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RESEARCH PAPER

Study on utilization of e-Resources in agriculture education

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Abstract: Different communication systems have influenced the twentieth century. The introduction and usage of IT is the most important invention of the century that affects scientific communication. Different goods and services were developed by application of computers to information processing. The academic environment has therefore undergone significant changes in these years, which have taken on new dimensions shaped by technological applications. Libraries have undergone a significant transformation both in the growth of their collections and their service systems in recent years. Electronic resources are the electronic representation of information. They are available in various forms like e-books, digital libraries, online journal magazine, e-learning tutors and on line test. Because of the effective presentation with multimedia tools, these e-resources have become the source of information. E-resources may include e-journals, e-news, e-mail on line chatting, etc can be called as an e-resources. Therefore, this research paper aimed to find the utilization of e-resources in agriculture education by the students, researchers and teachers in the University of Agricultural Sciences, Raichur. An interview schedule was prepared and distributed among the students, researchers and teachers to collect the desired data. A total of 120 schedules were distributed of which 50 were under-graduate students, 50 were post-graduate students and 20 were university teachers. The study found that majority of the post-graduate students and teachers used the e-resources for research purpose, while majority of the undergraduate students used e-resources for preparation to face the JRF exams. It was also found that majority of the respondents used e-resources in PDF form. According to the cent percent of respondents e-resources were helpful to the extent of 85 per cent and above. Overall it was found that e-resources were highly helpful in improvement of agricultural education and research.

Key words: e-Resources, Post graduate, Research, Teachers, Under-graduate

Introduction

Different communication systems have influenced the twentieth century. The introduction and usage of IT is the most important invention of the century that affects scientific communication. Different goods and services were developed by application of computers to information processing. The academic environment has therefore undergone significant changes in these years, which have taken on new dimensions shaped by technological applications. Libraries have undergone a significant transformation both in the growth of their collections and their service systems in recent years. Electronic resources are the electronic representation of information. There are available in various forms like e-books, digital libraries, online journal magazine, e-learning tutors and on line test. Because of the effective presentation with multimedia tools, these e-resources have become the source of information. E-resources may include e-journals, e-news, e-mail on line chatting, etc can be called as an e-resources.

Information and communication technologies (ICTs) have changed how researchers and faculty access and use information services. As a result, e-services have become an important part of academic and research information resources, and they can also replace print resources (Mardhusudhan, 2010). The usage of e-resources expands as consumers gain access to the internet (Korobil et al., 2006). In general, it is clear that the age of print is giving way to the age of electronic information services. The electronic representation of information is known as an electronic resource. E-books, digital archives, online journal magazines, e-learning tutors, and online tests were some of the options. These e-resources have become a source of knowledge due to their successful presentation of multimedia tools. Electronic services include information in the form of full text databases, e-journals, image collections, and multimedia on CD, tape, the internet, and web technology, among other formats. E-journals, e-discussions, e-news, data collections, e-mail on-line chatting, and other e-resources are examples of e-resources.

Raichur is privileged of being an oldest establishment for agricultural research in 1932 an Agricultural Research Station was established by the then Nizam's Government of Hyderabad with a mandate to carryout research on dry land farming. After the reorganization of states in the country, Raichur was identified as the main research station for oilseeds. With the establishment of State Agricultural University in Karnataka in 1964 at Bangalore, it was elevated to Regional Research Station with a jurisdiction of five districts of Northern Karnataka. Agricultural Engineering Institute (AEI) was added to Raichur campus in 1969 to offer diploma course in Agri-Engineering which, in 1987, was upgraded to the status of College of Agricultural Engineering with up-gradation of Diploma to B.Tech degree. In 1984 and 2000, Colleges of Agriculture were started functioning, one at Raichur and the other at Bheemarayanagudi (Shahapur Taluk of Kalaburgi District)

respectively, with an intake capacity of 30 students. However, with establishment of University of Agricultural Sciences, Dharwad during 1986, Raichur became the component campus under UAS, Dharwad. Intriguingly, Raichur continued its privilege of being the second largest campus and a major hub of education under UAS, Dharwad. The Post-graduate degree program leading to Master's degree in eight departments was started in 1995 with an intake capacity of five students for each department every year. In 1994, Krishi Vigyana Kendra (KVK), a component of UAS, Dharwad but funded and monitored by ICAR, started functioning in the campus and received the best Krishi Vigyan Kendra National Award for the year 2007-08, thus completing all the necessities of Teaching, Research and Extension. During 2008-09 and 2009-10, PG programmes began in other departments, thus making a total of 13 departments offering Post Graduate program at the campus level. The Raichur campus has registered significant growth in last decade reaching newer heights in education, research and extension and recently introduced one more agriculture sub campus at Ganagavati. Therefore, this research paper aimed to find the utilization of e-resources in agriculture education by the students, researchers and teachers in the University of Agricultural Sciences, Raichur.

Methodology

University for Agricultural Sciences for Hyderabad-Karnataka (H-K) region was felt almost a decade back (Annexure I) owing to inimitable climatic conditions and farming activities. The H-K region comprising of Bidar, Kalaburgi, Raichur, Bellary, Koppal and Yadgir districts (Map), an agrarian area with an irrigation potentiality of 12 lakh hectares through Tungabhadra, Krishna, Karanja, Mullamari, Hirehalla, Bennethore and other irrigation projects, spanning a total geographical area of 44.96 lakh hectares accounting 33.60 per cent of the geographical area of the state, of which nearly 68 per cent is under cultivation and has a unique combination of medium (32.42%) and large farmers (36.69% bestowed with rich natural resources especially for agricultural development. The initiation for new Agricultural University at Raichur began through a letter by Government of Karnataka (No. AHD:165:UAS:99 dated 17-12-1999) directing University of Agricultural Sciences, Dharwad to submit a feasibility report on the proposal.

Sampling procedure

Purposive sampling method was used for selection of Agriculture College. Further simple random sampling was done for the selection of UG, PG/ Ph.D. and Teachers respondents. A total 120 schedule was distributed of which 50 were under-graduate students, 50 were post-graduate students and 20 were university teachers.

Data

Primary data was collected from the students and teachers in terms of their usage of e-resources. With a tabular analysis the data was analyzed and concluded the results in quality form. The frequency and percentage were calculated on the basis of responses recorded answers toward questionnaire.

Result and discussion

The awareness among the UG students, PG/PhD students and teachers of UAS, Raichur about e-resources was recorded and presented in Table 1. The perusal of the table reveals that cent per cent of teachers, PG/PhD students and 84 per cent of UG students were aware of e-resources. This might be due to the 16 per cent of the UG students were maybe due to low knowledge of accessing e-resources for the study.

The e-resources are plays a vital role in the study or knowledge improvement as 85 per cent of respondents opined (Table 2.) that they were using e-resourced daily for their improvement in study and knowledge. This indicates that e-resources was significantly necessary for the improvement or updating the knowledge level in the respondent's life.

The study also covered the purpose of e-resources was used by the respondents and presented in the Table 3. The perusal of the table reveals that 84 per cent of the UG students used e- resources for updating general knowledge of the students followed by JRF and other exam preparation (80%) and for the course work study (56%). While, PG students used e-resources cent per cent for research and writing the research

Table 1 Awareness about e-resources among the respondents

Categories	Aware	Per cent	Not Aware	Per cent
UG students	42	84	08	16
PG/PHD Students	50	100	-	-
Teachers	20	100	-	-
Total	112	93.33	08	6.67

Table 2 Frequency of e-resources used

Period	Number	Per cent
Daily	102	85
Weekly twice	12	10
Weekly	06	05
Total	120	100

Table 3 Purpose of e-resources used by the respondents

Purpose	Number	Per cent
UG students (n=50)		
For studying course work	28	56
For updating general knowledge	42	84
JRF and other exam preparation	40	80
PG students (n=50)		
For studying course work	31	62
For updating general knowledge	39	78
For teaching	06	12
For research work	50	100
For writing research papers	50	100
Teachers (n=20)		
For studying course work	15	75
Updating syllabus notes	09	45
For updating general knowledge	20	100
For teaching	20	100
For research work	20	100
For writing research papers	20	100

papers followed by updating general knowledge (78%), studying course syllabus (62%) and 12 per cent for the teaching purpose. Similarly, the University teachers used cent purpose of the e-resources for teaching, research work and writing research papers, followed by studying the course material (75%) and updating the course syllabus notes (45%).

The preference level of respondents was presented in the Table 4 and Fig. 1. The figures of the table indicated that majority of the e-resources preferred by the students and teachers was electronic type (76.66 %), followed by both electronic and printed material (41.66 %) and printed material (10.83 %).

Beyond their personal accessing point, majority of the respondents accessing the e-resources in their respective departments of college (74.17 %) followed by hostel (48.33 %) and library (35.00 %). The major reason was teachers and PG/ PhD students were carry their research and thesis writing work in the respective department (Table 5).

It is very much important to know that the format of the e-resources used by the respondents which indicates the comfortability of e-resources for using by the respondents, it was presented in the Table 6 and Fig. 2. Revealing nearly 50.83% of the preferred e-resources for reference in PDF format and 21.17 % in the HTML format, remaining 20% was preferred in the format of excel and power point format. Nearly 7.50% of respondents were not able to prefer to any particular format of the e-resources.

Table 4 Level of preference using e-resources by the respondents

Type	Number	Per cent
Electronic	92	76.66
Printed material	13	10.83
Both	15	41.66
Total	120	100

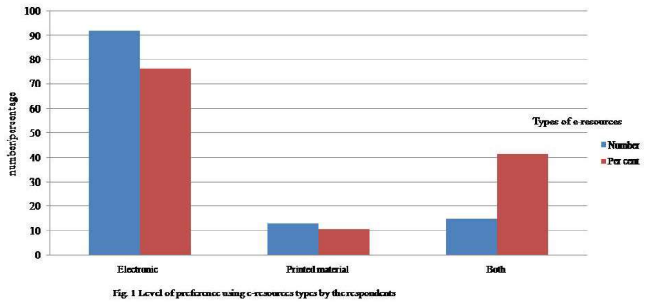

Fig. 1 Level of preference using e-resources types by the respondents

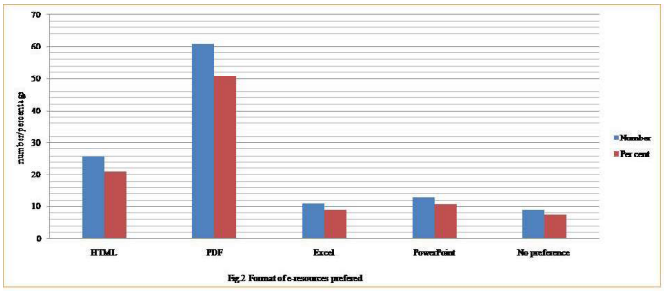

Fig.2 Format of e-resources prefered

Table 5 Accessing point of e-resources

Accessing point	Number	Per cent
Library	42	35.00
College Department	89	74.17

Table 6. Formats of e-resources preferred

Formats	Number	Per cent
HTML	26	21.17
PDF	61	50.83
Excel	11	09.17
PowerPoint	13	10.83
No preference	09	07.50
Total	120	100.00

Table 7. Major e-resources websites/ links used by agriculture students and teachers

Websites	Purpose of visit
www.krishikosh.com	Online thesis for reference
www.agricoop.com	Ministry of agriculture, information about development activity in agriculture field, reports, rules, etc.
www.indiastat.com	Secondary data
www.krishimarathavahini.com	Karnataka agriculture commodities market prices
www.cera.jcc.in	Online journals
www.icar.org.in	Information regarding ICAR
www.ndri.nic.in	Thesis, publication, NDRI institute information
www.fao.org	Information regarding food and nutritional level, etc.
www.agrijobs-india.com	Recruitment for agri. graduates
www.agromarket.com	Market information of agriculture commodities
www.agriserve.com	Agriculture technologies information
www.agfind.com	Agriculture finding reports
www.webagri.com	Statistical data and reports
www.uasr.edu.in	Information regarding UAS, Raichur

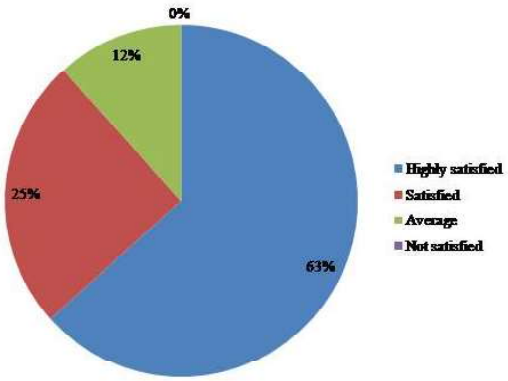

Fig.3 Satisfaction level of accessing e-resources by sample respondents

Table 8. Satisfaction level of accessing e-resources by sample respondents

Satisfaction level	Number	Per cent
Highly satisfied	76	63.33
Satisfied	30	25.00
Average	14	11.67
Not satisfied	0	0.00
Total	120	100

There are many websites for accessing the e-resources but in this study only few major e-resources used by UAS, Raichur respondents opined were listed based on frequent visited websites. Used for various purpose which are online thesis for reference, Ministry of agriculture, information about development activity in agriculture field, reports, rules, *etc*., Secondary data, Karnataka agriculture commodities market prices, Online journals, Information regarding ICAR, Thesis, publication, NDRI institute information, Information regarding food and nutritional level, *etc.* Recruitment for agri. Graduates, Market information of agriculture commodities, Agriculture finding reports, Statistical data and reports. The respective websites were presented the Table 7.

The satisfaction level of the respondents was presented in the Table 8 and Fig.3. The perusal of the table revealed that, respondents are highly satisfied (63.33 %) with the information gathered by e-resources for their research, study and knowledge improvement.

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