

Full Length Research Paper

A study of web-based library classification schemes

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The study deals with web-based library classification schemes. In the emerging digital paradigm, the library classification schemes sparked dynamically print into web in the beginning of 21st century. Web-based library classification schemes are completely different from traditional classification schemes. The study discusses three web-based schemes viz WebDewey 2.0, UDC (universal decimal classification) online and classification web. WebDewey 2.0 is a Web-based product of DDC 23rd ed., UDC online is of UDC and classification web of LCC (Library of Congress Classification). These are constantly updated, revised and up-to date web-based library classification schemes. This study is significant in that it provided a description of current trends of library classification schemes. Investigative method is used to identify web-based library classification schemes. The databases have been accessed through trial accounts of their official websites. This study mainly compares the aspects of WebDewey 2.0, UDC online, and classification web. It concludes that DDC (Dewey Decimal Classification) is the most updated library classification scheme in the world.

Key words: Web-based library classification schemes, WebDewey 2.0, Universal Decimal Classification online, classification web.

INTRODUCTION

Library classification is the significant part of Library and Information Science. The library classification is an art to use for the systematic arrangement of various subjects of universe of knowledge on the shelves and to locate the material quickly, easily in the library. It is a technique to encompass universe of subjects in a schedule. Knowledge is like an ocean increasing day by day. So, it is the technique to organize universe of knowledge in a systematic manner in a schedule. Thanks, to Melvil Dewey, Paul Otlet and Henry La Fontain and S.R. Ranganathan who originated the great Library Classification Schemes.

Library classification is a technique of knowledge organization. Library classification helps to arrange documents in a systematic order, which is most convenient, time saving and conserve energy of the readers and the library staff. So, it needs to use some

method or device which is automatic, systematic and following helpful arrangement. There are some library classification like DDC (Dewey Decimal Classification), UDC (Universal Decimal Classification) and LCC (Library of Congress Classification) schemes originating for organizing library materials.

Web-based library classification schemes plays an exclusive role on web. Web-based editions have many additional features over the print version and allow multiple searching by terms and numbers and have user friendly browsing option. The innovative web-based services are provided to the users.

There are three topmost web-based library classification schemes

- WebDewey 2.0 (DDC 23rd Ed.)
- UDC online (UDC)

- Classification web (LCC)

Electronic versions of the DDC UDC and LCC make it possible to realize the potential of Library Classification to improve subject retrieval. It creates renewed interest in classification as an organizing and retrieval device for information resources has been sparked by the growth in usage of the Internet and World Wide Web (WWW).

Advantages of web-based library classification schemes

- Easy access of schedule and table/ auxiliary numbers
- Easy access of related terms by using different keyword indexes
- Online retrieval of class numbers
- Time saving
- Flexible
- Provides work area for building numbers Ex. DDC and UDC
- Simply, universal classification schemes are available online
- Uses online retrieval subject heading list, dictionaries and glossaries
- Access through hyperlinks
- View online schedules and its hierarchies
- Most updated and advanced than print editions
- More handy and convenient to users
- Multiple keyword searching and browsing facility
- User oriented
- Facilitates OPAC
- Boolean searching

Disadvantages of web-based library classification schemes

- Technological barriers
- Language barriers (Use standard dictionary)
- Very expensive

Objectives of the study

- To identify web-based library classification schemes.
- To identify the advantageous and disadvantageous of web-based classification schemes.
- To collect information regarding web-based library classification schemes.
- To access the web-based databases of library classification schemes.
- To compare the web-based databases of library classification schemes.

RESEARCH METHODOLOGY

The investigative methodology is followed for collecting

data on the Internet with the keyword 'web-based library classification schemes' and found DDC, UDC, LCC are three web-based library classification schemes and information was collected from their official websites. The web-based databases have been accessed through trial accounts and then compared.

IMPACT OF WEB ON LIBRARY CLASSIFICATION SCHEMES

In the Techno-savvy era, libraries become modern, advanced, developed, and automated. Traditionally, there are number of library classification schemes like Dewey Decimal Classification, Universal Decimal Classification, Library of Congress Classification, Colon Classification etc.

But, in the 21st century, with the impact of IT some traditional Library Classification Schemes have changed in a glorious way. DDC, UDC and LCC are the top most and web based library classification schemes. They provide a variety of online services to the users. Users can browse and search the class number by clicking on that it is used to organize electronic data as well as classify libraries. It is the power of hypertext on the web, any item or class number placed at multiple positions in a web based classification schemes. It provides several ways how to get the same class number and the caption. The design of traditional scheme is quite different the design of web based schemes and tends.

- User-centered
- Users can create their own notes.

DEWEY DECIMAL CLASSIFICATION (DDC) SCHEME

DDC is the oldest and most prevalent system all over the world. It is efficiently working not only in print, but in online environment also. It was devised by Melvil Dewey in 1876 though it was conceived first in 1873. It is based on a discipline to be organized with fields, into sub-fields and topics. DDC is divided into 10 main classes 000-999.

DDC is the most updated classification system throughout. It has completed a long and arduous journey of more than 100 years from its first edition in 1876 to the 23rd edition published in 2011. The abridged 15th edition was published in February 2012. It is regularly being revised and adopted according to entry of new subjects and giving right place in the schedules.

WebDewey 2.0: The Web Product of DDC 23rd Ed.

Currently, OCLC offers DDC 23rd edition in web version 'WebDewey 2.0' to the users. There are several major changes included in publication of print and web version WebDewey 2.0 simultaneously. It is dynamic, much



Figure 1. Homepage of 'WebDewey 2.0'.

Source: <http://www.oclc.org/dewey/versions/webdewey/> (Last Accessed on 4/5/2012).

revised, updated and easy to navigate on the online version. It is easy to use and more handy than earlier web version WebDewey.

This is the homepage of 'WebDewey 2.0', the online exclusive product of Dewey decimal classification 23rd Ed (Figure 1). It gives access of main classes and tables (T6).

Salient features of WebDewey 2.0

- WebDewey 2.0 is simple and easy to handle to the beginners and users.
- Continuously updated.
- Provides tutorials as well as trial accounts to users to learn more about WebDewey 2.0.
- Provides additional searches (Using Boolean Operators)
- Use of truncation and wildcards for term expansion to include variant endings.
- Provision for creating user notes and its searching.
- Provides readymade build numbers to the users according to 'Add to base no.' instructions and avails work area for building DDC number.
- LCSH to DDC mappings, BISAC to DDC mappings, MESH to DDC mappings
- No price increase in WebDewey 2.0.
- Provide links to OPAC.

UNIVERSAL DECIMAL CLASSIFICATION SCHEME

Universal Decimal Classification is a wide-ranging scheme for classifying the whole universe of knowledge. It is one of the most expanded, most prevalent, developed, revised, up-to-date library classification system in the world. It has always been a major international scheme, but currently, UDCC (Universal Decimal Classification Consortium) has created an international (and eventually multilingual) database. The structure of

the main tables is like DDC which uses a simply one digit number. The universe of knowledge is divided into ten main branches which is denoted by 0 to 9 decimal fraction Indo-Arabic numerals.

UDC online

'UDC Online' is web-based product of universal decimal classification available on web since 2001 (Figure 2). It works extremely fine with computers and using software.

Salient features of UDC online

- UDC online is an international database.
- Has developed colour combined numbers especially main tables, common auxiliaries and special auxiliaries
- Provides powerful search and browse.
- Enables broadening and narrowing searches.
- Enables to cover new subjects easily.
- Two different search methods available.
- Provides search through 'UDC Dictionary'.
- Keeps good control over truncation/stemming.
- Number building boxes are provided for synthesized complex numbers.
- Special auxiliaries are not shown separately. It is displayed with specific colour when search results are displayed.
- Includes a 'Hierarchy Tree'.
- Easy and quick checking of related and associated classes.
- Quicker finding and building of UDC numbers.

LIBRARY OF CONGRESS CLASSIFICATION SCHEME

The system 'Library of Congress Classification' is one of the most widely used library classification system in the USA. It was developed by Library of Congress, USA in

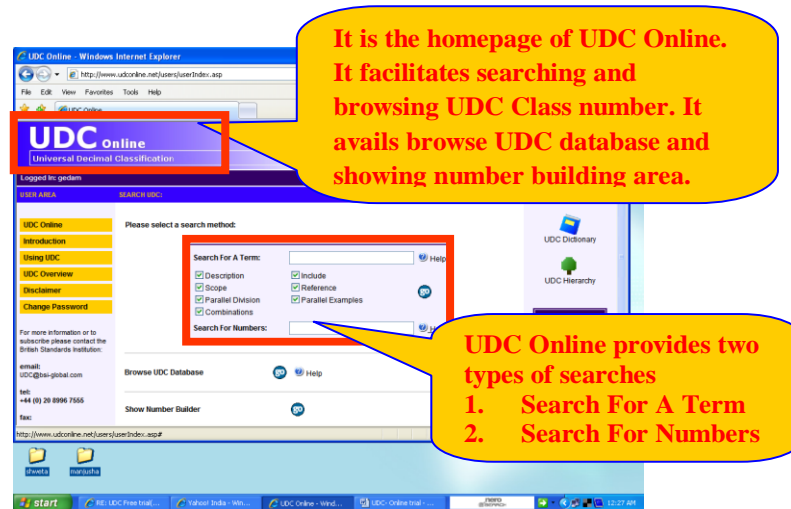


Figure 2. UDC online.

Source: <http://www.udconline.net/> (Last Accessed on 4/5/2012).

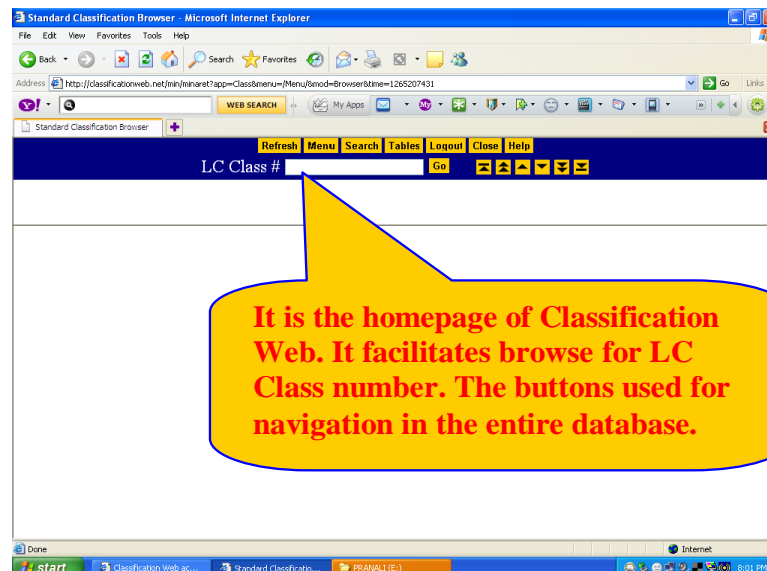


Figure 3. Classification web.

Source: www.classificationweb.net/ (Last Accessed on 25/08/2010).

the late nineteenth and early twentieth century to organize and arrange the book collections in the library. The Library of Congress is broadly divided into 21 categories labels spreading into A to Z, but the letters I, O, W, X and Y are unused.

LCC is effectively and efficiently working in print as well as on web. It is equally helpful and potential on web to make total use for online retrieval of LC class numbers.

Classification web: The online product of Library of Congress Classification Scheme

Classification web is a web-based, effective and

exclusive product of Library of Congress Classification Scheme provided by Classification Distribution Service (Figure 3).

Salient features of classification web

- Provides the users to browse and search the full text of the Library of Congress Classification (LCC) schedules.
- Classification web contains LCC schedules, LC class and its subdivisions, Library of Congress Subject Headings.
- User can access the correlations between LCC numbers and LCSH and DDC.

Table 1. Different form versions.

S/N	Names of online version of classification systems	Print	LAN available	Electronic version (CD-ROM)	Web availability	Points gained
1	WebDewey 2.0	Yes	No	Yes	Yes	03
2	UDC online	Yes	Yes	Yes	Yes	04
3	Classification web	Yes	No	Yes	Yes	03

Table 2. Essential qualities in web accessible library classification schemes.

S/N	Essential qualities	Classification web	UDC online	WebDewey
1	Index	Print: Each schedule has its separate index, Web: Multiple searchable and browsable indexes,	Print: Alphabetical Index , Web: (02)Indexes: Searching for terms and UDC class number (web)	Print: Relative Index (alphabetical) Web: (09) searchable and (05) browsable indexes,
2	LCSH	LCSH mapped to DDC numbers	Not available	LCSH
3	Built numbers	Not available	Facility for number building	10,000 Built numbers
4	Glossary/Dictionary	Not available	UDC Dictionary	Glossary
5	Search History	Not available	Not available	Describing previous 10 search results

- Users can create their own notes in the database.
- Provides powerful search and navigation tools to the users.
- Automatic calculation of classification table numbers.
- Facility to link to local Web OPAC for many major vendor systems.

COMPARISON THE WEB-BASED CLASSIFICATION SYSTEMS

It is evident from Table 1, UDC is the only Library classification scheme that makes available all forms (04) in Print, LAN (Local Area Network), CD-ROM and web environment. DDC (03) and LCC (03) are available in CD-ROM, print and accessible through web.

From Table 2, it is seen that WebDewey, UDC online and classification web describe essential qualities of web accessible library classification schemes. They provide multiple searchable and browsable indexes to the users rather than print editions.

WebDewey has many essential qualities providing access of LCSH, built numbers and glossary to users and describing search history of previous 10 search results. Classification Web does not provide dictionary, build numbers and search history. Users can search for terms in UDC Dictionary.

Table 3 shows the analysis of database features of web-based library classification schemes. Classification web provides highest number (24) of features; UDC

online has (17) lowest features. WebDewey, UDC online and classification web provide flexibility searches, truncation searches, Boolean searches, punctuations, hierarchical display, use of hyperlinks, topdown navigation, ease of use, view records, view list, Help, outlines, Back buttons. Classification web and WebDewey provides the opportunity to create and search for user notes in the database. They provide tutorials, wild cards searches, links to LCSH. WebDewey uses right and left truncation. UDC online numbers can be truncated from the right, not the left. Classification web uses automatic truncation. Classification Web is the only web accessible library classification scheme provides the opportunity to the users to see OPAC links of 20 libraries of U.S.A. in the trial service. In, WebDewey, the users can not log on directly to World Catalogue. Classification web does not provide keyboard shortcuts, stoplists, clear and delete buttons, but facilitates bookmark and subsets.

From Table 4, online searchable indexes is found. WebDewey provides (06) all types of searchable indexes and classification web gives access of (05) multiple searchable indexes to its users finding the class number. UDC online provides two types of indexes- search for a term and search for numbers.

Only DDC published the highest (23rd) number of editions both in print and web (Table 5). LCC have reached up to 7th ed. in print and classification web was updated weekly. From 1993, a standard version of UDC is maintained and is distributed in a database format: UDC Master Reference File (UDC MRF) which is

Table 3. Database features of web based library classification schemes.

S/N	Online database features	Classification web	UDC online	WebDewey
1	Flexibility Search	Yes	Yes	Yes
2	Truncation Searches	Yes	Yes	Yes
3	Boolean Searches	Yes	Yes	Yes
4	Character Masking Wild Cards	Yes	No	Yes
5	Mathematical Operators	Yes	Yes	No
6	Punctuation	Yes	Yes	Yes
7	Hierarchical Display	Yes	Yes	Yes
8	Use of Hyperlinks	Yes	Yes	Yes
9	Links to LCSH	Yes	No	Yes
10	Enable Top-Down Navigation	Yes	Yes	Yes
11	Links to OPAC	Yes	No	Yes
12	Ease of Use	Yes	Yes	Yes
13	Keyboard Shortcuts	No	No	Yes
14	User Notes	Yes	No	Yes
15	View Records	Yes	Yes	Yes
16	View List	Yes	Yes	Yes
17	Book Marks	Yes	No	No
18	Subsets	Yes	No	No
19	Preferences	Yes	No	Yes
20	Outlines	Yes	Yes	Yes
21	Tutorials	Yes	No	Yes
22	Help	Yes	Yes	Yes
23	Moving Arrows	Yes	Yes	No
24	Back Buttons	Yes	Yes	Yes
25	Redisplay	Yes	No	No
26	Stop Lists	No	No	Yes
27	Clear	No	Yes	Yes
28	Delete	No	Yes	No
	Total	24	17	22

Table 4. Online searchable indexes.

S/N	Online searchable indexes	WebDewey 2.0	UDC online	Classification web
1	Class Number Searching	Yes	Yes	Yes
2	Keyword Searching	Yes	Yes	Yes
3	Captions	Yes	No	Yes
4	LCSH Searching	Yes	No	Yes
5	User Notes Searching	Yes	No	Yes
6	Relative Index	Yes	No	No
	Total	06	02	05

updated and released annually.

CONCLUSION

On the basis of this study, it is concluded that among the web version of the three chiefly used Library Classification systems, DDC with 23 editions has the highest

number of updates not only in print (23rd edition 2011) as well as on web quarterly (WebDewey 2.0) update. Web Dewey 2.0 also has extraordinary advancement in web version and provides multiple searchable and browsable indexes, advanced searches, readymade thousands of build numbers, work area for building class numbers, create user notes and search user notes. UDC is published in higher number of languages.

Table 5. Up-dation in library classification schemes.

S/N.	Up-to-date library classification schemes	DDC	UDC	LCC
1	Print	23 rd ed. 2011	Standard Edition Pub. by BSI, 2005	Latest Ed. (7 th ed.) 2003
2	Web	WebDewey 2.0	Published Web on June 2001 and UDC Online database updated annually	Published Web on 2002 and Classification Web updates Weekly

Classification web has most of the features of database. UDC online have least characteristics. As the online library classification schemes are more user friendly they are easy to use, multiple search strategy, number building facility, searching and browsing of terms/numbers aid in user friendliness.

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Appendix. Description of Web-based Library Classification Schemes.

Names of classification systems	On-line version	Price	Publisher	Address	E-mail ID for contact	Address of the website	Access per hours (Trial accounts)	Tel No.	Fax No.
Dewey Decimal Classification	WebDewey 2.0	\$205 (No price increase)	Online Computer Library Centre	OCLC Headquarters 6565 Kilgour Place Dublin, Ohio 43017-3395, USA	oclc@oclc.org	http://connexion.oclc.org/	120 min (Default inactivity)	(1) 614-764-6000 (2) 800-848-5878	614-764-6096
	Abridged WebDewey	\$58							
Universal Decimal Classification	UDC Online	£260	BSI	UDC Consortium, PO Box 90407, 2509 LK The Hague, The Netherlands	UDC@bsiglobal.com	http://www.udc online.net/	-	+ 44 (0) 20 8996 7555	+ 44 (0) 20 8996 7001
			Universal Decimal Classification Consortium		mail[@t]udcc.org	http://www.udc online.net/	-	(+ 31) 70 314 0509	(+ 31)70314 0450
Library of Congress Classification	Classification Web (May 2002 Available)	\$ 525	Cataloguing Distribution Service	Library of Congress Cataloging Distribution Service Customer Services Section 101 Independence Ave. SE Washington, D.C. 20541-4912 USA	cdsinfo@loc.gov	http://classificationweb.net	20 h of access per month	TDD (202) 707-0012	(202) 707-1334