 per cent (Table 2) of them know when they are in need of information and all the respondents know where to find the needed information (Table 3).

<table>
<thead>
<tr>
<th>Response</th>
<th>Respondents</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>85</td>
<td>94.44</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>5.56</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.00</td>
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</tbody>
</table>

Table 2. Ability to know the need for information

10.3 Ability to Access Needed Information Effectively and Efficiently

From Table 4 it is revealed that all the respondents make use of library for getting the required information along with 66.66 per cent of respondents also making use of Internet as other popular source of information gathering and 27.77 per cent using other libraries available in the locality. Table 5 shows that 95.55 per cent of respondents know exactly what kind of information they need. From Table 6 it is noted that 94.44 per cent of respondents contact library staff for accessing the required information and discuss with their teachers and

<table>
<thead>
<tr>
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<th>Percentage</th>
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<tr>
<td>Yes</td>
<td>90</td>
<td>100.00</td>
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<tr>
<td>No</td>
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<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.00</td>
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</tbody>
</table>

Table 3. Ability to know where to find the information

<table>
<thead>
<tr>
<th>Response</th>
<th>Respondents</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Your college library</td>
<td>90</td>
<td>100.00</td>
</tr>
<tr>
<td>Other libraries</td>
<td>25</td>
<td>27.77</td>
</tr>
<tr>
<td>Internet</td>
<td>60</td>
<td>66.66</td>
</tr>
<tr>
<td>Others</td>
<td>-</td>
<td>-</td>
</tr>
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</table>

Table 4. Places where information was searched

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<thead>
<tr>
<th>Response</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>86</td>
<td>95.55</td>
</tr>
<tr>
<td>No</td>
<td>04</td>
<td>04.45</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.00</td>
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Table 5. Ability to search exact information

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<thead>
<tr>
<th>Response</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library staff</td>
<td>85</td>
<td>94.44</td>
</tr>
<tr>
<td>Friends</td>
<td>60</td>
<td>66.66</td>
</tr>
<tr>
<td>Faculty</td>
<td>65</td>
<td>72.22</td>
</tr>
<tr>
<td>Self</td>
<td>70</td>
<td>77.77</td>
</tr>
</tbody>
</table>

Table 6. People contacted to access the information
friends for more clarification. Seventy-seven point seven per cent of respondents access the required information themselves.

10.4 Ability to Evaluate Information and its Authenticity

Online access to information is available in different forms and formats. Everything available online is not always correct and authentic. Therefore, it is very important to evaluate the online information for its authenticity, currency, authority and appropriateness from other sources and draw conclusions based on the information gathered as regards to its usefulness. Questions were framed based on these issues and it is noted from the data provided by the respondents that 91.11 per cent (Table 7) of them evaluated the gathered information by consulting other sources of information and by discussing it with teachers and friends. Table 7 also depicts that all the respondents believed that it is important to evaluate information available on Internet, and draw conclusions based on information gathered as regards to its usefulness.

10.5 Ability to Classify, Store and Manipulate Information

Today, when the education is going online, and much of the information is available in electronic forms and formats, computer literacy competence (the ability to use a computer and its software to accomplish a task) play a greater role. Students should have the ability to classify, store, and manipulate the collected information. Students should have the competence in developing search strategies for retrieving the online information.

The competencies such as constructing searches, narrowing or broadening searches are key to information retrieval and storing. The online information can be stored using copy/paste function or by photocopying and scanning information available in print format. To store the information available in electronic format, 47.77 per cent of respondents used the copy/paste function. For the information available in print format 41.11 per cent of respondents used the photocopy facility and 8.89 per cent of respondents use the scanner to scan, store and manipulate the gathered information for future use and 2.23 per cent of respondents used audio/visual equipments also (Table 8).

To preserve the integrity of information resources, equipment, systems, and facilities it is important to respect the Copyright and Privacy Laws. All the respondents said that they respected the access to right and gave the reference to the information source used in their assignment and project works. But Table 9 shows that only 83.33 per cent of the respondents were aware of the Copyright and Privacy Laws. Table 10 reveals that all the respondents agreed that the information source...
should be properly handled and preserved from damages for the future generation.

10.6 Ability to Incorporate Information into one’s Knowledge Base and Value System

Students should have the competence in incorporating selected information into knowledge base and value system. This is possible by sharing the gathered information with friends and teachers for more clarification and synthesis. All the respondents said that the gathered information enhanced their knowledge base (Table 11) and 85.55 per cent of respondents communicated new knowledge with friends and teachers (Table 12). About 83.33 per cent (Table 13) of respondents used the information technology applications such as spreadsheet, databases, multimedia and audio visual equipments to synthesise the information gathered.

Table 11. Ability to recognise new information and enhance knowledge base

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<tr>
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<th>Percentage</th>
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<tbody>
<tr>
<td>Yes</td>
<td>90</td>
<td>100.00</td>
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<td>No</td>
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<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.00</td>
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Table 12. Ability to communicate new knowledge with friends and teachers

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<tr>
<th>Response</th>
<th>Respondents</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Yes</td>
<td>77</td>
<td>85.55</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>14.45</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
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Table 13. Ability to use information technology applications to synthesise the information gathered

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<thead>
<tr>
<th>Response</th>
<th>Respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>75</td>
<td>83.33</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
<td>16.67</td>
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<tr>
<td>Total</td>
<td>90</td>
<td>100.00</td>
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10.7 Ability to Understand the Cultural, Economic, Legal and Social Issues surrounding the Use of Information

Now that libraries are providing access to electronic information online, it is very important that students should know the cultural, ethical and legal issues such as privacy and security while accessing information both in print and electronic format. Table 14 shows that 91.11 per cent of respondents had the knowledge about the cultural, ethical and legal issues surrounding the use of information. The institutional policies related to the access and use of information sources while storing and disseminating text, data, image, etc., were being followed by the majority (94.44 per cent) of respondents (Table 15).

Table 14. Ability to understand cultural, ethical and legal issues

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<th>Response</th>
<th>Respondents</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td>82</td>
<td>91.11</td>
</tr>
<tr>
<td>No</td>
<td>08</td>
<td>08.89</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
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Table 15. Knowledge of laws and institutional policies related to the access and use of information resources

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<tr>
<td>Total</td>
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</table>

Though it is clear that majority of the respondents had the information literacy competence but still some of the IL programmes such as online information search strategies, extracting online information, copyright laws, institutional policies related to the access and use of information sources, both print and electronic, needs to be developed and demonstrated to the students to transform them into a information literate person and lifelong learner.

11. FINDINGS

The findings of the study have been summarised below:

- The majority (94.44 per cent) of the respondents had the ability to recognise a need for information and had the ability to locate the needed information.
- Though majority of the respondents indicated that they have the ability to locate the needed information, but needed assistance either by library staff or faculty members.
- Among those who indicated that they were competent to evaluate the information gathered, 8.89 per cent did not thought that it was necessary to evaluate the gathered information with respect to its authority, usefulness, currency, and authenticity.
- Respondents are competent in developing search strategies and are able to classify and store the gathered information for future use.
Respondents have some knowledge regarding the Copyright and Privacy Laws, but they lack the competence in electronic access to information and institutional policies related to the access and use of information.

12. CONCLUSION

The mission statement and planning documents of the College should include a statement for IL and Goals and Objectives of IL needs to be included into the mission statement.

College should have a separate funding and the other measurable support for an information literacy agenda.

Technological infrastructure needs to be implemented to enable better utilisation of the online resources being subscribed.

Faculty-Librarian should collaborate to develop programme that deal with discipline specific research skills and assignment specific tutorials.

There is a need to develop and demonstrate tutorials on Copyright Laws, Electronic Access to Information, and Institutional Policies related to the access and use of information.

There is a need to develop tutorials related to database search skills such as navigating the database, searching specific interfaces, etc., and Internet skills such as web browser navigation, communication on the Internet, web search tools, web search strategies, evaluation of web resources, using subject-based portals, and gateways, etc.

Library staff should play a significant role in the identification of relevant sources and should involve in the hands-on-training of students.

Training for trainers programmes need to be recognised in order to upgrade knowledge of subject specific information sources and tools for both library and faculty staff.

Methods of assessment should be defined to ensure that IL skills are assessed and hence taken seriously by the students.

IL programmes that meets the specific information needs of the students should be developed by the library staff in collaboration with faculty staff.

Inclusion of IL component in the agricultural education curriculum in order to develop the students to suit the demands of job markets.

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REFERENCES


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**Dr Iqbalahmad U. Rajgoli** obtained his PhD in Library and Information Science from Karnataka University, Dharwad in January 2008 under the guidance of Prof. C.R. Karisiddappa. He started his professional career at Indian Institute of Astrophysics, Bangalore as Library Trainee in the year 2003 where he was involved in the Digital Library of India project. He is well exposed in the digital library and institutional repository technologies. He joined ISRO HQ in February 2005 and is involved in cataloguing and classification of various documents, and ISRO HQ institutional repository. His areas of interest include information literacy, digital libraries and institutional repositories. He has contributed 22 articles in national and international journals and conferences.