

Open and Distance Learning System with Special Reference to Library and Information Science Education in India

**Anamika Das, Assistant professor,
Netaji Subhas Open University, Kolkata, West Bengal**

Abstract

Acceptability to open and distance learning system is increasing day-by-day universally due to the rise in gross enrolment ration and limited intake capacity of the on-campus conventional mode of education. Library and information science education is a practice-oriented educational and training programme. Due to intensifying requirement of library and information professionals in the Information-service based job market, a substantial growth in the number of aspiring students in LIS education is being noticed. Again, in-service information professionals need in-service training to keep themselves up-to-date in their professional fields. Such issues like a large number of enrolment and offering in-service training can well be met by flexible mode ODL system. In this paper, it has been studied how LIS education is being offered to meet the growing demand of information professional in the country. The historical evolution of ODL system in the country has been discussed at the first, and then the status of LIS education in general and through ODL mode is presented.

Keywords: *ODL System- India; Distance Education Policies- India; National Education Policy, 2020- India; LIS distance education- India.*

1. Introduction

Gross Enrolment Ratio (GER) figures in higher education have always been an area of concern. The ODL system has been emerging as a very prolific alternative system of dispersing education (MacDonald, 2005; Ghafri, 2013). It intends to serve the masses at a low cost and reach out to the people.

Library and Information Science (LIS) as an educational and training programme is generally delivered through university departments in India. There is a need of direct contact between teacher and students, since LIS education involves various practical aspects. The growth in number of students in a developing country like India is quite substantial. Moreover, LIS professionals aspire in-service training to keep themselves up-to-date in their professional fields. Gradually, it is felt that to cater the growing need of aspiring students and trainees of LIS service, the existing infrastructure of classroom/ conventional education may not be sufficient. Accordingly, LIS education is delivered through open and distance learning (ODL) mode also. This chapter is aimed at describing the conceptual issues regarding the present status of LIS education through ODL mode in India. Although, the main emphasis is

on LIS education through ODL system in India, it is tried to touch upon the concept on a holistic basis. The rest of the chapter is designed as follows.

2. Historical Background and Evolution of ODL System in India

In India, the demand for an alternative mode of higher education was realised during the Third Five-Year Plan (1961–1966) period (Panda, 2006) and ODL system in the form of correspondence course was adopted in the university level in 1962. The scenario became more obvious since 1980s, when the ODL institutes began to be established.

India has a history of ODL system of about five decades. The Government of India, since the time of Independence in 1947 has undertaken the development and expansion of education as the key to development and as a vehicle for the transmission of the new value system to live new ways of life, thought and works. The University Grants Commission (UGC) suggested in its report for 1956-1960 that, proposals for evening colleges, correspondence courses and award of external degrees should be considered. To meet the demand for higher education the Planning Commission in its Third Five-Year Plan (1961–1966) formed an Expert Committee under the chairmanship of Dr. D.S. Kothari, the then Chairman of UGC, to look into the proposal of introducing correspondence courses. The Committee recommended the introduction of Correspondence Education at the University level. Hence, distance education in the form of correspondence course was begun as an alternative mode with the foundation of School of Correspondence Courses and Continuing Education in the University of Delhi in 1962 (Panda, 2006).

Gradually, this alternative mode of catering education started flourishing and present-day's ODL system has revolutionised by subsequent transformation through different phases. The period 1962 to early 1980s was the correspondence education phase. The 1970s saw a spurt in the growth of correspondence education. The 1980s and 1990s is referred to the Open University Phase (Panda, 2006). The National Policy on Education (NPE), 1986 under the Ministry of Human Resource Development promoted Open University system as the way to “an instrument of democratising education” (ODL what why and how, 2014). Several state open and distance universities, along with the national one namely Indira Gandhi National Open University (IGNOU) were established during this period. Dr. B. R. Ambedkar Open University (BRAOU) (formerly known as Andhra Pradesh Open University), established in 1982 is the first Open University in India. IGNOU was established in 1985. The latter part of 1990s witnessed a number of open and distance education universities in single-mode and correspondence courses in dual-mode when distance educations are being growing spontaneously throughout the country. At present there are one National Open and Distance University, i.e., IGNOU and fourteen State Open and Distance education Universities as detailed in Table 4.1.

Table 1: Emergence of State Open Universities in India

Sl. No.	Name of the State Open Universities	Year of Establishment
1.	Indira Gandhi National Open University (IGNOU), New Delhi	1985
2.	DR. B.R. Ambedkar Open University (BRAOU), Hyderabad, Andhra Pradesh	1982
3.	Yashwantrao Chavan Maharashtra Open University (YCMOU), Nashik, Maharashtra	1983
4.	Nalanda Open University (NOU), Patna, Bihar	1987 by an ordinance, Government of Bihar; 1995 Nalanda Open University Act
5.	Vardhman Mahaveer Open University (VMOU), Kota, Rajasthan	1987
6.	Madhya Pradesh Bhoj Open University (MPBOU), BHOPAL, M.P.	1991
7.	DR. Babasaheb Ambedkar Open University (BAOU), Ahmedabad, Gujarat	1994
8.	Karnataka State Open University (KSOU), Mysore, Karnataka	1996
9.	Netaji Subhas Open University (NSOU), Kolkata, West Bengal	1997
10.	Uttar Pradesh Rajarshi Tandon Open University (UPRTOU), ALLAHABAD, U.P.	1999
11.	Tamil Nadu Open University (TNOU), Chennai, Tamil Nadu	2002
12.	PT. Sunderlal Sharma Open University (PSSOU), Bilaspur, Chhattisgarh	2005
13.	K. K. Handique State Open University, Guwahati, Assam (KKHSOU)	2005
14.	Uttarakhand Open University, Haldwani, (Nainital), Uttarakhand	2006
15.	Odisha State Open University, Odisha (OSOU)	2016

In addition to the National-level and State-level Open Universities, correspondence and distance education courses in several conventional universities under the patronage of University Grants Commission-Distance Education Bureau (UGC-DEB) [erstwhile Distance Education Council (DEC)] are also running in the country.

Thus, in India there are four types of institutions offering academic programmes through distance mode:

1. National Open University;
2. State Open Universities;
3. Directorates of Distance Education (DDEs) functioning under conventional universities i.e. dual-mode universities; and
4. Private professional institutes.

UGC-DEB (India, University Grants Commission, 2014) reports that there are about 250 distance education institutions in the dual mode universities and institutions which are offering programmes through distance mode. There are about 22 lakhs students who have enrolled in the DDEs of dual mode universities. .

The Financial Express (May 4, 2012) reports that 'The Open Distance Learning (ODL) system, also known as Distance Education (DE) system, has evolved as one of the effective modes of education and training as the overall annual growth in enrolment between 1975-76 and 2008-09 was 5.6% for the conventional system, while it was 16.3% in the ODL system'. This also shows that the contribution of ODL to gross enrolment ratio (GER) in graduation level has risen to about 22%. It has also been reported that the percentage of students enrolled for post-graduate general programme in conventional system is 10.92 %, while the same in the ODL system is in the range 15-20% in SOUs and around 30% in DEIs.

3. Policies and Recommendations on Distance Education in India

The delivery of ODL education hinges on two aspects- quality of host institutions and the regulatory framework that facilitates operations of such institution. In India the Central Government plays a pivotal role in framing policies relating to education (Education being a matter of Concurrent List). Accordingly, we discuss extant regulations relating to discuss higher education, more precisely higher education through distance mode, in view with our present context, including their evolution in the following sections

3.1. Indira Gandhi National Open University Act, 1985 and Origin and functionalities of Distance Education Council (DEC)

To regulate the promotion and coordination of ODL system in India Distance Education Council (DEC) was founded in 1991 by the Indira Gandhi National Open University Act, 1985. It started operating in 1992 as the apex body for ODL system to regulate the promotion and maintenance of the standards of the distance education in the country. The Vice Chancellor of IGNOU was the *ex officio* Chairman of the DEC. It remained functional until the Distance Education Bureau (DEB) was founded by the University Grants Commission (UGC) to take over DEC to regulate the ODL System in India in June 2013. The origin of DEB may be traced into the recommendation of the Madhava Menon Committee.

3.2. Madhava Menon Committee and Origin of DEB

The Ministry of Human Resource Development, Government of India (The MHRD, GOI) constituted a Committee under the Chairmanship of Professor Madhava Menon to

frame regulations for maintenance of standards of teaching-learning process through distance mode in August, 2010. The DEB under UGC as the regulatory authority of ODL system in the country later formed as per the recommendation of this Committee. Finally, the DEC was dissolved in May 2013. Before the birth of DEB in June 2013, an independent body namely Distance Education Council of India (DCMI) was created by the Parliament for the interim period.

The National Policy on Education, 1986 (as revised in 1992) fostered for establishing State Open Universities (SOUs). DEC took the initiatives and consequently a number of SOUs has been established throughout the country.

3.3. Open and distance learning in draft national education policy of 2016

The MHRD, GOI while preparing the Draft National Education Policy 2016 has recognised and accepted Open Distance Learning (ODL) as an important mode for achieving enhanced access to education, developing skills, capacity building, training, employability and life-long learning. It (ODL) has contributed significantly to the development of education in India, with over 4 million students enrolled under ODL. There are several variants of providing distance education courses which are being offered by both public and private institutions. These provide avenues to those students who are not able to leave their jobs or are not able to attend regular classes due to any other reason. At present, Open and Distance Learning system in the country is provided mainly by Indira Gandhi National Open University (IGNOU) and State Open Universities in the higher education sector, and National Institute of Open Schooling (NIOS) is the main provider in the field of school education. However, there are issues of quality in distance education, which call for reforming the ODL system. The performance of ODL system over the period is also an involved policy issue.

In the next section, we deal with LIS education which has some distinct features and occupies an important position in ODL system.

3.4. University Grants Commission (Open and Distance Learning) Regulations, 2017

University Grants Commission notified the University Grants Commission (Open and Distance Learning) Regulations, 2017 in the official Gazette on 23.06.2017. Subsequently, First, Second, Third and Fourth amendments in the UGC (Open and Distance Learning) Regulations, 2017 were notified in the official Gazette on 11.10.2017, 06.02.2018, 06.09.2018 and 06.06.2019 respectively. These Regulations lay down the minimum standards of instruction for the grant of degree at the undergraduate and post-graduate levels, through Open and Distance Learning mode. The regulations cover various aspects dealt with for running ODL programmes in the country, viz. recognition of higher education (HE) institutions for ODL Programmes, Maintenance of infrastructural, academic and other quality standards by those institutions, guidelines for admissions, examinations and learner support, guidelines for Assessment, Accreditation, Audit, Inspection and Monitoring the ODL Programmes, etc.

3.5. National Education Policy 2020, Ministry of Human Resource Development, Government of India

NEP, 2020 emphasises that a number of initiatives will be taken to ensure optimal learning environments are created that are engaging and supportive, and enable all students to succeed. All institutions and faculty will have the autonomy to innovate on matters of curriculum, pedagogy, and assessment within a broad framework of higher education qualifications that ensures consistency across institutions and programmes and across the ODL, online, and the traditional 'in-class' modes. The Policy ensures that Higher Education Institutions will have the option to run Open Distance Learning (ODL) and online programmes, provided they are accredited to do so. Norms, standards, and guidelines for systemic development, regulation, and accreditation of ODL will be prepared, and a framework for quality of ODL that will be recommendatory for all HEIs will be developed. All programmes, courses, curricula, and pedagogy across subjects, including those in-class, online, and in ODL modes as well as student support will aim to achieve global standards of quality.

3.6. University Grants Commission (Open and Distance Learning Programmes and Online Programmes) Regulations, 2020

These regulations lay down the minimum standards of instruction for the grant of degrees at the undergraduate and post graduate levels and grant of post graduate diploma, through Open and Distance Learning mode and online mode.

These regulations put forth directive for recognition process for offering programmes under open and distance learning (ODL) mode and online mode, maintenance of infrastructural, academic and other quality standards by higher educational institutions, admissions, examinations and learner support, assessment, accreditation, audit, inspection and monitoring, provision for Centre For Internal Quality Assurance (CIQA), etc. According to these regulations, any Higher Educational Institution willing to apply for recognition by the regulatory authority for offering programmes through the Open and Distance Learning mode,

- i. is required to be accredited by the National Assessment and Accreditation Council (NAAC) with minimum score of 3.01 on a 4-point scale, or,
- ii. have to be ranked in top-100 in University category of National Institutional Ranking Framework, at least once in two preceding cycles (at the time of application)

UGC (ODL) Regulations, 2017 may be regarded as a stepping stone towards introducing new generation of ODL systems in India; and thereafter UGC (ODL Programmes and Online Programmes) Regulations, 2020 have further strengthen ODL system and have enhanced the blend of ODL and Online mode of teaching –learning system. However NEP, 2020 has given an impetus towards implementing UGC (ODL Programmes and Online Programmes) Regulations, 2020.

4. LIS EDUCATION THROUGH ODL MODE IN INDIA

Although, delivery of LIS education through distance mode is the main focus area, it is considered that a brief overview of LIS education may be a good point of beginning.

4.1. LIS Education in India

The education of library science in India was started in the year 1911 under the patronage of Maharaja Sayajirao III Gaekwad of Baroda (1862-1939). Mr. W. A. Borden (1853-1931), an American disciple of Melvil Dewey was appointed to train the employees of the library system of the erstwhile Baroda State through a short-term training programme in library science at Baroda (Panigrahi, 2010).

Before independence short-term training programmes, certificate courses, and PG Diploma courses were started growing. Andhra University (1935), Madras University (1937), Banaras Hindu University (1941), University of Bombay (1943) and University of Calcutta (1945) were offering diploma courses and Delhi University (1947) was offering Postgraduate diploma course in library science.

After Independence the stimulus for the growth and development of libraries and library science education have started in the country. University of Delhi was the first to conceive M.Lib.I.Sc and Ph.D. degrees in addition to PG Diploma in 1949. With the commencement of the First Five-Year Plan in 1951 the effort in progress and extension of education, scientific research and programme of socioeconomic development started in the Independent India. As a result of these developments, Library and Information Science education like all other higher education sectors started sprawling. Over a period of time, LIS education has grown and developed into a full-fledged discipline in various levels of courses. Human Resources Management in Libraries and Information Centres are being met by departments, institutions, library associations and specialised institutions.

From the survey of extant literature, it is found that at present approximately one hundred seventy-five (175) LIS departments affiliated to universities and colleges are offering LIS education in regular mode (Yadav & Gohain, 2015). Yadav and Gohain (2015) give a view on recent trends and development of LIS education in India. According to them, around 234 institutions including universities, colleges and other special institutions offer library and information science education courses in regular and distance mode. Asundi & Karisiddappa (2007) shows LIS courses are offered in different levels in India. All the LIS courses prevailing in the country are grouped into these levels as presented in the in the Table 2.

Table 2: State of LIS education in India

Level of programme	Name of the Programme	No. of Institute offering the programmes	Total no. of programmes in each level
Certificate	Certificate in Library and Information Science	18	18
Diploma	Diploma in Library and Information Science	18	18
P.G. Diploma	PGDLIM: Post-Graduate Diploma in Library and Information Management	1	4
	PGDILIT: Post-Graduate Diploma in Library and Information Technology	1	
	PGDLAN: Post-Graduate Diploma in Library Automation and Networking	2	
Bachelor's	B.Lib.I.Sc.: Bachelor of Library and Information Science	158	161
	BA (LIS): Bachelor of Arts (Library and Information Science);	2	
	BSc (LIS): Bachelor of Science (Library and Information Science)	1	
Master's	M.Lib.I.Sc.: Master of Library and Information Science;	160	168
	MSc (LIS): Master of Science in Library and Information Science;	6	
	MIS: Master of Information Science;	1	
	M.Tech: Master of Technology in Library and Information Science	1	
Research	M.Phil: Master of Philosophy;	48	145
	Ph.D: Doctor of Philosophy.	96	
	D. Litt.: Doctor of Letters (Post-Doctoral)	1	

(Source: ugc.ac.in; Accessed in 2018; Result computed)

It is evident from the above data that 158 institutes offer B.Lib.I.Sc. (or BLIS) programmes and 160 institutes offer M.Lib.I.Sc. (or MLIS) Programmes, including both regular and distance mode. In our present study we limit our area to the instructional materials of B.Lib.I.Sc. and M.Lib.I.Sc. programmes through ODL mode in India. Therefore, having an overview of present state of LIS education in India, we focus on the LIS distance education in the country in the next section.

4.2. LIS Distance Education in India

To meet the demand of in-service training and to fill the gap of inadequate number of trained professionals in the field of library and information service ODL system in India started offering LIS courses in distance mode. LIS education through distance mode was first started in Andhra Pradesh Open University (APOU) (which has been renamed as Dr. B. R.

Ambedkar Open University (BRAOU) in 1991) with the launch of B.Lib.I.Sc. course in 1984. Later IGNOU started B.Lib.I.Sc. in 1989 and M.Lib.I.Sc. in 1994, the first M.Lib.I.Sc. programme through distance mode in India. BRAOU (erstwhile APOU) started M.Lib.I.Sc. programme in 1998. As per the data collected and estimated from UGC website (November 2016), LIS distance education in various levels is offered by sixty universities in the country. Among these are included one National Open University ten out of fourteen State Open Universities, and the rests are Directorate of Distance Education (DEIs/DDEs) under the conventional universities.

UGC provided a detailed list of institutions imparting LIS courses in distance mode, before 2018-19 Session. After notification of the UGC (ODL) Regulations, 2017, programme-wise recognition has been accorded to the HEIs from academic session 2018-19 and 2019-20 and onwards. Therefore, in recent times Institution-wise and programme-wise recognition of distance education programmes varies from year to year. However, for the sake of the exhaustive picture of LIS distance education in the country, we have adopted the detailed list from UGC Website (collected in April, 2018) and computed a State-wise distribution of LIS distance education. It is presented in Table 3.

Table 3: State-wise distribution of LIS distance education

Sl. No.	Name of State And UT	B.Lib.I.Sc.	M.Lib.I.Sc.	Cert.Lib.I.Sc.	Dip.Lib.I.Sc.	PGDLIS	Total no of ODL
1	Andhra Pradesh	4	4				5
2	Bihar	5	4	1			5
3	Chandigarh (UT)	1				1 (PGDLAN)	1
4	Chhatisgarh	1					1
5	Delhi	1	1			1 (PGDLAN)	1
6	Gujarat	1					1
7	Haryana	1	2		1		3
8	Karnataka	2	2	1	1	1 (PGDLIS)	3
9	Kerala	2	1				2
10	Madhya Pradesh	6	5				6
11	Maharashtra	3	3			1 (PGDLIM)	4
12	Nagaland	1	1				1
13	Orissa	3	2			1 (PGDLAN)	3
14	Puducherry (UT)	1					1
15	Punjab	2	2		1		
16	Rajasthan	2	2	1	1		2

17	Sikkim	1	2	1			2
18	Tamil Nadu	11	11 + (M.Lib.I.Sc. integrated)1	6		1(PGDLAN)	11
19	Telangana	1	1				1
20	Tripura		1				1
21	Uttar Pradesh	2	2				2
22	Uttar Pradesh	1	1				1
23	West Bengal	1	1				1
Total =		53	37	10	4	6	58

(Note: The ODL institutes have started offering Ph.D. Programmes under Regular Mode as per vide F.No. 2-1/2017 (DEB-III/DEB-IV) on 19.05.2017, UGC (Minimum Standards and Procedure for Award of M.Phil./Ph.D. Degrees) Regulations. But as only Distance courses are considered in this paper, the M.Phil. and Ph.D. programmes offered are not counted)

Out of the fifteen Open Universities in the country, as presented in Table 1, ten universities offer B.Lib.I.Sc. programme and nine universities offer M.Lib.I.Sc. programme (Table 4).

Table 4: Open Universities offering B.Lib.I.Sc./M.Lib.I.Sc Programmes in Distance Mode

Sl. No.	Name of the University	B.Lib.I.Sc./M.Lib.I.Sc Programmes in Distance Mode
1.	Dr. B. R. Ambedkar Open University	B.Lib.I.Sc., M.Lib.I.Sc.
2.	Indira Gandhi National Open Univ.	B.Lib.I.Sc., M.Lib.I.Sc.,
3.	Karnataka State Open University	B.Lib.I.Sc., M.Lib.I.Sc.
4.	M. P. Bhoj (Open) University	B.Lib.I.Sc., M.Lib.I.Sc.
5.	Nalanda Open University	B.Lib.I.Sc., M.Lib.I.Sc.
6.	Pt. Sunderlal Sharma Open University	B.Lib.I.Sc.
7.	Vardhman Mahavir Open University	B.Lib.I.Sc., M.Lib.I.Sc.
8.	Y.C.Maharashtra Open University	B.Lib.I.Sc., M.Lib.I.Sc.
9.	U. P. Rajarshi Tandon Open University	B.Lib.I.Sc., M.Lib.I.Sc.
10.	Netaji Subhas Open University	B.Lib.I.Sc., M.Lib.I.Sc.

4.3 Language of Delivery in LIS Courses through Distance Education System in India

India is a land of diversified language and culture. Most the learners are comfortable to study in their vernacular. But English as a common language is the major language for delivering LIS courses through distance education system in the country. Yet some of the institutions offer LIS programmes in local languages depending upon local demands. Table 5 presents Language-based distribution of LIS distance education in India. It has been found

from the online information (either from websites or through telephone) that the LIS distance education in northern part of the country offers their instructional materials mostly in Hindi.

Table 5: Language of offering SLMs of LIS education through distance mode in India (Source: www.ugc.ac.in Accessed in 2018; Result computed)

Language-based distribution of LIS distance education in India			
	Language of SLMs	M.Lib.I.Sc.	B.Lib.I.Sc.
a.	only in English	26	26
b.	Both in English and Hindi/ Regional Language	8	10
X	Total in English (X=a+b)	34	36
c.	Only in Hindi/ Regional Language	9	12
Y	Total in Hindi/ regional language (Y= b+c)	17	22
d.	Data not available (Both B.Lib.I.Sc. and M.Lib.I.Sc. together)	9	

4.3. Curriculum in LIS Distance Education in India

During the development phase of LIS distance education, it has been felt that uniformity of curriculum is needed. Accordingly, model curriculum was developed and offered by the Curriculum Development Committee (CDC) under University Grants Commission under the chairmanship of Prof. Karisidappa in 2001 (www.ugc.ac.in/oldpdf/modelcurriculum/lib_info_science.pdf). The ODL systems in the country conceive their own syllabi both for B.Lib.I.Sc. and M.Lib.I.Sc. courses, or integrated M.Lib.I.Sc. courses following the modules recommended in this model curriculum.

But the reality of the situation of the LIS profession has a bit changed now. The shape of the information service profiles and their tools and techniques have been changed considerably. To cope up with this changed situation in the profession, the LIS departments in the conventional universities have adopted new and emerging concepts and components in their syllabi. The ODL systems also have initiated very recently to incorporate the new trend into their syllabus. IGNOU has changed the syllabus in B.Lib.I.Sc. level in 2014. A sample study of Self Learning Materials (SLMs) of B.Lib.I.Sc. and B.Lib.I.Sc. courses collected from ODL institutes reveals that most of the distance institutes have initiated the revision of their syllabi and the processes of developing SLMs according to their new syllabi have also been initiated in recent times. An updated model curriculum incorporating the scope for training in new and emerging skills and concepts in the field of LIS education is being incorporated. However, the process has been slowed down due to COVID 19 pandemic situation for nearly two years. With such a situation the learners from ODL system are confronting immense challenges in the job market.

4.4. Pedagogy in LIS Distance Education

To overcome such difficulties in confronting the job market, the instructional method is proposed to be updated. The learning contents have been started to be updated, and the mode of delivery has been updated to blended mode including both physical contact

programmes, printed learning contents and online mode delivery of both contact programmes and learning content.

But whatever may be the mode of instructional system, the contents delivered through Self Learning Materials (SLMs) or Self Instructional Materials (SIMs) should follow logical structure as prescribed by existing Instructional Design theories to simplify the self-study of distant learners. The ODL institutes should also offer some supporting mechanisms to enhance the self-learning method, so that the distant learners can overcome their learning difficulties, as well as keep themselves updated. They may be offered support services, like counselling, contact programmes, tutorials, supplementary A/V materials, workshops, hands-on practices, discussion groups, online resources, etc.

5. Conclusion

In this chapter, conceptual issues relating to distance education, open learning, ODL system, etc are discussed. This chapter also traces historical evolution of distance education from a global perspective. Since the study aims at appraising SLMs on LIS, the present state of LIS education in India is analysed in detail. Such an analysis is aimed at facilitating appropriate sample selection for empirical study. The regulatory framework of distance education is also discussed in brief. In the next chapter we give an account of role of ODL study materials in producing skilled LIS professionals for the betterment of science.

References

1. Asundi, A.Y. & C. R., Karisiddappa. (2007). Library and information science education in India: international perspectives with special reference to developing countries. *DESIDOC Journal of Library & Information Technology*. 27. <10.14429/djlit.27.2.127>. Retrieved on 10.01.2018
2. Dr. B. R. Ambedkar Open University. Retrieved from <https://braou.ac.in> on 14.05.2018.
3. Dr. Babasaheb Ambedkar Open University. Retrieved from <<http://www.baou.edu.in>> on 04.05.2018.
4. (The) Financial Express (May 4, 2012). Retrieved from <<http://epaper.financialexpress.com/36102/Hyderabad/04-May-2012#page/4/1>> on 25.08.2016.
5. Ghafri, T.K. (2013). Self-directed learning in asynchronous courses: strategies for effective design and development. 13th International Educational Technology Conference. *Procedia - Social and Behavioral Sciences*, 103, 807 – 817. <www.sciencedirect.com>.
6. Indira Gandhi National Open University Act, 1985 (No.50 of 1985). (1985). Retrieved from Acts and Rules. Ministry of Human Resource Development, Government of India. <<http://mhrd.gov.in/acts-higher>>
7. Karnataka State Open University Mysore. <<http://ksoumysore.karnataka.gov.in>>
8. Krishna Kanta Handiqui State Open University. <www.kkhsou.in>

9. MacDonald, C. J. & Thompson, T. L. (2005). Structure, content, delivery, service, and outcomes: quality e-Learning in higher education. *International Review of Research in Open and Distance Learning*, 6(2): July, 2005.
10. Madhya Pradesh Bhoj (Open) University. <www.bhojvirtualuniversity.com>
11. Ministry of Human Resource Development, Government of India (2016). National Policy on Education, 2016: Report of the Committee for Evolution of the New Education Policy. Retrieved from <<http://mhrd.gov.in/nep-new>> 06.11.2018.
12. Nalanda Open University. Retrieved from <nalandaopenuniversity.com> on 11.05.2018.
13. Panda, S. (2006). Historical development of DE in India. Retrieved from <<https://www.researchgate.net/publication>> on 17.02.2018.
14. Pandit Sundarlal Sharma (Open) University. Retrieved from <pssou.ac.in> on 11.05.2018.
15. Panigrahi, P. (2010). Library and information sciences education in East and North-East India: retrospect and prospects. *DESIDOC Journal of Library & Information Technology*, 30(5). 32-47. Retrieved from <<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.886.6973&rep=rep1&type=pdf>> on 15.04.2018.
16. Tamil Nadu Open University. Retrieved from <tnou.ac.in> on 15.05.2018
17. University Grants Commission (2014). ODL what why and how (2014). Retrieved from <<https://www.ugc.ac.in/deb/pdf/ODLwhatwhyandhow.pdf>> on 24.04. 2014.
18. University Grants Commission (2014). University Grants Commission: specification of degrees. *The Gazette of India*, July 5, 2014. Registered No. DI(N)—04/0007/2003—05. Published by Authority, GOI: New Delhi.
19. Uttar Pradesh Rajarshi Tandon Open University. Retrieved from www.uprtou.ac.in on 11.05.2018.
20. Vardhman Mahaveer Open University. Retrieved from <vmou.ac.in> on 11.05.2018.
21. Yadav, A. K. S. & Gohain, R. R. Growth and development of LIS education in India. *SRELS Journal of Information Management*, [S.l.], p. 403-414, dec. 2015. ISSN 0976-2477. Retrieved from <<http://www.srels.org/index.php/sjim/article/view/84316>>. Date accessed: 13 Nov. 2019. doi:10.17821/srels/2015/v52i6/84316> On 02.02.18.
22. Yashwantrao Chavan Maharashtra Open University (YCMOU). Retrieved from <ycmou.ac.in> on 11.05.2018.