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Utilization of e-resources by faculty members of Agricultural Universities:

An analysis

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Abstract

Libraries have evolved manifold times with technology playing a great part in making learning more accessible. With growing accessibility of the Internet, huge impetus is on the global access of information resources. This paper discusses the utilization of e-resources by the faculty members. A survey of 134 faculty members of three oldest agricultural universities of Punjab, Haryana and Himachal Pradesh was conducted. It was discovered that faculty members of Punjab Agricultural University (PAU) and Himachal Pradesh Agricultural University (HPAU), use e-books, e-journals, and e-databases 'weekly' whereas faculty members of Haryana Agricultural University (HAU) 'rarely' use e-books and e-databases. The frequency of using e-resources 'daily' is quite low by the faculty members of all the three agricultural universities. Nearly 14 percent faculty members of HPAU are 'unaware' of the CAB Abstract and half of the faculty members of HAU 'rarely use it. Almost 14 percent faculty members of PAU & HPAU and 20 percent HAU faculty members are though aware of the resource but do not use Krishiprabha. However, faculty members generously use e-resources for research and teaching, and reveal good interest in e-journals and e-databases.

Keywords: E-resources, PAU, HAU, HPAU, Agricultural University, EIRs

1 Introduction

Digital transformation is the buzzword of all the university libraries. The rapid availability of data (Internet) and shift from print to electronic model have contributed a lot in connecting scholars to global base of knowledge. This change has revolutionized the information industry as well as the university libraries framework. Dependency of scholars on EIRs has fundamentally altered the scholars' expectations and behaviors. These resources provide current information ahead of print resources and facilitates anywhere anytime access. Teachers being the catalyst for global change have a powerful role to play in e-learning. Opportunities for new experiences can be explored when teachers use these new resources (EIRs) and apprise the student

community. It is therefore imperative to examine the exposure of faculty members to electronic information resources.

This study attempts to investigate faculty's utilization of electronic information resources (EIRs) by the faculty members of agricultural universities of Punjab, Haryana and Himachal Pradesh. Various aspects like use of e-resources, purpose and preference of e-resources has been analyzed. Besides, frequency of using CAB Abstract, Consortium of e-resources in Agriculture (CeRA) and Krishiprabha has also been discussed.

2 An Overview of the Agricultural Universities under Study

The study focuses on the utilization of EIRs by the faculty members' of three oldest agricultural university libraries in the state of Punjab, Haryana and Himachal Pradesh. The universities under study are Punjab Agricultural University (PAU), Ludhiana; Haryana Agricultural University (HAU), Hisar and Himachal Pradesh Agricultural University (HPU), Palampur. These agricultural universities have contributed in bringing green revolution and white revolution in these states. PAU is the oldest university established in 1962 having 2, 56,141 books, 1, 04,639 bound periodicals, 38572 theses, 336 e-books and 10 e-databases whereas HAU was established in 1975 and have collection of 2, 02,436 books, 6,628 bound periodicals, 9577 theses, 377 microfilms, 247 e-books and 17 e-databases HPAU was established in 1978 having collection of 55,813 books, 29,662 bound periodicals, 622 e-books and 12 e-databases. Disseminating these information resources to all members of the library is integral to the university framework.

3 Review of Related Literature

Libraries are growing at a rapid pace and so is the use of technology. Some significant studies related to the study have been mentioned here. Satpathy & Rout (2010) investigated that faculty members are aware of different types of e-resources. Majority of faculty members use e-databases followed by e-journals and e-books. E-articles/re-prints is least used e-resource. 57.5 percent faculty find Usefulness of e-resources on print resources to a great extent. Major hindrance in the use of e-resources is low speed of internet and suggested more number of e-resources should be subscribed by the library. Most of them gain knowledge about the resources through email from the library followed by library orientation programme. Garg & Tamrakar (2014) examined the utilization of e-resources by the research scholars, post graduates and faculty members of IIT Kharagpur and pointed out that majority of

respondents preferred e-journals (37.85%) and good number of respondents also uses print journals (29.85%) whereas only 9.7 percent uses computerized databases. It was seen that majority of respondents prefers journals in electronic format. However, the frequency of using e-resources by majority of respondents is occasionally. Bellary & Surve (2019) investigated the use and awareness of e-resources by the engineering faculties. It was seen that majority of the faculty members access e-resources for the research/learning purpose followed by teaching. It is also found that large number of faculty members access e-resource weekly. The engineering databases like ASCE, ASME, Delnet, IEEE/IEL Online, Springer, Science direct, McGraw Hill e-books, Pearson e-books, and e-brary are used rigorously. It was also noticed from the results that apart from the information about engineering databases, faculty members were aware of other databases pertaining to other subjects. Also, faculty members do motivate student community to use e-resources by giving class assignments. Srinivasulu, Balu & Narendra (2019) also studied the awareness and use of e-resources and found that large number of faculty members are aware of e-resources and 92.19 percent faculty members use them daily. Majority of faculty members use e-resources for publishing articles/books. 96.87 percent faculty use IEEE. 72.39 percent faculty members were satisfied with overall usage of e-resources. Sharma (2018) pointed that majority of students and faculty members were aware of e-resource and use them once in a week. Most of the respondents use them for the purpose of writing papers followed by for study course work. Most of the respondents use internet as an e-resource followed by e-journals. However, very few respondents use databases. Sharma (2019) also reported the use of e-resources by the faculty members and research scholars and noticed that majority of them were aware of e-resources and other library facilities. Indian Citation Index, Web of Science, and Scopus databases were being used by faculty members and research scholars for citation analysis whereas Shodhganga and MDU Institutionary repository were being used for Theses and Dissertations. However, restricted timings of the digital library were the major difficulty expressed by the faculty members as well as the research scholars. Henda (2020) examined the extent of benefit received by the faculty members of Kuwait University by the e-resources. It was found that majority of faculty members used e-resources generously for the purpose of writing research papers. Databases and e-journals were the most preferred choice. However, faculty members who do not use e-resources show their unawareness to these resources, but

willing to learn more about e-resources. Kaur (2020) studied the faculty members' perception on e-resources and envisaged that faculty members prefer resources in both the formats and feel that print resources hold a certain cachet.

Digital change has received most attention these days and the use of electronic information resources is just the beginning, taking libraries forward to the newer, ever-evolving 'digital' world.

4 Objectives and Methodology

The paradigm shift from print information resources to electronic information resources is the need of the hour. University libraries are making huge efforts in making users satisfied and its core objective to provide the right information to the right people at the right times. Achieving increased and improved use of electronic information resources, faculty members are the key driving vehicles. It is hence significant to know the utilization of these new resources (EIRs) by the faculty members of Punjab Agricultural University (PAU), Haryana Agricultural University (HAU) and Himachal Pradesh Agricultural University (HPAU). The objective of the study is to,

- know the use of e-resources
- examine the use of e-databases.
- ascertain the purpose to access e-resources
- identify the preference of e-resources

A structured questionnaire was developed and administered randomly to 150 faculty members of three oldest agricultural university libraries of Punjab, Haryana and Himachal Pradesh. Out of which, 134 questionnaires i.e. 36 were from PAU, 61 from HAU and 37 from HPAU have been received and analyzed. The SPSS software has been used for analysis of data. Chi Squared (χ^2) test has been performed wherever necessary to see the level of association. Rank to score conversion has also been performed to see the order of priority wherever necessary.

5 Data Analysis and Discussion

5.1 Demographic Details

Table 1 and Table 2 presents gender wise and age wise distribution of the faculty members. Majority of faculty members are females in PAU and HPAU while in HAU most of the faculty members are males. Age wise distribution shows that most of the faculty members belong to the age group above 35 years.

Table 1 Gender wise distribution (in percentage)

Group/Sub Group	Male	Female
PAU	44.44	55.56
HAU	80.33	19.67
HPAU	45.95	54.05
Chi ² =17.28**(df:2) C=0.34		

Table 2 Age wise distribution (in percentage)

Group/Sub Group	21-25	26-30	31-35	Above 35
PAU	22.22	27.78	22.22	27.78
HAU	0.00	6.56	11.48	81.97
HPAU	8.11	8.11	5.41	78.38
Chi ² =37.81**(df:6) C=0.47				

5.2 Use of e-resources

Electronic information resources are making high strides in academics. It is apparent to see the use of these resources by the faculty members and their contribution towards digital learning using new learning tools. Table 3 indicates the frequency of use of different electronic information resources by the faculty members.

Table 3 Frequency of use of e-resources (in percentage)

E-databases	Frequency	PAU	HAU	HPAU
E-books	Daily	13.89	4.92	5.41
	Weekly	38.89	19.67	32.43
	Fortnightly	33.33	29.51	18.92
	Rarely	13.89	42.62	29.73
	Aware but Don't Use	0.00	3.28	13.51
	Unaware	0.00	0.00	0.00
20.69**(df:8) C=0.37				
E-journals	Daily	19.44	9.84	8.11
	Weekly	52.78	36.07	35.14
	Fortnightly	19.44	45.9	27.32
	Rarely	8.33	4.92	24.32
	Aware but Don't Use	0.00	3.28	5.41
	Unaware	0.00	0.00	0.00
19.59*(df:8) C=0.36				
ETDs	Daily	0.00	0.00	2.70

	Weekly	27.78	22.95	13.51
	Fortnightly	41.67	31.15	24.32
	Rarely	25.00	27.87	37.84
	Aware but Don't Use	5.56	18.03	21.62
	Unaware	0.00	0.00	0.00
14.27(df:10) C=0.31				
E-Databases	Daily	5.56	6.56	2.70
	Weekly	38.89	24.59	37.84
	Fortnightly	27.78	40.98	32.43
	Rarely	19.44	22.95	8.11
	Aware but Don't Use	8.33	3.28	18.92
	Unaware	0.00	1.64	0.00
14.27(df:10) C=0.31				
E-Reference Sources	Daily	11.11	4.92	8.11
	Weekly	19.44	19.67	27.03
	Fortnightly	25.00	27.87	8.11
	Rarely	36.11	31.15	37.84
	Aware but Don't Use	8.33	8.20	18.92
	Unaware	0.00	8.20	0.00
15.34(df:10) C=0.32				

It is found that all faculty members of PAU are aware of e- resources. However, majority of PAU and HPAU faculty members use e-books 'weekly' whereas most faculty members of HAU 'rarely' use them. Besides, 'daily' use of e-books is quite low by all the faculty members. On the other hand, few faculty members of HPAU don't use e-books.

Further, all the faculty members of three universities are aware of e- journals. Majority of PAU and HPAU faculty members use e- journals 'weekly' whereas HAU faculty members use e-journals 'fortnightly'. Regarding e-theses and dissertations, majority of PAU and HAU faculty members use them 'fortnightly' whereas HPAU faculty members use ETDs 'rarely'. Nearly 19 percent of HAU faculty members and 22 percent of HPAU faculty members don't use them.

In case of e-databases majority of PAU and HPAU faculty members use e- databases 'weekly' while HAU faculty members use them 'fortnightly'. Very few faculty members of three universities use them 'daily'. Consequently, e-reference sources are used 'rarely' by the faculty members.

On testing statistically, the chi square value was found to be highly significant in case of e-books and significant for e-journals.

5.3 Use of e-databases

Databases are the wonderful invention and one stop shop for information seekers. It is a magnificent platform for research and education. In databases, information is well packaged, but its worth can be known when they are effectively used. Table 4 presents the frequency of using e-databases. It is found that nearly 14 percent faculty members of HPAU are ‘unaware’ of the CAB Abstract; 50 percent faculty members of HAU ‘rarely’ use them and 50 percent PAU faculty members use them ‘weekly’. However, ‘daily’ use of CAB Abstract is quite low by all the faculty members of the universities under study. Most of the faculty members use CeRA and Krishiprabha ‘weekly’.

However, almost 6 percent PAU and HPAU faculty members don’t use CAB Abstract. About 8 to 12 percent faculty members don’t use CeRA. Nearly 14 percent PAU & HPAU faculty members and almost 20 percent HAU faculty members don’t use Krishiprabha.

Table 4 Frequency of use of e-databases (in percentage)

E-databases	Frequency	PAU	HAU	HPAU
CAB Abstract	Daily	2.78	1.64	8.11
	Weekly	50.00	18.03	18.92
	Fortnightly	25.00	29.51	24.32
	Rarely	16.67	50.82	29.73
	Aware but Don’t Use	5.56	0.00	5.41
	Unaware	0.00	0.00	13.51
CeRA	Daily	5.56	6.56	2.70
	Weekly	44.44	34.43	43.24
	Fortnightly	22.22	27.87	13.51
	Rarely	16.67	16.39	21.62
	Aware but Don’t Use	11.11	11.48	8.11
	Unaware	0.00	3.28	10.81
KrishiPrabha	Daily	0.00	3.28	2.70
	Weekly	30.56	32.79	32.43
	Fortnightly	38.89	19.67	10.81
	Rarely	16.67	19.67	32.43
	Aware but Don’t Use	13.89	19.67	13.51
	Unaware	0.00	4.92	8.11

5.4 Purpose of Access

Table 5 shows the opinion of faculty members regarding the purpose of using e-resources. Faculty members were asked to prioritize their choices. Rank analysis was performed to know their preferences. Low average rank with high average score indicates first priority of the faculty members. It was found that all the faculty members has given first priority to the ‘research work ‘followed by ‘writing papers and publication’, while third priority was given to ‘teaching’ work.

Correlating Table 3, Table 4 and Table 5, it shows that faculty members are exploring e-resources and generously use them in their research work as well as for teaching purposes. At the same time faculty members need to innovate fast and be more responsive to student needs.

Table 5 Purpose to access e-resources

Item	Average Rank	Average score	Total Score
Teaching	3.08	56.97	525
Writing paper/Publication	2.81	61.44	561
Projects	3.66	47.39	448
Research work	2.33	69.53	626
Seminars/Workshops/PPT	4.46	33.96	340
To update ourselves	4.66	30.72	314

5.5 Preferences of e-resources

E-resources are re-shaping our teaching and learning process. To students, teachers are the epitome of persistence and perseverance. Teachers motivate and make things perfect for students while technology just facilitates and catalyses their work. Table 6 represents the preferences of faculty members regarding their choices on different e-resources. To know their preferences rank analysis has been performed. It was found that faculty members give top priority to e-journals followed by e-databases. E-books and e-theses and dissertations are seldom used by them.

Table 6 Preference of e-resources

E-resources	Average Rank	Average score	Total Score
e-Books	3.12	47.61	386
e-Journals	1.58	78.36	592
ETDs	3.23	45.37	371
e-Database	2.64	57.16	450
e-Reference Source	4.41	21.79	213

It is inferred that majority of faculty members are aware of e-resources subscribed by their libraries and reveal good interest in e-resources specifically in e-journals and e-databases. E-resources play a significant role in research and teaching activities.

5.6 Conclusion

Digital transformation in libraries is a necessary game changer. Inclusion of electronic information resources in the university library framework aids scholars to access information globally while adherence to antiquated mode of learning will restrict their knowledge. At the same, teachers are the pillars of our education system and promotion of new resources (EIRs) by them will definitely unlock the potential of generations of students. The result of the survey shows that faculty members of all the three agricultural universities are aware of e-resources, but e-journals are most popular e-resource among them. It is found that nearly 14 percent faculty members of HPAU are ‘unaware’ of the CAB Abstract and half of the faculty members of HAU ‘rarely use it. Nearly 14 percent faculty members of PAU and HPAU almost 20 percent HAU faculty members don’t use Krishiprabha. This raises concern as faculty members are the torch bearers and have a major role to apprise the students about new learning resources (EIRs). Although, EIRs has greater impact on faculty members’ comprehensive and evolving learning experience, the only need is to explore more of e-resources for delivering the best of the best.

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