

# Innovations in ICT Use in Library and Information Science Education through Distance Mode: An Experience

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## Abstract

Library and Information Science Programmes in India - from certificate programme to the research degree programs at doctoral level are being offered by more than one hundred universities/ institutions. Vardhman Mahaveer Open University offers a variety of Library and Information Science Programmes including a Certificate Programme in Digital Libraries (CPDL) and is a leader in the programmes offered in Hindi language. The University has employed various technologies to support learners starting from online admission to making available courses material online. This paper highlights the key features of the CPDL.

**Keywords:** Distance Learning, Innovations in ICT, LIS Education

## 1. Introduction

ICT has changed the very nature of education. Use of ICT in open and distance learning has opened doors of learning and has been useful in delivering quality learner-centred education. E-learning offers opportunities for wider access to learners overcoming space and time barriers. The government is encouraging universities including open and distance learning institutions to employ technologies in delivery of education. The recent development of content over ePGpathshala (<http://epgp.inflibnet.ac.in/>) and launch of MOOCs on SWAYAM (<https://swayam.gov.in/>) for graduate and post-graduate education are steps in this direction and indicate concerns of government to widen the education base.

Vardhaman Mahaveer Open University came into existence in 1987 and offers 74 programmes (as in July 2016). It offers skill based, professional, technical and academic programmes related to Science and Technology, Arts and Humanities, Continuing Professional Education, and Management and Commerce. These programmes have employed new technologies employed to a large extent in recent years. The paper describes as to how ICT has been employed in LIS Programmes.

## 2. Open and Distance Learning in India

Open and Distance Learning (ODL) system is a system wherein teachers and learners need not necessarily be present either at same place or same time and is flexible regarding modalities and timing of teaching and learning as also the admission criteria without compromising on necessary quality considerations. ODL is becoming more and more useful for continuing education, skill updating of in-service personnel and for quality education of relevance to learners located at educationally disadvantageous locations<sup>1</sup>. The growth of open and distance education in India is described as consistent in terms of number of institutions and students, share in GER<sup>2</sup>. ODL occupies a special place in the Indian higher education system because of its major contribution in enhancing the gross enrolment ratio and democratization of access to higher education to large segments of the Indian population particularly to reach out to the unreached and to meet the demands of lifelong learning which has become more of a necessity in the knowledge society.

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### 3. Library and Information Science Education at VMOU

Another paper describes<sup>3</sup> the state of library and information science education in India and Rajasthan. Vardhaman Mahaveer Open University, Kota, established in 1987 as Kota Open University (KOU), has the following objectives:

- To democratise access to higher education with the objective of providing educational opportunities to all groups - employed people, women, specially abled people and adults who seek education;
- To provide qualitative and employment-oriented education at low cost; and
- To widen the reach of higher education to unreached areas including remote desert areas.

The University started offering diploma level LIS programme from its inception in 1988 and started bachelor's degree in library and information science in 2001 and master of library and information science in 2008. A new certificate programme on digital libraries started in 2014 and has gained popularity not because

of number of students admitted but for the innovative approach used in its design, development and delivery using ICT. Some of the salient features of the library and information programme include:

- Opportunities to learn at 07 different model study centres,
- Multiple and relaxed entry qualifications,
- Opportunities to learn at learner's pace and convenience,
- Learning through assignments,
- Practical camps for training in technical aspects of librarianship,
- Availability of self-instructional material in both print and e-forms, and
- Learner-friendly web portal with programme related information and documents.

### 4. Purpose and Content of Library and Information Science Programmes

The purposes of the various programmes offered in library and information science are set out in the Table 1.

**Table 1.** Purpose and Content of Library and Information Science Programmes

Sl. No.	Name of the Programme	Purpose
1	Diploma in Library and Information Science (DLIS)	<ul style="list-style-type: none"> <li>• Providing elementary knowledge of library and information science</li> <li>• Training about the processes and routine library operations</li> <li>• To provide knowledge of ICT use in library and information science</li> <li>• To prepare school librarians and semi-professional skilled technicians with capacity to work in different kind of libraries.</li> </ul>
2	Bachelor of Library and Information Science (BLIS)	<ul style="list-style-type: none"> <li>• To provide skill and capabilities for effective organisation and arrangement of libraries and information units</li> <li>• Developing professionals working in libraries and information units and helping in extending employment opportunities</li> <li>• To provide deeper knowledge and skill for diploma holders in library and information science</li> <li>• To provide knowledge of ICT applications in library and information science</li> <li>• To attract newer graduates towards library and information profession.</li> </ul>
3	Master of Library and Information Science (MLIS)	<ul style="list-style-type: none"> <li>• To provide skill and capabilities for effective organisation and management of libraries and information centres</li> <li>• To offer opportunities for professional development and better working opportunities for in-service people</li> <li>• To extend knowledge and proficiency by training of recent trends and technologies in library and information science</li> </ul>
4	Certificate Programme in Digital Libraries (CPDL)	<ul style="list-style-type: none"> <li>• Familiarising the learners about the concept of digital libraries.</li> <li>• Imparting knowledge about workflow of digitisation processes and techniques in DLs.</li> <li>• Training learners to work productively and creatively in DLs.</li> </ul>

Evidently the programmes collectively have twin goals of offering educational programmes for those aspiring to enter the LIS profession as also rising skills and competencies of people who are already employed.⊕

## 5. Relaxed Entry Qualifications

The target group is well defined for the programmes run by the University as demonstrated in the eligibilities criteria for admission in each programme as shown in Table 2.

**Table 2.** Relaxed Entry Qualifications

Sl. No.	Programme	Formal Qualifications	Relaxed Qualifications for Working People
1	DLIS	12th Class or BAP/BCP/BCCP or equivalent	8th Class pass with 5 years experience in any district/public/academic/special library
2	BLIS	<ul style="list-style-type: none"> <li>Graduate with 50% or Master's degree in any discipline</li> <li>Bachelor's degree in professional subjects</li> </ul>	<ul style="list-style-type: none"> <li>Bachelor degree with Diploma in Library and Information Science</li> <li>Graduate with 2 years experience in a library and information centre</li> </ul>
3	MLIS	Bachelor degree in Library and Information Sc.	
4	CPDL	MLIS or equivalent qualification in Library and Information Sc.	BLIS with three years working experience in a computerised library

The LIS education aims at giving an understanding of the philosophical basis of librarianship, making aware of library activities, procedures and services, developing skills information resources acquisition, processing, retrieval and dissemination, and sharing, and offering an insight for using ICT for the larger benefit of users and the organisation. LIS curriculum developed by the university addresses such concerns, and efforts are being made to update these being available online for public use.

## 6. Serving Diverse Population

The university intends to reach to every family in the state and has adopted the slogan 'We have a programme for everyone'. It has a diverse base of learners, male and female, young, old-age and adults, employed and unemployed, people having different vocations, housewives, rural and urban people, etc. Through LIS Programmes, the University has been successful in meeting out its social responsibilities through opening up avenues for backward classes, working professionals, housewives, and rural masses as found with data for the years 2013-2016. Following key points supports such notion:

- The number of female learners remains above 40% in all the programmes of LIS,
- Students from rural areas enthusiastically take admission in LIS programmes, and
- Student intake for the reserved class is very high in all the library and information science programmes except CPDL. The students admitted during last four years from reserved category remained above 65%.

⊕ Nomenclature of various courses (papers) in LIS programmes is annexed [annexure -1].

Above figures substantiate that Open University system is meeting the demands of diverse groups which have traditionally been deprived access to higher education.

## 7. UGC Emphasizing on use of ICT

University Grants Commission (UGC) is the national regulatory authority for higher educational institutions in the country. The UGC has been emphasising the need to employ technologies for making the system learner-centric. The recent announcement for admission to the MOOCs and transfer of credit are changing higher education in the country. The UGC is set to launch more than 2000 MOOCs in more than 70 subjects and this has become a reality. Apart from this the video repository of the lectures for graduate and post-graduate learners, availability of free content for graduate and post-graduate students on the ePGP portal and that too as Open Education Resources (OER) are major developments. The OER policy allows using content that already exists by all educational institutions. The UGC has taken many decisions for employing ICT in higher education in a big way, which include: Choice Based Credit System; MOOC (to the extent of 20% of total credits of the programme) on the portal [www.swayam.gov.in](http://www.swayam.gov.in); online admission process; open learning content in 77 subjects at the ePGPathshala, etc. These developments indicate increasing role of ICT in the higher education system of the country for greater transparency, equity of access, etc.

## 8. Innovative uses of ICT at VMOU

This study is about the innovative uses of ICT for delivery of distance education in LIS at Vardhman Mahaveer Open University, Kota (VMOU). ICT is used both for providing learner support in terms of availability of programme information and content on the website for providing access to learners through Oneview; and Using Moodle for content delivery in Hindi and English in the CPDL Programme.

## 9. Programme Related Information

Information about the programme, eligibility, tenure, fee, medium, courses, examination pattern, etc. is also available online when the learner looks for the programme information on the link provided (Figure 1).

Apart from programme and course information free full text material is available online, so that the prospective learner can go through the course material and have more information about each course.

## 10. Admission Online

The learner must take admission online through the admission link on the webpage where she goes through the instructions related to applying online. The learner

chooses the programme and selects the study/ regional centre/ examination centre and fills up the personal information, submits documents and pays fee online (which can be done via net banking, credit card or e-mitra. E-mitra ([http://www.emitra.gov.in/#\\_](http://www.emitra.gov.in/#_)), which has a network of thousands of kiosk as collection/service centres spread all over the state of Rajasthan and offers fee collection facilities for public utilities). As soon as the learner submits the form he/she gets a text message (SMS) indicating the application number using which he/she can track the status of admission, documents verification, etc. The learner can also submit a query online.

## 11. Student's Oneview

As soon as the learner is allocated scholar no., this information reaches the Material Production and Distribution Division of the university to initiate distribution of course material to the learner. The learner can track the progress of the process of material delivery online both on the website of the post office and VMOU through Oneview by logging in using scholar number and date of birth (Figure 2).

Oneview is an important e-facility for learners of the university where learner's personal information, address, mobile no., e-mail address, scholar no., validity period for the programme, etc. are given. The learner can change mobile no, examination centre, etc. The learners can find the material/information in Table 3.

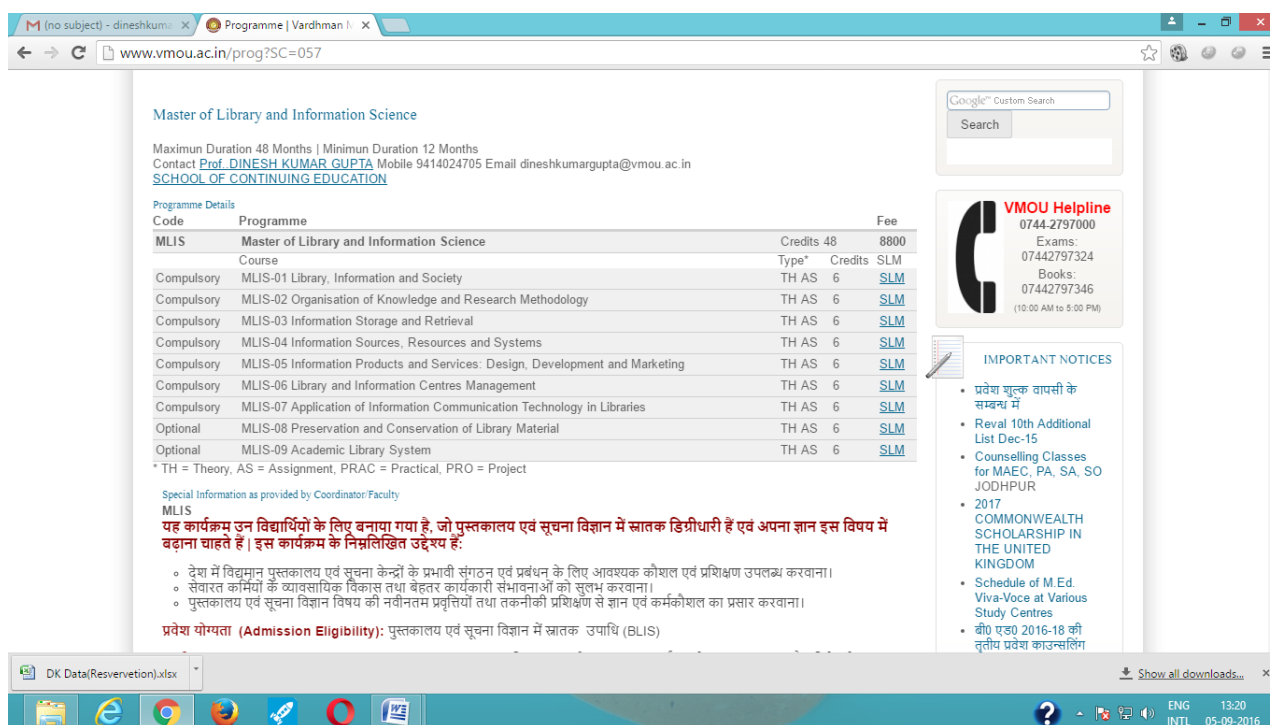


Figure 1. Programme Related Information.

The screenshot shows the 'छात्र सूचना प्रणाली' (Student Information System) interface. Key sections include:

- छात्र सूचना प्रणाली**: Student registration details for NANDITA BHARGAVA, including course details (Master of Library and Information Science) and regional center information (Kota).
- छात्र विवरण**: Personal details of the student, including name, parents' names, address, and contact information.
- प्रवेश विवरण**: Admission details and status.
- अध्ययन सामग्री प्रेषण विवरण**: A table showing the dispatch status of study materials for various courses (MLIS-01 to MLIS-07).

कार्यक्रम कोड	कोर्स कूट	इकाई	मात्रा	माध्यम	प्रेषण संख्या	प्रेषण दिनांक	EPP DISPATCH NO.	EPP DISPATCH DATE	स्थिति
MLIS	MLIS-01	सेट	1	क्षेत्रीय केंद्र द्वारा			2871	28/11/2014	प्रेषित
MLIS	MLIS-02	सेट	1	क्षेत्रीय केंद्र द्वारा			2871	28/11/2014	प्रेषित
MLIS	MLIS-03	सेट	1	क्षेत्रीय केंद्र द्वारा			2871	28/11/2014	प्रेषित
MLIS	MLIS-04	सेट	1	क्षेत्रीय केंद्र द्वारा			2871	28/11/2014	प्रेषित
MLIS	MLIS-05	सेट	1	क्षेत्रीय केंद्र द्वारा			2871	28/11/2014	प्रेषित
MLIS	MLIS-06	सेट	1	क्षेत्रीय केंद्र द्वारा			2871	28/11/2014	प्रेषित
MLIS	MLIS-07	सेट	1	क्षेत्रीय केंद्र द्वारा			2871	28/11/2014	प्रेषित

Figure 2. Student's Oneview.

Table 3. learners material/information in Oneview

Sl. No.	Information Heading	Information Covered	Full Text	Remark
1.	Courses registration detail	Course material; question bank	Yes	e-Course material of the courses (papers) opted
2.	Assignment work position	Whether and on which date it was submitted		Information only
3.	Study material dispatch position	Whether handed over personally, or by post. If no action is made, contact no. is provided		Information related to date of dispatch, speed post receipt no, date of delivery
4.	Examination related detail	Learner's progress of evaluation, date of dispatch of mark sheet		Information about marks obtained, successful / unsuccessful in each course, total marks obtained, division, year of exam, etc.
5.	Important information	programme related information and course content, information, examination papers,	Yes	Any Document and information as submitted by the Programme Coordinator
6.	Downloads	Identity Card; Change in name, address, course, regional/ study centre forms; old question papers; academic calendar	Yes	Any paper as uploaded by the EMPC for all students of the Programme
7.	Student Grievances Redressal	Grievance reaches to the concern and shown on the portal		Learners can put requires on mobile or online or through e-mail/SMS
8.	Related video	Learner can see the videos related to the programme	Yes	Videos are available with other relevant courses / information
9.	My online applications	Learners find all online applications for exams, etc. at one place		It's easier for the learners and others to track the applications they have made
10.	Degree verification	Once degree is issued can be verified and date of dispatch with postal detail is provided.		Degree verification is possible.

The entire life cycle is managed through this integrated online system once the learner is enrolled for a programme.

## 12. Programme on Digital Libraries

### 12.1 Design of the Programme

The Certificate Programme on Digital Library was designed keeping in mind the developments in the LIS domain. This programme is an introductory one and initiates LIS professionals to digital library. This programme is also being helpful for the LIS professionals seeking new roles in managing digital information.

The programme is structured into three courses:

- *Introduction to Digital Libraries:* This course gives a basic understanding of the Digital Library (DL) concept; various aspects of DL; functionality and technicalities, management of the DL; and various issues such as legal, ethical, access, preservation, etc.,
- *Creation and Management of Digital Objects:* This Course is about the management of digital objects and metadata standards, etc., and
- *Design and Development of Digital Libraries:* This is a very important course of the Programme which trains the learner to create a digital library using different digital library software, such as GSDL and DSpace.

### 12.2 Developmental Process

There have been some changes in the programme since

its inception:

Initially it was suggested to implement the programme using open educational resources; but, the required course content could not be found; as such some in-house videos were developed along with small units with extended link using authoring tool 'exe' and imported into MOODLE. Learners could login using a password to access the content in MOODLE. FAO also provided free CDs of the iMark course on *Digital Libraries, Repositories and Documents* for free distribution amongst learners of the programme. A one-week compulsory training by the CSIR-NISCAIR at Jaipur and/ or Kota remained a part of the programme.

Learners had difficulty with the language of the material and it was decided to prepare course material in Hindi for the benefit of learners. This was a difficult task; however, the department prepared the material and made it available on the platform along with the English content and iMark CD (<http://www.fao.org/elearning/#/elc/en/course/H>). The online content is being continuously updated and the material in Hindi is also available. This approach of making course material available in both English and Hindi was found to help the learner understand the digital library concept.

### 12.3 Delivery

The delivery mechanism is a combination of making the content available on the open source LMS MOODLE and face to face training offered by CSIR-NISCAIR to the learners. The use of MOODLE in delivering content offers added value to learners (Figure 3).

This is the first and only programme of the University

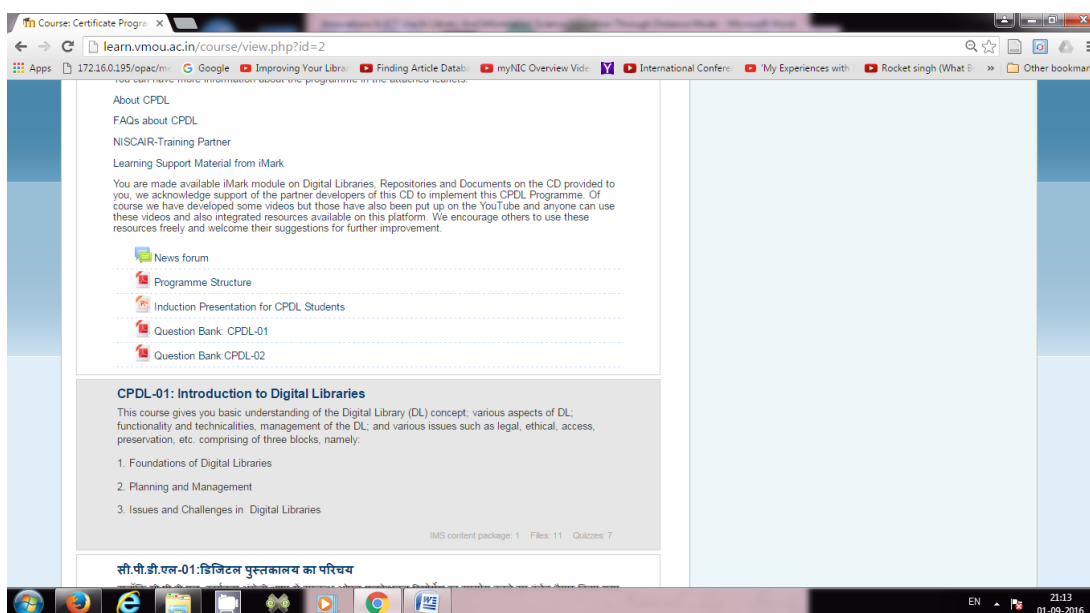


Figure 3. MOODLE in delivering content offers.

offered through LMS to partly deliver the content. Apart from course material, learners have access to glossary, additional resources, discussions, quizzes which are not available in other programmes run by the Department. These items will help the learners to understand the subject in a better way.

### 13. Conclusion

VMOU, Kota offers many programmes in different streams including LIS. The university offers programmes to large audience of the society not reached by the traditional system. Interestingly there are more female learners than male learners and the number of students belonging to reserved categories is also generally higher than the prescribed percentage. These clearly suggest the value of utilising technology in enhancing the reach of higher education as learners residing in rural and far away areas have equal opportunity. They can even interact with peer

group, teachers and counsellors with the available media of communication. A major challenge is to overcome the resistance of learners with a traditional mindset and belief only in print format. The university should also make efforts to orient them in the use of technologies. Technological innovations for both teaching and learning are becoming increasingly necessary. The flexibility with regard to admission criteria, learning at a convenient pace, continuous learner support through ICT are the key factors attracting learners to open and distance learning.

### 14. References/ links

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#### Annexure – 1

#### **Nomenclature of Courses (Papers) of Library and Information Science Programmes**

S.N	DLIS	BLIS	MLIS
1	Library Classification and Cataloguing-Theory	Library and Society	Library, Information and Society
2	Library Classification-Practical	Library Classification and Cataloguing-Theory	Organisation of Knowledge and Research Methodology
3	Library Cataloguing-Practical	Library Classification-Practical	Information Storage and Retrieval
4	Library Routine and Reference Work	Library Cataloguing-Practical	Information Sources, Resources and Systems
5	School and Public Libraries	Library Management	Information Products and Services: Design, Development and Marketing
6	Information Services and Computer Applications	Information Sources	Library and Information Centres Management
7	-	Reference and Information Services	Application of Information Communication Technology in Libraries
8	-	Computer : Basics and Applications	Preservation and Conservation of Library Material (Optional -1) Academic Library System (Optional -2)