Enhancing Information Literacy Competencies among the UG Students: A Survey

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Abstract

The study examines Information Literacy competencies among Science UG students at Karnatak University, Dharwad. For the said purpose, the authors adopted the survey method and questionnaire tool to collect the data from the respondents. A survey method and questionnaire tool were used, with a response rate of 93.32%. Results show most students know search strategies, desire library staff training on internet usage, and believe Information Literacy skills positively impact their studies.

Keywords

Information Literacy; Competencies; Skills; Undergraduate Students

INTRODUCTION

Today, information has become a major commodity and the citizens need to be educated for the proper utilization of information, especially children from pre-school to post-secondary education. In this context, the librarians can play an important role for effective and efficient information use by educating them about the information literacy skills at all levels of education to enable them to be highly informed citizens of the country (Angeley and Purdue, 2000). In the information rich world, where the scope of available information appears limitless, there is a growing need for students to become the critical users of information. It not only includes knowing how to locate internet resources but also focuses upon developing the skills necessary in seeking information from a variety of resources. The type of information found is not important, but how relevant it is to use that information to complete the assigned task or research is of great importance.

Internet has now emerged as a very powerful communication and publishing medium. One of the main virtues of the internet is the ability to translate ideas immediately without controls. With the exponential growth of digital information, the Internet has become the most important source of information (Noh, 2017). The Internet has emerged as a boon to the academic community by facilitating access to a treasure of information on the web, which can be used for study, teaching and research (Scott and O'Sullivan, 2000). It is a source of current information generated all over the world. For the publication of the research output also the Internet can effectively be used by the academic community. The researchers can obtain the related literature in their field of study by browsing the Internet. The internet is also widely used in the teaching-learning process and also for career development. Thus, the WWW provides the information professionals a great amount of information as well as facilities for imparting knowledge.

In the ICT driven society, the information quickly changes, as a result of this, students and professionals alike must be able to find information and put it to use effectively. Students must be able to access information beyond textbooks and classroom instructors to prepare for the workplace. Staying successfully updated requires individuals to be information-literate (Leung, 2010). Webber (2010) defines information literacy for the 21st century as "the adoption of appropriate information behavior to

identify, through whatever channel or medium, information well fitted to information needs, leading to wise and ethical use of information in society." Keeping in view the importance of Information Literacy in mind, the present study has been undertaken.

NEED FOR THE STUDY

Since the ability to use information effectively and wisely is crucial to student's success in higher education. It is increasingly important to incorporate information literacy skills among the students for better performance in their academic achievements. The students of the degree colleges are basically associated with learning and co-curricular activities. The students basically require information on their subject for studying and preparing for examinations. They may constantly update their existing knowledge in their domain. Further, Information plays a vital role in all spheres of life. Information is available in different forms and formats spread across various sources. To get the right information at the right time from the abundance of scattered data / information, the students must be information literate (Andreae and Anderson, 2012). In this context, role of the student is very important. If the student wants to be competent and serious in their studies, he / she should have Information Literacy skills and competencies so that they can become life-long independent learner. Hence, in the present study, an attempt has been made to assess the importance of information literacy skills and competencies on the academic performance of the Science UG students of aided degree colleges affiliated to Karnatak University, Dharwad, Karnataka State. Hence the proposed study has been undertaken.

SCOPE AND LIMITATION OF THE STUDY

The scope of the present study covers and is limited to the UG students of aided science degree colleges affiliated to Karnatak University, Dharwad, Karnataka State.

OBJECTIVES OF THE STUDY

The primary objective of this study is to examine the Information Literacy Competencies among the Science students of Aided Degree Colleges affiliated to Karnatak University, Dharwad. The specific objectives of the study are to:

1. Analyze the different advantages Information Literacy Programmes offer.
2. Know the UG students' ability to search / use / evaluate information.
3. Identify the preferred method and content of ILP to impart information literacy skills among the science students.
4. Suggest the ways and means for the improvement of IL Skills among the UG students.

METHODOLOGY

For the present study, the authors have adopted survey method and questionnaire tool to collect the data from the UG students. One of the authors personally visited all the twenty colleges to distribute the questionnaires to the science UG students. A total of 929 questionnaires were distributed to the UG students and a total of 885 questionnaires were received back. The researcher checked all the questionnaires for their validation. 867 questionnaires were dully filled in and found correct, thus resulting into response rate of 93.32%. The data was further fed into Ms-Excel for its simple frequency distribution.

ANALYSIS AND INTERPRETATION OF DATA

Opinion on the abilities to search / use / evaluate information

Due to the advent of Information Technology there is a heap of information available on Internet these days. Thanks to the publishing industry which made this possible. But extracting the right information from this mammoth store is challenging one. Hence, the end user must be able to search / use / evaluate information available on Internet. A question was posed to the respondents to elicit their opinion on the abilities to search / use / evaluate information. The study reveals that 434 (50.06%) respondents strongly agreed for the statement 'I know the search strategy for selecting a relevant keyword, whereas, 524 (60.24%) respondents agreed for the statement that 'I can refine and modify the search strategy if necessary', 393 (45.33%) respondents agreed that 'they can search effectively since they know the search techniques'. 441 (50.87%) respondents were positively agreed for the statement 'I am aware of special characters like less than, greater, equals to, hyphen, inverted commas, Boolean operators like AND, OR and NOT', 409 (47.17%) respondents

agreed for 'training on search techniques is required to make best use of e-resources effectively'. For majority of the statements, the respondents agreed and strongly agreed respectively. The detailed opinion of the respondents is recorded in the table 1.

Table 1: Opinion on the abilities to search / use / evaluate information

Sl. No.	Statement	SA	A	Un	DA	SDA
1	I know the search strategy for selecting a relevant keyword	434 (50.06)	327 (37.72)	22 (2.54)	5 (0.58)	1 (0.12)
2	I can refine and modify the search strategy if necessary	169 (19.49)	524 (60.44)	77 (8.88)	5 (0.58)	3 (0.35)
3	I can search effectively since I know the search techniques	245 (28.26)	393 (45.33)	86 (9.92)	15 (1.73)	3 (0.35)
4	I am aware of special characters like less than (<), greater (>), equals to (=), hyphen (-), Inverted Commas ("….."), Boolean Operators (AND, OR, NOT)	182 (20.99)	441 (50.87)	110 (12.69)	25 (2.88)	11 (1.27)
5	Training on search techniques is required to make best use of e-resources effectively.	203 (23.41)	409 (47.17)	104 (12.00)	11 (1.27)	14 (1.61)
6	I will compare the information with other sources before I deem it accurate	182 (20.99)	417 (48.10)	115 (13.26)	13 (1.50)	7 (0.81)
7	I am capable of analyzing and evaluating information sources critically	187 (21.57)	402 (46.37)	91 (10.50)	17 (1.96)	8 (0.92)
8	I know the credibility of authors who publish books	128 (14.76)	419 (48.33)	120 (13.84)	10 (1.15)	8 (0.92)
9	I am well aware of my College library in terms of content	184 (21.22)	412 (47.52)	95 (10.96)	14 (1.61)	3 (0.35)
10	I am familiar with how to protect and save data (files) for later use.	217 (25.03)	399 (46.02)	84 (9.69)	13 (1.50)	6 (0.69)
11	I am aware of ethical aspects of information when using it	164 (18.92)	399 (46.02)	127 (14.65)	23 (2.65)	1 (0.12)
12	I am aware of Copyright issues related to the use of information	174 (20.07)	368 (42.45)	119 (13.73)	32 (3.69)	7 (0.81)
13	I am capable of converting digital text or image to another format	182 (20.99)	389 (44.87)	119 (13.73)	27 (3.11)	5 (0.58)
14	I obtain permission from the owner while using copyrighted materials and incorporate the notices I receive into my work	159 (18.34)	407 (46.94)	97 (11.19)	24 (2.77)	14 (1.61)

Figures in parenthesis indicate percentage

Factors to evaluate the information available on Internet or print sources

There are various factors through which one can evaluate the internet sources and also print sources. The table 2 reveals the factors which help users to evaluate the information available on Internet or print sources. The data reveals that 633 (73.01%) respondents evaluate information for its Accuracy on Internet or internet sources, whereas, 447 (51.56%) students evaluate information for its Authenticity, followed by 367 (42.33%) respondents see for coverage of information sources on Internet, 332 (38.29%) respondents look for its reliability. The other factors like usability (256, 29.53%), timeliness (243, 28.03%), objectivity (222, 25.61%), biasness (176, 20.29%), appearance (173, 19.95%) and currency (157, 18.11%) were given less preference.

Table 2: Factors to evaluate the information available on Internet or print sources

Sl. No.	Factors	Number of Respondents	Percentage (%)

1	Accuracy	633	73.01
2	Authenticity	447	51.56
3	Coverage	367	42.33
4	Reliability	332	38.29
5	Usability	256	29.53
6	Timeliness	243	28.03
7	Objectivity	222	25.61
8	Biasness	176	20.29
9	Appearance	173	19.95
10	Currency	157	18.11

Need for Information Literacy Programmes (ILP) to identify, access and use information sources

The end user must undergo training programmes frequently though they are knowledgeable in this knowledge society. He / she needs to update their knowledge to cope up with the technology as well as in the working environment. A question was raised to the respondents on the need for ILP to identify, access and use information sources effectively. The study reveals that 556 (64.13%) respondents expressed their desire that there is a need for maximum training and orientation programmes to be conducted by the library staff on how to use Internet and its resources, whereas, 196 (22.61%) respondents require minimum training, orientation and only 115 (14.26%) respondents felt that there is no need to conduct any training or orientation while using Internet since they know how to access, use and evaluate internet sources.

Table 3: Need for Information Literacy Programmes (ILP) to identify, access and use information sources

Sl. No.	Need for Information Literacy Programmes	Number of Respondents	Percentage (%)
1	Need maximum training, orientation	556	64.13
2	Need minimum training, orientation	196	22.61
3	Need no training, orientation	115	13.26
	Total	**867**	**100.00**

Areas of Information Literacy Programmes (ILP) and Training

Internet has opened up many areas where training is required. A question on the areas of Information Literacy Programmes and training was asked to the students and the same data is recorded in table 4. It reveals that 565 (65.16%) respondents expressed their desire to conduct the training on how to use Catalogue and Online Public Access Catalogue (OPAC), 512 (59.05%) respondents want the training on different digital platforms which are useful for their studies, 459 (52.94%) respondents have said that training is necessary on different services provided by the library staff, 424 (48.90%) respondents are willing to join training on how to access electronic resources. The least preferred areas of training were specific skills and techniques for online searching (352, 40.59%), how to use classification schemes (343, 39.56%), locating high quality information sources quickly and effectively (319, 36.79%) and filtering effectively for online information (272, 31.37%).

Table 4: Areas of Information Literacy Programmes (ILP) and Training

Sl. No.	Areas of ILPs and raining	Number of Respondents	Percentage (%)
1	How to use Catalogue and OPAC	565	65.16
2	Different digital platforms	512	59.05
3	Different services provided by the library staff	459	52.94
4	How to access electronic resources	424	48.90
5	Specific skills and techniques for online searching	352	40.59
6	How to use Classification schemes	343	39.56
7	Locating high quality information sources quickly and effectively	319	36.79
8	Filtering effectively for online information	272	31.37

Opinion on the enhancement of Information Literacy Skills

Information literacy is the ability to find, evaluate, organize, use, and communicate information in its various formats, most notably in situations requiring decision making, problem solving, or the acquisition of knowledge. The table 5 details about the opinion on Information Literacy Skills. Ability to know the need for information which enhances IL skills for 627 (72.32%) respondents, whereas, 457 (52.71%) students opined that it is the ability to locate the desired information sources which enhances their IL skills, followed by 456 (52.59%) respondents felt the ability to use / present information which helps them to enhance their IL skills. Ability to select / analyse the required information, ability to organize information in a better way and ability to evaluate information critically were other skills which help them enhance their IL skills.

Table 5: Opinion on the enhancement of Information Literacy Skills

Sl. No.	Information Literacy Skills	Number of Respondents	Percentage (%)
1	Ability to know the need for Information	627	72.32
2	Ability to locate the desired information source	457	52.71
3	Ability to use / present information	456	52.59
4	Ability to select / analyse the required information	438	50.52
5	Ability to Organize information in a better way	430	49.59
6	Ability to evaluate information critically	365	42.09

Information Literacy and its positive impact on study

Information literacy helps develop individuals' intellectual abilities of reasoning and critical thinking and enables them to learn how to learn. A question on information literacy and its positive impact on study was posed to the respondents. The data is presented in table 6 and reveals that 582 (67.01%) and 262 (30.22%) respondents agreed and strongly agreed respectively that IL has a positive impact on students' study. 193 (22.26%) respondents were still uncertain about the statement.

Table 6: Information Literacy and its positive impact on study

Sl. No.	Opinion	Number of Respondents	Percentage (%)
1	Strongly Agree	262	30.22
2	Agree	581	67.01
3	Uncertain	193	22.26
4	Disagree	05	0.57
5	Strongly Disagree	00	00.00
	Total	867	100.00

SUGGESTIONS

1. The study indicates that majority of the respondents know the simple keyword / basic search, and also possess Boolean Operators like AND, OR and NOT, followed by very few respondents were aware of Field search options like Title, Author, URL, Abstract etc. The search strategy is a crucial component of a systematic review manuscript as it determines the scope and comprehensiveness of the study. The search techniques / strategies also fetches them core results which were not aware by the UG students. Hence, it is recommended to the library staff that IL programmes / training programmes / workshops may be conducted on regular intervals so that the students can access information resources on Internet without any obstacles and develop skills to evaluate Internet sources.

2. The study reveals the factors which evaluate the information available on Internet or print sources. 633 (73.01%) respondents evaluate information for its Accuracy on Internet or

internet sources, whereas, 447 (51.56%) students evaluate information for its Authenticity, followed by 367 (42.33%) respondents see for coverage of information sources on Internet. Hence, it is recommended to the library staff to organize workshops on the evaluation of the information resources available on Internet since the authenticity / evaluation of the information sources are to be checked in terms of many factors. One cannot take the information sources available on Internet granted.

CONCLUSION

Surviving in the knowledge driven world demands competitiveness and to be competitive, one must cultivate essential skills, particularly the survival skills of the information age, known as information literacy skills. Acquiring these skills and becoming information literate is a challenging but essential task that requires continuous knowledge and skill updates in a fiercely competitive knowledge landscape. Information literacy empowers individuals to actively participate in the information driven society by equipping them with the necessary skills and fostering lifelong and independent learning abilities, prerequisites for effective problem-solving.

The present study deals with the Information Literacy Competencies among the Science UG students of Aided Degree Colleges affiliated to Karnatak University, Dharwad, Karnataka State. The results of the study indicate that more number of UG students are making use of Internet sources. At the same time, the students also expressed that they are encountering some problems with regard to the authenticity, reliability of sources, usability, currency etc. They also expressed their desire to conduct Information Literacy Programmes on regular basis on various areas like Library Catalogue, different digital platforms pertaining to academics, how to access electronic resources and search strategies / techniques etc. It is also evident from the study that Information Literacy skills and competencies have a positive impact on their study and the students also opined that IL programmes should be conducted on regular bases to improve their skills time to time against the changes in the technology.

References

1. Andreae, J., & Anderson, E. (2012). Re-conceptualizing access: The new role of information literacy in post-secondary education. *Communications in Information Literacy*, 5(2), 2. https://pdxscholar.library.pdx.edu/cgi/viewcontent.cgi?article=1130&context=comminfolit
2. Angeley, R., & Purdue, J. (2000). Information literacy: An overview. Office of Survey Research. 425. https://cedar.wwu.edu/surveyresearch docs/425
3. Leung, L. (2010). Effects of Internet connectedness and information literacy on quality of life. *Social Indicators Research*, 98, 273-290. https://link.springer.com/article/10.1007/s11205-009-9539-1
4. Noh, Y. (2017). A study on the effect of digital literacy on information use behavior. *Journal of Librarianship and Information Science*, 49(1), 26-56. https://doi.org/10.1177/0961000615624527
5. Scott, T. J., & O'sullivan, M. (2000). The Internet and information literacy: Taking the first step toward technology education in the social studies. *Social Studies-Brooklyn New Jersey Then Washington*, 91(3), 121-126. https://pedagogy21.pbworks.com/f/The+Internet+and+Information+Literacy.pdf
6. Webber, S. (2010). Information literacy for the 21st century. Paper presented at INFORUM 2010: 16th Conference on Professional Information Resources. Retrieved June 16, 2019 from http://www.inforum.cz/pdf/2010/webber-sheila-1.pdf