Impact Assessment of Library Course in an Indian Agricultural University

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Abstract

This paper discusses a study conducted on impact assessment of a Library Course at Punjab Agricultural University, Ludhiana, India. Questionnaire method was used to obtain data from master's degree students registered under this course. 84 questionnaires were got filled out of a population of 210 students by random sampling technique thus making the sample size as 40% of the total population. The data was analysed using MS-excel 2010 for frequency, average, percentage and weighted index. The results of the course evaluation shows that this library course is effective in encouraging the students towards visiting the library more frequently, creating awareness about library services and resources and has improved their ability to search the information using catalogue. But, the students are lagging in framing appropriate keywords to refine their search, using advanced search options, ability to frame search preferences and evaluate e-resources for authenticity. This study recommends that the teachers need to put in more efforts through the library course to improve the ability of the students to use the library more efficiently.

Keywords: Library course, impact assessment, library user education, course evaluation, library services, library resources, library and information services.

Introduction

Education is backbone for personal and professional development of all. Educating a user towards efficient use of a system is must for its optimum use. IFLA/UNESCO[(1)] has defined users' education as "including any effort or programme which will guide and instruct existing and potential users individually or collectively with the objective of facilitating: The recognition of their own information needs, the formulation of these needs; the effective and efficient use of information services: and the assessment of these services". It is rightly said that the library is a heart of every academic institution. It is the pivot around which teaching, learning and research revolve. The libraries exist with an objective that its resources and services are used maximum by its users. But, Akinwunmi[(2)] opines that a library may not attract adequate users because of inadequate user education programmes as users may find the organization of library materials complicated and thus may be indifferent to library resources and services. Aina[(3)] supported and said that library processes could be so complex that an average user may not easily understand. It is therefore of dire need to educate the users about the library system. Moreover, the library education to the users has become essential due to the information explosion and emergence of e-resources and internet as an information source. Edem and Lawal[(4)] said that in order to motivate the use of library resources the library users should be taught on how to obtain information from available resources. It is widely accepted that the attitudes of users towards the library will depend on the types of services provided by the library, its collections and efforts of the library staff towards the library use course which may be in form of library orientation, library lectures, individual sessions or classroom instruction. Library user education programmes are known by varied names like orientation programmes, user orientation programmes, library instruction, bibliographic instruction, user training programmes, etc. Teaching students about the efficient use of library and information available worldwide, as a part of their curriculum, is one such effort. Nowadays, when information is available in abundance, ability to use information efficiently has become vital. Moreover, with the overall change in the society and the structural change in the libraries' information resources, it is very important to include library instruction in academic curriculum. Eden and Lawal[4] opined that "without a well-structured teaching on how to use the resources of the library, the users will find it difficult to make optimum use of the rich store of knowledge locked up in the library." In simpler words, the purpose of conducting orientation programmes in libraries is maximum utilization of the library material by the users. According to Fjallbrant,[(5)] "user education is one of the most effective ways of stimulating potential users". In other words, Library education imparts the necessary knowledge and skills in students to use the library effectively. Nowadays, educating users regarding library and its services is need of the hour as it enables the students to acquire the requisite technical knowledge of library methods to facilitate effective use of the library materials. Therefore, it is necessary that students are taught in their institutions about how to exploit the library resources to the optimum. Along with educating the users about the system, evaluation is equally important for its constant improvement. This study attempts to evaluate the importance of Library and information services course being taught to postgraduate students in Punjab

Agricultural University (PAU), Ludhiana and its impact on students' ability to use library resources efficiently.

Library and Information Services Course

The higher education institutions are established with an objective to prepare well-informed, skilled and globally competent citizens for the nation. With similar objectives PAU has "Technical Writing, Communication Skills, Library and Information Services"- a compulsory course for post graduate students popularly known as PGS501 course by its short name (It is being referred to as Library and information services course or as PGS501 course in the following text). The Library and information services part of the PGS501 course is taught by the Library faculty. It is a credit course for master degree students and non−credit course for PhD students with same credit hours for both. The main objectives of the course are to increase students' ability to locate the desired information, to extend their knowledge of useful library resources and to encourage them to make extensive use of the library. In other words, this course is intended to acquaint students with the basic library use skills necessary to enable them to use the library effectively. It is rightly said by Busayo[6] that library use skills are most suitable for a person for the purpose of learning, research and recreation. It is a practical course which includes seminars, library based assignments, activities involving searching information from library and other resources.

Objectives of the Study

The present study was conducted to study the extent to which the objectives of the Library and information services course are achieved. Thus the following objectives were framed:

1. To study the students' tendency to use the library.
2. To study the awareness of the students about the library and various resources available in the library.
3. To study the students' ability to locate the desired information.

Methodology

The instrument used to collect data in this study is a self-constructed questionnaire having closed-ended questions based on the objectives of the study. It included questions on frequency of library visits, awareness about information, services and resources available in library, searching of information, purpose of using internet, place of accessing internet, extent of e-resources used, ability to select authentic e-resources and various problems faced while accessing e-resources. Random sampling technique was used to collect data. The questionnaires were personally distributed to the students in the class in two different phases. Firstly during the first lecture of the semester and again during the last lecture in order to study the impact of the course on the students by comparison of the results of the data collected during both the phases. During this process, a brief introduction to the objectives and impact of the research was explained to them. The respondents were given sufficient time to fill in the questionnaires so as to receive honest responses for the research. Size of the population was 210 master degree students registered under PGS 501 course during the second semester of the academic session 2015-16. The size of sample was 40% of the population i.e. 84 students, which is a satisfactory representative of the population. The data was tabulated and analyzed using MS-excel 2010 for frequency distribution, percentage, average and Weighted Index (W.I.). The questionnaire included some questions which involved ranking of the options by the respondents. The data pertaining to such questions was analyzed using W. I. which is applied when all the items are not assigned equal importance or rank. According to Sharma[7], it is an index where the important items are given more value than less important ones. Weight is assigned to each item relative to its importance and index number computed from these weights is called weighted index. The formula used to calculate W.I. is:

$$Rw = \frac{\sum_{I=1}^{n} RiNi}{\sum_{I=1}^{n} Ni}$$

Where:
Ni = No. of observation corresponding to ith rank
Ri = n+1- i (n is the highest value rank and ith is the actual rank value)

In addition to this, a comprehensive review of the relevant literature available on internet and e-resources subscribed by the library was carried out for the present study.

Analysis of Findings

According to Ampka[8] the students' use pattern is one of the determining factors to measure the extent of effectiveness of academic libraries in fulfilling their set objectives within the context of the university system. Keeping this in view, various parameters like library visits, ability to search the information, awareness about library services and resources and ability to use the library efficiently forms the basis of evaluation of the impact of the Library and information services course. The results of the data collected and analysed to investigate this study are discussed in the following sections.

Library visits: The students were asked a question about their frequency of visiting the Library in the questionnaire. As shown in the Table 1, the responses

received in the beginning of the course reveal that only 4 respondents (4.8%) visited the Library daily and 27 respondents (32.1%) visited monthly. Whereas, analysis of the data collected a t the end of the course shows that there was increase in the number of respondents visiting the Library daily (8.3%) and decrease in the respondents visiting Library on monthly basis (13.1%). There was remarkable increase in the number of respondents visiting library on weekly basis from 32.1% to 52.4%. The increase in students visiting the library daily and weekly with a decrease in monthly visits is perhaps due to the awareness created about the library during the course about its resources, services and role it plays in professional accomplishments of the students.

Table 1: Library visits

Frequency	Beginning		End	
	Number of respondents	%age	Number of respondents	%age
Daily	4	4.8%	7	8.3%
Once in two days	24	28.6%	21	25%
Weekly	27	32.1%	44	52.4%
Fortnightly	2	2.4%	1	1.2%
Monthly	27	32.1%	11	13.1%

Availability of Information: The students were asked their opinion about the adequacy of information available in the library. It is evident from Table 2 that only 58 (69.1%) respondents regarded the information available in the library as adequate when asked in the beginning whereas at the end of the course 79 (94%) respondents regarded it as adequate. During the course of their study they were introduced to various resources available in the Library in both printed as well as electronic form. Increase in adequacy of information available in the library as reported by the respondents is possibly due to the increase in their awareness about the information available in various resources in the Library after the course.

Table 2: Amount of Information available in Library

Amount of Information	Beginning		End	
	Number of respondents	%age	Number of respondents	%age
Adequate	58	69.1%	79	94%
Inadequate	20	23.8%	3	3.6%
Very inadequate	6	7.1%	2	2.4%

Search ability: The ability of the students to search desired information from library was determined by their skills to use catalogue, frame appropriate keywords, search methods and search preferences used. Table 3 shows that 31 respondents (36.9%) were able to frame appropriate keywords in beginning of the course which improved to 34 respondents (40.5%) at the end of the course. There was remarkable improvement in using the catalogue in the due course of study as only 32 respondents (38.1%) could use the catalogue in the beginning of the course as compared to 51 respondents (60.7%) towards the end of the course. Though there is improvement but still there is scope of much more improvement specifically with regard to framing of appropriate keywords.

Table 3: Search ability

Ability to	Beginning		End	
	Number of respondents	%age	Number of respondents	%age
Frame appropriate keyword	31	36.9%	34	40.5%
Use catalogue	32	38.1%	51	60.7%

The respondents were also asked about their search preferences while searching information from an online database. The data in this instance was analysed using the W.I. As shown in Table 4, the option 'Refine your search by sorting them by relevance' got first rank followed by 'Refine your search by sorting chronologically'. It is evident from the Table that as an impact of the course the students preferred 'Going for advanced search' than 'Refine your search by sorting chronologically' which got second and fourth rank respectively towards the end of the course. It shows that earlier the respondents relied more on computers to sort out information but gradually by the end of the course they developed better skills of using advanced search option. But still, lots of efforts are

required on the part of the teachers to sharpen these skills much more and enable the students to search information even more efficiently. Fowler and Dupuis[9] reported that Digital Information Literacy Office at the University of Texas at Austin created Texas Information Literacy Tutorial. It was integrated with the existing library instructions programme. This online tutorial was designed to teach progression of basic and advanced level skills amongst the students through problem based interactions. A significant development in the advanced search skills, framing of keywords, searching indexes and evaluating websites was observed as an impact of this tutorial. Thus, teachers of PGS501 course need to emphasize on the development of specific skills of the students in which they are lacking.

Table 4: Options used for searching relevant information

Purpose	Beginning		End	
	W.I.	Rank as in W.I.	W.I.	Rank as in W.I.
Consult all references one by one	3.00	6	2.67	6
Refine your search by sorting chronologically	3.64	2	3.44	4
Refine your search by sorting them 'by relevance'	4.20	1	4.27	1
Refine your search by sorting highly cited	3.58	3	3.50	3
Going for advanced search	3.45	4	4.12	2
Search again using some other keyword	3.12	5	3.02	5

Consultation of e−resources: Electronic resources have changed the information seeking and dissemination patterns as they are capable of providing most recent, relevant and authentic information. As reported by Kumar and Sharma,[10] these resources are widely accepted by all categories of users for one purpose or another like teaching, publishing, course work, study, research, information, etc. During the Library and its Services course, the students were told about the e-resources of information available in form of e-journals, e-books, online databases and information available through internet. They were also provided information regarding enormous benefits of e-resources like multi-user access, remote access, speed, easy and as the fastest growing media. Consequently, a remarkable increase was observed from 11.9% to 40.5% of respondents consulting 61%-80% of e-resources out of the total resources of information consulted. The Table 5 shows the extent of consultation of e-resources by the students.

Table 5: Consultation of E−resources

Percentage of e-resources consulted	Beginning		End	
	Number of respondents	%age	Number of respondents	%age
1% - 20%	20	23.8%	15	17.9%
21% - 40%	14	16.7%	13	15.5%
41% - 60%	32	38.1%	17	20.2%
61% - 80%	10	11.9%	34	40.5%
81% - 100%	8	9.5%	5	5.9%

E−resources preferred: The ability of the students to determine the relevant e-resource was evaluated by their preference of e-resource used for searching a research paper. As shown in Table 6, Google got first rank on analysis of the data using W.I. followed by Google Scholar and Consortium for e-Resources in Agriculture (CeRA). This indicates that the students preferred Google the most to search research papers even over the academic databases subscribed by the library such as CeRA and ScienceDirect.com. However, an improvement was noticed in their preference towards the end of the course as CeRA was preferred over Google Scholar as they got second and third rank respectively. It is worth mentioning that Google Scholar inspite of being academic site providing access to scholarly literature is preferred less as compared to Google thus more awareness needs to be generated amongst the students about Google Scholar in this course.

Table 6: E−resource used for searching research paper

Purpose	Beginning		End	
	W.I.	Rank as in W.I.	W.I.	Rank as in W.I.
CeRA	3.05	3	3.40	2
ScienceDirect.com	3.02	4	3.00	4
Google	4.07	1	3.86	1
Google Scholar	3.27	2	3.26	3
Altavista	1.58	5	1.48	5

Authenticity of e−resources: Majority of the information is now reaching people in electronic form which can be easily accessed from the comforts of home or office but Sharma[11] opines that the reliability of these resources cannot be undermined. The ability of the respondents to select an authentic e-resource was assessed. In order to access research based information from the websites of government organisations, educational institutions, commercial organisations and voluntary research/other such organisations; the respondents were asked to rank these websites according to their authenticity. The data was calculated using W.I. The Table 7 shows that websites of educational institutions got first rank in authenticity. This was followed by websites of commercial organisations, government organisations and voluntary research/other such organisations. Furthermore, no change was observed in the respondents even after the course. It is clear from the Table that the students are lagging in evaluating the e-resources for authenticity. This is in accordance to Flaspohler,[(12)] who reported about evaluation of effectiveness of library programme being organised at Concordia College, Moorhead, USA. This programme was assessed to be very effective as students started using relevant subject based online databases and other reference sources in addition to the Internet which was the only source referred earlier on. It was found that they started framing relevant keywords and refined their search by using sub-headings. However, they still found difficult to evaluate authenticity of websites. It was recommended that such courses may be conducted regularly and effectiveness of the same be assessed in order to make further improvement. This topic is not taken care of in PGS501 course curriculum presently. But since, web based information increases manifold and is available very easily in abundance, needs to be evaluated for its authenticity before being used. Thus, this topic needs to be taken up meticulously in the PGS501 course to develop the skills of evaluating e-resources for authenticity amongst the students.

Table 7: Authenticity of e-resources

Purpose	Beginning		End	
	W.I.	Rank as in W.I.	W.I.	Rank as in W.I.
Government sites	2.14	3	2.37	3
Educational institutions site	3.14	1	3.15	1
Commercial sites	2.81	2	2.68	2
Voluntary/research/other such organizations site	1.89	4	1.80	4

Reasons for Irrelevant information: The problems faced by the students or in other words actual reasons due to which they found irrelevant information from e-resources were also studied and the data was calculated using W.I. The Table 8 shows that inability of the respondents to use the 'advanced search' option was one of the major reasons followed by inability to frame appropriate keywords as reported in the beginning of the course. It was vice-versa at the end of the course. In addition to these reasons, insufficient e-resources, not useful journals, Library staff and proper training requirements are other reasons which cannot be ignored. Thus, once again, it is clear that respondents were not able to 'frame keywords', use 'advanced search' option and 'refine the search' which is in agreement with Fowler and Dupuis[(9)] who reported same in their study and informed that significant development in the skills of the students like advanced search skills, framing keywords, searching indexes and evaluating websites; was observed with introducing an Information Literacy tutorial. Furthermore, according to Ajegbomogun[(13)] the course curriculum must be updated in accordance with the global trend in electronic information resources and services. Besides this, the library collections should also be updated with current and relevant ICT facilities and materials. The librarians must focus on improving the library education courses so that the students do not come across any such problems while searching information.

Table 8: Reasons for getting irrelevant information

Purpose	Beginning		End	
	W.I.	Rank as in W.I.	W.I.	Rank as in W.I.
Unable to frame appropriate key words	4.71	2	5.33	1
Sufficient number of digital resources not available	3.83	5	4.06	4
Journals covered in the databases are not useful	4.06	4	4.01	5
Unable to use 'advanced search' option	4.87	1	4.73	2
Unable to refine the search	4.44	3	4.61	3
Library staff not helpful in searching information	2.96	7	2.04	7
Proper training is not imparted in this regard	3.12	6	3.35	6

Awareness about Library and its resources: The awareness of the students about the Library and its resources was evaluated by grouping various parameters into different groups which was then quantified and assigned numerical values for the purpose of data analysis to calculate average scores. These scores are discussed below:

- **Computer awareness score:** Parvathamma and Pattar[14] are of the view that in the present era of ICT when libraries are technologically well equipped with e-resources and infrastructure to use them, computer education or an understanding to use the computers enables the students to use the Library in a better way. Keeping this in view, computer awareness score was formed which consists of values for parameters like having an email id by the student, Wi−Fi id, type of computer owned, place from where internet is used, purpose for which computer and internet are used.
- **Library awareness score:** This score was constituted by grouping the responses related to the parameters like students' understanding regarding the basic system of the Library, services provided by the Library and its collection. This indicates the awareness of the student about the Library− its services, collection, arrangement of documents and general usage.
- **Resource awareness score:** This score was constituted to evaluate the awareness of the students about various resources available in the Library. It includes parameters like types of resources available, type of information available in various resources, usage and access of the resources.

The data was analysed for the above mentioned scores and results are presented in Table 9. It is evident from the Table that improvement in all the three scores was observed at the end of the course. Computer awareness score increased from 11.8 to 13.6, Library awareness score was 5.3 at the beginning which came out to be 7.8 at the end. The resource awareness score has shown considerable improvement from 4.3 to 9.2. Thus, as a result of the Library and information services course, improvement in the students' awareness about the Library and various resources available has been recorded.

Table 9: Awareness about Library and its resources

Score	Beginning	End
Computer awareness score	11.8	13.6
Library awareness score	5.3	7.8
Resource awareness score	4.3	9.2

Conclusions and Recommendations

Holden et al[15] opines that an effective program evaluation does more than simply collect, analyze and provide data. It makes it possible for program managers and stakeholders to learn continually about the effectiveness of a program. The present study was conducted to assess the impact of the Library and its Services course at PAU by evaluating the extent to which the objectives of the course are achieved. It is evident from the results of data analysis that this course is effective in achieving its basic objectives to a great extent. The analysis of data reveals that PGS 501 course is successful in creating awareness about library services and resources amongst the students in addition to encouraging the students towards visiting the library more frequently and has also improved their ability to search the information using catalogue. Inspite of this, much more efforts are required to be put in to improve their ability to use the library more efficiently. It is therefore recommended that the teachers need to focus on developing advanced skills like ability to frame appropriate keywords and ability to refine their search with sub-headings to narrow down the search. Similarly, for accessing information from e-resources the students need to improve their skills to use advanced search options available in such databases and their ability to prefer relevant resources over others

in order to get relevant information and save their valuable time. Furthermore, the students may be acquainted about the criteria adopted to evaluate e-resources for their quality, reliability and authenticity.

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