UDC and its use: a case study of libraries and information centres in Delhi

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ABSTRACT: This paper explores the use of UDC in libraries and information centers of Delhi. The information presented here is part of the larger data set collected by the author while compiling the Delhi libraries web directory. The survey, conducted through library visits and questionnaires, shows that in Delhi there are sixty four libraries using various editions of UDC. These include libraries of Defense Research and Development Organization (DRDO), Council of Scientific and Industrial Research (CSIR), Indian Council of Agricultural Research (ICAR), as well as libraries of the Judiciary system situated in Delhi such as Supreme Courts of India, High Courts of Delhi and Districts courts of Delhi. Some libraries of national importance such as Indian Institute of Technology, National Agricultural Library, National Medical Library, National Science Library, are also using the UDC.

KEYWORDS: UDC use, Delhi Libraries

1. Introduction

Library classifications are fundamental tools for organizing and exploring library collections, helping in collection browsing, items location and in the retrieval of relevant documents. UDC is a general knowledge scheme designed and developed by Paul Outlet (1869-1944) and Henri La Fontaine (1854-1943), first published in French in 1904-1907,[1] which is still regularly maintained to keep pace with the advances of knowledge. UDC is well known in India and is often used in science and technology libraries.

2. Background and purpose

Delhi, the capital of India, is known for having good libraries, documentation centres, information/ library networks and LIS schools. Nowadays, there are 14 university (or the equivalent) libraries, more then 100 college libraries, a network of over 296 academic, special and public libraries and 2,888 school libraries.[2] In Delhi there are also several other libraries of historical/national significance such as the National Science Library, of NISCAIR, the National Medical Library, the National Agricultural Library, of IARI, the National Archives Library, national documentation centres such as the DESIDOC and NASSDOC, the Library of National Museum, the Nehru Memorial Museum and Library, the Parliament Library and the Libraries of national councils such as the ICAR, ICMR, CSIR, AICTE, NCTE, RCI, DCI, ICSSR, ICHR, ICCR, ICPR, DCE, PCI, NCERT, SCERT, MCI, BCI, CCH and CCIM (these professional councils are responsible for the recognition of courses, promotion of professional institutions, providing grants to teaching, research and training in their respective fields, etc.).

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[1] Singh, K. P. (2006) *Universal Decimal Classification: A practical manual*. Department of Correspondence Courses: Punjabi University, Patiala, p. 3

[2] Bhatt, R. K. (2007) *Growth and development of libraries in Delhi*. NACLIN 2007 Souvenir. DELNET: New Delhi, p. 42

The study presented here is part of the research project entitled "Designing & Developing a Web Enabled Directory of Library & Information Centres in Delhi" that included a library survey undertaken in 2007-2008. For the purpose of this paper, data related to the UDC was extracted from the part of the survey dealing with classification schemes in use, their applications, local adaptations, their adequacy etc. Regarding UDC, this survey provides information documenting the scheme's use, editions and assessment of its suitability for the library use, which are presented in the following sections.

3. Research methodology

The objective of the survey was to collect comprehensive, accurate, reliable and up-to-date information on various aspects of library organization and services: name and parent body of the library, year of establishment, address and contacts (telephone numbers, email and URL), head of library, type of library, type of collections, budget and staff, classification and cataloguing system followed (edition, for what purpose and type of collection, status of adequacy and extent of its use), library services and working hours, use and availability of ICT, library software used, and type of membership.

The survey was conducted in the following steps: questionnaire design, pilot survey, main survey, data collection and analysis. While designing the questionnaire, special care was taken to keep it comprehensive and at the same time simple and easy to answer objectively. Questions were designed to be clear and easy to understanding and to take as little as possible to answer. The questionnaire was tested through a pilot survey that included ten libraries and necessary adjustments based on their feedback were implemented in the questionnaire prior to the main survey. The final questionnaires were distributed to libraries via post and electronic mail. As this first distribution resulted in very little return, a second attempt was made through personal visits to the libraries, method by which most of the data was collected, during 2007-2008.

4. Findings and discussion

The findings of the study are presented in a way that not only to provide the present status of UDC use in Delhi libraries but also to give an overview of major scientific and technical library organizations of India. The findings are organized in four groups:

4.1. UDC and DRDO libraries

DRDO - Defence Research and Development Organization - was established in 1958 from the merging of the former Technical Development Establishments (TDEs) of the Indian Army and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organisation (DSO). DRDO was then a small organization with 10 establishments/laboratories. Over the years, it has grown multi-directionally in terms of the variety of subject disciplines, number of laboratories, achievements and stature.[4]

Today, the DRDO is a network of 51 laboratories which are deeply engaged in developing defence technologies covering various disciplines, like aeronautics, armaments, electronics, combat vehicles, engineering systems, instrumentation, missiles, advanced computing and simulation, special materials, naval systems, life sciences, training, information systems and

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[4] *Ibid*, p. 34.

agriculture. Presently, the organisation is backed by over 5000 scientists and about 25,000 other scientific, technical and supporting personnel. Several major projects for the development of missiles, armaments, light combat aircrafts, radars, electronic warfare systems etc are on hand and significant achievements have already been made in several such technologies.[5]

As it transpires from the statements above, DRDO has a great significance in the growth and development of technological research in the field of defense science and technology. The Defence Science Laboratory (now known as LASTEC) which is situated in Delhi is considered the mother of the Defence establishments in India. DRDO libraries are usually known by 'Technical Information Centres (TIC)' and every lab/establishment has its own TIC. To meet the information needs of the Indian defence scientists and technocrats working in the DRDO laboratories, DRDO established a national documentation centre known as Defence Scientific Information & Documentation Center (DESIDOC). The UDC has a special role within TICs of the DRDO, as the majority of them are using UDC for classifying and arranging documents. The current status of the UDC use in DRDO is given in Table 1.

Table 1 - **Use of UDC in DRDO Libraries in Delhi**

	Name of the Library	A	B	C	D	E
1	Defence Scientific Information & Documentation Center (DESIDOC) also called clearing house of defense information in India	IME (1993)	Y	N	NA	NA
2	DRDO Hqrs Library	IME (1993)	Y	N	NA	NA
3	Solid State Physics Laboratory (SSPL) Library	IME (1993)	Y	N	NA	NA
4	Institute of Nuclear Medicine & Allied Science (INMAS) library	IME (1993)	Y	N	NA	NA
5	Institute of System Studies and Analysis (ISSA) Library	IME (1993)	Y	N	NA	NA
6	Defense Physiological Research & Allied Sciences (DIPAS) library,	IME (1993)	Y	N	NA	NA
7	Defense Psychological Research Institute (DIPR) library	IME (1993)	Y	N	NA	NA
8	Central for Fuel, Explosive and Environmental Safety (CFEES) Library (formerly CEES and DIFR)	IME (1993)	Y	N	NA	NA
9	Defense Terrain Research Laboratory (DTRL) library	IME (1993)	Y	N	NA	NA
10	Laser Science Technology Centre (LASTEC) Library (formerly Defense Science Centre)	IME (1993)	Y	N	NA	NA

Y=Yes; NA = Not Applicable; N= NO
a) Which edition of UDC are you are using, since which year. b) Do you find it adequate to classify the kind of literature you have c) Do you feel the need for any local extensions?   d) If the organization does teaching, which edition is used and at what level. e) Is there any UDC guide for classroom teaching?

4.2. UDC and ICAR Libraries

The Indian Council of Agricultural Research (ICAR) was founded in 1929 with its headquarters at New Delhi. It is an autonomous apex body responsible for the Organization, monitoring, funding and managing the research and education in all domains of agricultural sciences and technology in India. The Union Minister of Agriculture is the President of the ICAR. Its principal officer is the Director-General who is also the Secretary to the Government of India in the Department of Agriculture Research and Education (DARE). ICAR has established various research centres nationwide in order to undertake education, research and consultancy in agricultural sciences

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[5] Singh, K. P. (2007) *On information seeking behaviour of agricultural scientists working in the select institutions of ICAR in Delhi and Punjab Agricultural University, Ludhiana*. A study under the supervision of Professor (Dr. MP Satija). Ph.D thesis submitted to Guru Nanak Dev University, Amritsar (Punjab), p. 23.

and other related fields. The ICAR is considered the largest network of agriculture education and research institutions in the world. At present it consist of 38 State Agricultural Universities (SAUs) and one Central Agricultural University (CAU), 5 Deemed-To-Be-Universities (DUs), 35 National Research Centres (NRC), 46 Central Research Institutes (CRI), 5 National Bureaus (NBs), 11 Project Directorates (PDs) and 90 All India Coordinate Research Projects (AICRP), all functioning under the control of the ICAR, New Delhi.6

Delhi based agricultural institutions have played an important role in the growth and development of agricultural education and research in India. To the same extent, library classifications, in particularly the UDC, are of special significance for organizing knowledge in the agricultural field. The majority of the ICAR libraries in India are using UDC. The current status of the use of UDC is given in Table 2.

Table 2 - **Use of UDC in ICAR Libraries in Delhi**

	Name of the Library	A	B	C	D	E
1	National Agricultural Library of India of Indian Agricultural Research Institute (IARI).	IME (1993)	Y	N	NA	NA
2	Indian Council of Agricultural Research (ICAR) Hqrs. Library	IME (1993)	Y	N	NA	NA
3	Indian Agricultural Statistical Research Institute (IASRI) library	IME (1993)	Y	N	NA	NA
4	National Bureau of Plant Genetic Resource Centre (NBPGR) Library	IME (1993)	Y	N	NA	NA
5	National Centre of Agricultural Economics and Policy Research (NCAP) Library	IME (1985)	Y	N	NA	NA
6	National Soil Survey & Land Use Planning (NSS&LUP) Regional Library	IME (1985)	Y	N	NA	NA
7	Krishi Anushandhan Bhawn (KAB) Library	IME (1993)	Y	N	NA	NA

Y=Yes; NA = Not Applicable; N= NO
a) Which edition of UDC are you are using, since which year. b) Do you find it adequate to classify the kind of literature you have c) Do you feel the need for any local extensions? d) If the organization does teaching, which edition is used and at what level. e) Is there any UDC guide for classroom teaching?

4.3 UDC and CSIR libraries

Having as its mission and vision "to provide scientific industrial research and development that maximizes the economic, environmental and societal benefits for the people of India", the Council of Scientific and Industrial Research (CSIR) was established in 1942 with its headquarters at Delhi, by a resolution of the then Central Legislative Assembly. It is funded mainly by the Science and Technology Ministry of India and is one of the world's largest publicly funded research and development organisations, having connections to academia and other major R&D organisations and industries. Although being funded by the Science and Technology Ministry mostly, CSIR operates as an autonomous body registered under the Registration of Societies Act of 1860. It is the largest Research and Development organization in India comprising 38 laboratories and 50 field stations/extension centers nationwide.[6]

As with ICAR and DRDO libraries, all CSIR libraries situated in Delhi are using UDC, as given in Table 3.

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[6] Singh, K. P. (2004) *Application of information communication technology in the libraries and information centers of the Defence Research and Development Organisation (DRDO) and the Council of Scientific and Industrial Research (CSIR) located at Delhi*. M.Phil Dissertation submitted to Alagappa University, Karaikudi, p. 66.

Table 3 - **Use of UDC in CSIR Libraries in Delhi**

	Name of the Library	A	B	C	D	E
1	National Science Library of NISCAIR (National Institute of Science Communication And Information Resources, which came into existence in 2004 by the merging of the INSDOC and NISCOM	IME (1993)	Y	N	NA	NA
2	Council of Scientific & Industrial Research (CSIR) Hqrs Library	IME (1993)	Y	N	NA	NA
3	Central Road Research Institute (CRRI) Library	IME (1993)	Y	N	NA	NA
4	National Institute of Science, Technology and Development Studies (NISTADS) Library	IME (1993)	Y	N	NA	NA
5	Institute of Genomics and Integrated Biology Library. (Formerly Centre for Biochemical Technology)	IME (1993)	Y	N	NA	NA
6	National Physical Laboratory (NPL) Library (the NPL is considered the mother lab of the CSIR)	IME (1993)	Y	N	NA	NA

Y=Yes; NA = Not Applicable; N= NO
a) Which edition of UDC are you are using, since which year. b) Do you find it adequate to classify the kind of literature you have
c) Do you feel the need for any local extensions?   d) If the organization does teaching, which edition is used and at what level.
e) Is there any UDC guide for classroom teaching?

4.4. UDC and other Libraries

In addition to DRDO, ICAR and CSIR there are many other important libraries such as NML, IIT, libraries of the India judiciary system (such as SCI, Delhi High Coutts, Districts courts, etc.) and also many libraries in non-governmental sectors, management and financial enterprises, public under-takings etc., are using UDC. The current status of UDC use in such libraries is given in Table 4.

Table 4 - **UDC and other Libraries**

	Name of the Library	A	B	C	D	E
1.	Bureau of Indian Standard (BIS) Library	IME (1985)	Y	N	NA	NA
2.	Business Standard Library	IME (1985)	Y	N	NA	NA
3.	Cabinet Secretarial Library, (RAW)	IME (1985)	Y	N	NA	NA
4.	Central Public Works Department (CPWD) Library	IME (1985)	Y	N	NA	NA
5.	Centre for Development of Telemetric (C-DOT) Library	IME (1993)	Y	N	NA	NA
6.	Central Soil Materials Research Institute (CSMRI)Library	IME (1985)	Y	N	NA	NA
7.	Delhi Development Authority (DDA) Library	IME (1985)	Y	N	NA	NA
8.	Delhi High Court Judge Library	IME (1985)	Y	N	NA	NA
9.	Delhi Judicial Library		Y	N	NA	NA
10.	Department of Biotechnology (DBT) Library	IME (1985)	Y	N	NA	NA
11.	Department of Library & Information Science (DLIS) Library University of Delhi	IME (1985)	Y	N	NA	NA
12.	Directory of Agriculture Extension (DAE) Library, Ministry of Agriculture	IME (1985)	Y	N	NA	NA
13.	Electronic Niketan Library	IME (1985)	Y	N	NA	NA
14.	Engineers India Ltd (EIL)Library	IME (1985)	Y	N	NA	NA
15.	Fertilizer Association of India Library, New Delhi	IME (1985)	Y	N	NA	NA
16.	FORE College of Management (FCM) Library	IME (1985)	Y	N	NA	NA
17.	Gas Authority of India Ltd (GAIL) Library	IME (1985)	Y	N	NA	NA
18.	Indian Institute of Foreign Trade (IIFT) Library	IME (1985)	Y	N	NA	NA

19.	Indian Institute of Technology (IIT) Library	IME (1995)	Y	N	NA	NA
20.	Indian Law Institute Library (Deemed University)	IME (1995)	Y	N	NA	NA
21.	Indian National Science Academy (INSA) Library	IME (1985)	Y	N	NA	NA
22.	Indian Oil Corporation Limited (IOCL) Library		Y	N	NA	NA
23.	Institute of Chartered Accounts of India (ICAI) Library	IME (1985)	Y	N	NA	NA
24.	KSK Library	IME (1985)	Y	N	NA	NA
25.	Ministry of Small Scale Industry Library,	IME (1985)	Y	N	NA	NA
26.	National Council of Applied Economic Research (NCAER) Library	IME (1985)	Y	N	NA	NA
27.	National Human Right Commission (NHRC) Library		Y	N	NA	NA
28.	National Informatics Center (NIC) Library	IME (1993)	Y	N	NA	NA
29.	National Metrology and Seismological Documentation Centre (NMSDC)	IME (1985)	Y	N	NA	NA
30.	Punjab National Bank (PNB) Library	IME (1985)	Y	N	NA	NA
31.	Pusa Polytechnic Library	IME (1985)	Y	N	NA	NA
32.	Raj Kumari Amrit Kaur College of Nursing Library	IME (1985)	Y	N	NA	NA
33.	SAARC Documentation Centre	IME (1993)	Y	N	NA	NA
34.	School of Planning and Architecture (SPA) Library	IME (1985)	Y	N	NA	NA
35.	Shri Guru Tegh Bahadur Khalsa College (SGTBKC) Library	IME (1985)	Y	N	NA	NA
36.	Standing Conference of Public Enterprises (SCPE) Library		Y	N	NA	NA
37.	Steel Authority of India Ltd (SAIL)Library	IME (1985)	Y	N	NA	NA
38.	Supreme Courts of India (SCI) Library	IME (1995)	Y	N	NA	NA
39.	Supreme Courts of India Bar Association Library	IME (1985)	Y	N	NA	NA
40.	The Energy Research Institute (TERI) Library (Deemed University)	IME (1993)	Y	N	NA	NA
41.	VHAJ Library	IME (1985)	Y	N	NA	NA

Y=Yes; NA = Not Applicable; N= NO

a) Which edition of UDC are you are using, since which year. b) Do you find it adequate to classify the kind of literature you have c) Do you feel the need for any local extensions?   d) If the organization does teaching, which edition is used and at what level. e) Is there any UDC guide for classroom teaching?

5. Conclusion and comments

Undertaking the compilation of a library directory can be an arduous and frustrating task due to the indifference and non-cooperative attitude of many professionals. Collecting the required data proved to be a struggle against many odds. But when realizing the objectives and importance of the project, many professionals came forward and extended their full support and motivation.

The project is under completion and very soon it will be available in the form of a directory. The data related to the use of classification tools/systems in Delhi libraries is a component of the directory. The survey revealed that the three main classification tools/systems used in Delhi libraries are DDC, UDC and CC, by growing order of merit. It is found that DDC is being used in all types of libraries. In case of UDC, it is found that editions quite old are used mostly, especially in the main science and technological libraries of ICAR, DRDO, CSIR, NIC, C-DOT, Judiciaries, etc., as well as in national libraries such as National Agricultural Library, National Science Library and National Medical Library. Many science and technology libraries such as IARI, NISCAIR, DESIDOC, C-DOT, NIC and BIS are using later UDC editions as they provide new class numbers for subjects recently emerged in their interest fields.

The libraries of NIC, C-DOT, Ministry of Information Technology & Communications and Electronic Niketan are known for having major collections on computer science. When interviewing librarians from these organizations they mentioned their concern about changes in Computer Science and Technology that imply reclassification from a single number 681.3 (as in BSI M-1000, international medium editions from 1985 and 1993) to class 004 (in BSI standard UDC edition from 2005) which - with almost 800 subclasses - is very comprehensive and more adequate for organizing literature on all facets of computer science.

The challenging task for these libraries, in particular the NIC, is carrying out the conversion from the old to the new numbers, especially when a library has more then thirty thousand volumes on computer science.

Furthermore, as a teacher of classification and a practicing librarian in an agriculture library using UDC, I would also advise that revision processes take into account the issue of retro-compat-ibility, as possible. Lastly, it is my opinion that, on the whole, UDC is the most versatile system for knowledge organization, especially in science and technology libraries, not only in Delhi but in the whole India.

List of Abbreviations/Acronyms

AICTE	All India Council of Technical Education
MCI	Medical Council of India
CCH	Central Council of Homeopathy
CCIM	Central Council of Indian Medicine
DCE	Distance Council of Education
IME	UDC: International Medium Edition : English text. BS 1000M (by British Standards Institution)
NCERT	National Council of Educational Research & Training
NCTE	National Council of Technical Education
PCI	Pharmacy Council of India
RCI	Rehabilitation Council of India
SCERT	State Council of Educational Research & Training
UGC	University Grants Commission
ICSSR	Indian Council of Social Sciences Research
ICMR	Indian Council of Medical Research
ICHR	Indian Council of Historical Research
ICCR	Indian Council of Cultural Relations
ICPR	Indian Council of Philosophical Research