Dewey Decimal Classification: A Brief Literature Review

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The present study is a literature review on Dewey Decimal Classification (DDC). Critical comments of experts on the origin, brief history, structure, modern digital versions of DDC and treatment of subjects in various DDC editions have found their manifestation in this literature review. Through this study an effort has been made to portray the overall picture of DDC in a nutshell.

Keywords: *Dewey Decimal Classification; DDC; Phase relations; Relative index; Relative location; Treatment of subjects.*

Introduction:

This literature review is an attempt to portray the overall picture of the Dewey Decimal Classification. Brief history, basic structure, treatment of subjects and present day transformation of this popular classification scheme are reflected in this study. So, through this literature review an effort has been made to view the Dewey Decimal Classification (DDC) scheme at a glance. But before observing the famous scheme of Dewey from the eyes of various renowned critics and practitioners of classification, one should know what classification is.

"Classification provides a system for organizing knowledge. Classification may be used to organize knowledge represented in any form, e.g., books, documents, electronic resources" (Introduction to the Dewey decimal classification, 2011).

Bhattacharya in 2012 focuses on the nomenclature of the classification scheme. According to Bhattacharya (2012), "a decimal point or dot, follows the third digit in a class number, after which division by ten continues to the specific degree of classification needed. The dot is not a decimal point in the

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mathematical sense, but a psychological pause to break the monotony of numerical digits and to ease the transcription and copying of the class number. Dewey's scheme is not called Decimal Classification because of this decimal point. The scheme is called Decimal classification because in its notations, every digit has been used as a decimal. Therefore, in each DDC number a decimal point is assumed before every digit."

Origin:

According to Krishan Kumar (2011), with the purpose of arranging the library of Amherst College, Melvil Dewey in 1876 launched his epoch making library classification scheme. Though in 1873 he conceived the idea of framing the scheme, it was actually published in 1876. The name of the first edition of Dewey Decimal Classification (DDC) Scheme was "A Classification and Subject Index for Cataloguing and Arranging the Books and Pamphlets of a Library". The name of Dewey appeared only in the copyright notice on the verso of the title page. The first edition had thousand copies and each copy consisted of 44 pages with 12 pages of introduction, 12 pages of schedules and 18 pages of index.

From the 20th edition of DDC (1989) and from the popular book on classification theory by S. Husain (2004) the following table has been drawn to have a glimpse at the brief introduction of all the editions of DDC.

EDITION	DATE	PAGES	COPIES	EDITOR
1	1876	44	1,000	Melvil Dewey
2	1885	314	500	Melvil Dewey
3	1888	416	500	Melvil Dewey
4	1891	466	1,000	Evelyn May Seymour
5	1894	467	2,000	Evelyn May Seymour
6	1899	511	7,600	Evelyn May Seymour
7	1911	792	2,000	Evelyn May Seymour
8	1913	850	2,000	Evelyn May Seymour
9	1915	856	3,000	Evelyn May Seymour
10	1919	940	4,000	Evelyn May Seymour
11	1922	988	5,000	Jennie Dorkas Fellows
12	1927	1,243	9,340	Jennie Dorkas Fellows
13	1932	1,647	9,750	Jennie Dorkas Fellows
14	1942	1,927	15,632	Constantin Mazney
15	1951	716	11,200	Milton J. Ferguson
15 rev	1952	927	11,045	Godfrey Dewey
16	1958	2,439	31,011	Benjamin A. Custer
17	1965	2,153	38,677	Benjamin A. Custer
18	1971	2,718	52,892	Benjamin A. Custer

EDITION	DATE	PAGES	COPIES	EDITOR
19	1979	3,385	51,129	Benjamin A. Custer
20	1989	3,388	-	John P. Comaromi
21	1996	4,115	-	Joan S. Mitchell
22	2003	4,076	-	Joan S. Mitchell

The 23rd edition of DDC was published in 2011 and was edited by Joan S. Mitchell (Dewey, 2011).

Basic Structure of DDC:

DDC being a hierarchical classification scheme moves from general to specific classes. It is mainly discipline oriented decimal scheme. There are ten main classes which are stated below:

000 – Generalities, 100 - Philosophy and related disciplines, 200 – Religion, 300 - The social sciences, 400 – Language, 500 - Pure sciences, 600 – Technology, 700 - The Arts, 800 – Literature, 900 - General geography and history.

The above main classes are based on the inverted Baconian order of memory, imagination and reason, with each main class having ten divisions and each division is divided into ten main sections. Thus there are altogether hundred divisions and thousand sections (Kumar 2011).

According to Pushpa Dhyani (1998), DDC consists of 7 tables consisting of common and special isolates (Table 7 became obsolete since edition 22). The tables are mentioned below:

Table 1: Standard subdivisions

Table 2: Geographic areas

Table 3: Subdivisions for individual literatures

Table 4: Subdivisions for individual languages

Table 5: Racial, ethnic, national groups

Table 6: Languages

Table 7: Groups of persons.

Table 1, 2 and 5 are common isolates whereas the rests denote special isolates.

Phase Relations -

Phase relations are also expressed in DDC, though it is clearly manifested in faceted classification schemes like Universal Decimal Classification or Colon Classification. In DDC inter–subject tool phase relation has been shown in the number 020.151 denoting Mathematical principles applied to Library and Information Science and bias phase relation in the number 340.2461 denoting Law books for doctors.

Indo-Arabic numerals 0-9, a decimal point after first three digits, Roman capitals in different editions, synthetic elements mainly in the form of tables for providing co-extensive class numbers, purity, simplicity and mnemonic quality in the notation, hospitality through 'decimal fraction device', gap device etc. add much to the structure of DDC (Dhyani,1998).

According to Sayers (1963) though Dewey himself had acknowledged the influence of the classification schemes of W. T. Harris of St. Louis Public School, the schemes of Natale Battezzati of Milan and Jaco Schwartz of New York, in reality DC did not resemble to the systems of Schwartz and Battezzati.

Bliss (1939) also pointed out that "It was not to be expected that in 1876 a young man of twenty-five years, however, brilliant could lay down a foundation that would provide, without change, for the future construction of fifty years; but he might have knowledge where to find other systems a better basis for such an undertaking."

Relative Location –

DDC brought a revolutionary change in the field of fixed location of book shelves. Instead of assigning numbers to the shelves, Dewey assigned decimal fraction numbers to the books for interpolation of new books in the shelves. This new concept of relative location truly made the subject wise arrangement of books and documents on the shelves an easy and helpful affair. The first edition of DDC provided a detailed relative index which also enabled an exact location of any subject or topic in the classification scheme (Kumar, 2011).

Dewey (1920) said that he desperately wanted to solve the problem of haphazard arrangement of documents. He visited 50 American libraries and read hundreds of books and pamphlets to find the solution. Finally on a Sunday morning during church service the solution came to his mind when he decided to use the simplest Indo-Arabic numerals as decimals and with this the enumerative scheme took its offshoot.

Hierarchical Notation -

This discipline oriented decimal classification system uses the decimal point after the first three digits and the numbers are lengthened by one digit at the stage of successive division which only satisfies the concept of hierarchical notation. It has been shown below:

700	The arts – Fine and decorative arts
720	Architecture
725	Public structures
725.8	Recreation buildings (Kumar, 2011)

Memory Aid -

Kumar (2011) mentioned that there are a number of memory aids available in DDC for subject synthesis. Application of area notation, language table, standard subdivisions etc. by their repetitive auxiliary nature while getting added to various main subjects, play a vital role.

Relative Index -

Husain (2004) points out that the relative index of DDC is so called because it relates subjects to disciplines. Here subjects are arranged alphabetically with terms indicating the disciplines in which they are treated sub-arranged alphabetically under them. An example will clarify the matter:

Garlic	641.3526
Botany	581.324
Cooking	641.6526
Garden crop	635.26

Index entries are also arranged alphabetically. This comprehensive relative index increases in bulk from the 18 pages of the 1st edition of DDC to 730 pages in the 20th edition.

Relocation: Phoenix Schedules -

Ohdedar (1994) said that from the 2nd to the 14th editions DDC always inserted new topics and expanded, but did not alter the places of subjects. Such alterations would require libraries to reclassify, and DDC might have disfavoured reclassification. However, expansion and development, without relocation (or re-allocation) of classes, made the scheme look outdated and too bulky in some parts. So with the 15th (1951) and the 16th (1958) editions relocation of subjects became a special feature.

Features of Various DDC Editions:

Sarah K. Vann (1976) pointed out that the first edition of DDC was published only one thousand in numbers. While the preface of the first edition stated the system, which was devised mainly for the purpose of cataloguing and indexing, it was on trial to be equally important for numbering and arranging books and pamphlets on

the book shelves. While writing the 'Future of DC', Dewey restated his requirements for classification as to 'know where to put a book when it come up and then to know where to find it again whether next day or century later'.

Comaromi (1976) said something about the second edition of DDC. This edition was published in 1885 with the assistance of Walter Stanley Biscoe. It was a bit different in size, style and enumeration from the first edition. Introduction of this edition was given 24 pages and 30 pages were allotted to the explanation to defend the new changes and additions in this edition. It was said that while the first edition of the scheme had been promising, the second edition was the promise fulfilled and it was probably the most prominent landmark in the development of American Library Association.

Dhyani (1998) pointed out some vital features of DDC 2nd edition which consisted of 314 pages, 10000 entries in place of the first edition's 2000 entries, relocations and expansions of numbers, policy of integrity of numbers, 'divide like device', decimal point after three digits and the renaming of 'relative index' from 'subject index'.

In between 1888 to 1942 twelve full and eight abridged editions of DDC were published. That means DDC 3rd edition to 14th edition came out within this time span. These editions increased in size but basic structure was more or less same. DDC 13th edition introduced a completely new schedule for Psychology at 159.9 together with earlier schedules at 130 and 150, which was not repeated in DDC 14.

In DDC 14 some of the schedules were expanded. In spite of haphazard and unbalanced expansions, some classifiers in USA considered DDC 14 as the 'premier classification in America Library Association'

With the desire of revising the 14th edition of DDC, the Decimal Classification Committee published a 'standard edition'. Finally came the 15th edition of DDC. From 31000 subjects of the 14th edition, the 15th edition was reduced to 4700 subjects. No provision for 'divide like device' was there. A revised edition of this 15th edition was published in 1952 under the editorship of Godfrey Dewey and in it the 'principle of keeping pace with knowledge' was introduced.

Due to the financial crisis Forest Press could not finance the 16th edition of DDC. Library of Congress started to finance the 16th edition in 1954.This edition was published in two volumes with the first termed as Tables, containing the schedules and the second volume as Relative Index.

DDC 17th edition followed the principle of keeping pace with knowledge. The term 'facet' was first introduced in its introduction by the editor. A new auxiliary table for the areas, transformation of 'form divisions' into 'standard sub-divisions', expansion and remodeling of this table and 'phoenix schedule' for the class 150 i.e. Psychology were the watchwords of this edition (Dhyani, 1998).

Francis Hinton (1960) pointed out that the Decimal Editorial Committee had decided that a reasonable amount of relocation is both desirable and inevitable as knowledge is dynamic in nature and a classification failing to accept the change becomes out of date very soon and is also inhospitable to new subjects.

DDC 18th edition comprised of three volumes with the volume 1 consisting of the introduction and the tables, the volume 2 consisting of the schedules and the third volume consisting of the relative index. In this edition the auxiliary tables were increased to 7 which indicated its inclination towards more faceted structure. The 'divide like device' was replaced by 'add device' and two 'phoenix schedules' for class 340 i.e. Law and 510 i.e. Mathematics were introduced.

DDC was for the first time produced by computerized photocomposition in 1979 in its 19th edition. The area notation 41- 42 were revised here. A supplementary table 3A was added to the table 3. The class 300 was also revised in some places (Dhyani, 1998).

In due course of time DDC took giant leap towards development. From the 44 pages of the first edition the 19th edition of 1979 was remarkably different. This 19th edition consisted of about 3000 pages. The single volume of the 1st edition was transferred into three

volumes of the 19th edition. Volume 1 comprised of the Introduction and Tables, Volume 2 contained the Schedules and the 3rd Volume was embellished with the Relative Index. The Manual of this edition was published in 1982 (Kumar, 2011).

The 20th edition of DDC came in the shape of a computer tape for publication. It had four volumes with the first volume containing the introduction and the tables, the volume 2 and 3 containing the schedules and the volume 4 consisting of the relative index. In the fourth volume a manual was also included for smooth work of classifying (Dhyani, 1998).

The editor of the 20th edition J.P. Comaromi stated in the introduction of the edition that the aim of this edition was the convenience of the users through clearer instructions, more explanations, greater accessibility through expanded summaries and the like (Dewey decimal classification, 1989).

Dhyani (1998) again mentions that DDC 21st edition was the first edition which was prepared with online access to the OCLC online union catalogue for guidance in literary warrants. This edition had been drastically revised and updated.

Mandal and Sain (1999) in their critical observation of DDC 21st edition and DDC 20th edition conclude that the 21st edition has attempted to "internationalize the scheme more by reducing its bias towards Western materials and the Christian religion and has taken the policy of faceting the scheme more to strengthen the subject retrieval capabilities, particularly in the online environment. The Relative Index and Manual of DDC-21 have been expanded over DDC-20 to provide more guidance and user convenience for classifying documents."

Khan (2004) focuses on the 22nd edition of DDC. The 22nd edition of DDC has brought many changes especially in Computer Science, Religion, Social Groups, Mathematics and DDC Tables. As DDC 22nd edition was produced in the context of web, thus the readers could also learn about new uses of the DDC in the web environment. The emphasis here is given on the changes from the 21st edition to the 22nd edition. DDC 22nd edition was released in print and electronic form during July 2003. It includes structural changes, many new changes in topics and significant updates to selected fields. This edition was designed to aid in amplifying the classifier's ease and efficiency.

M. P. Satija (2004) has also explained the organization, features and new changes in the 22nd editions of Dewey Decimal Classification.

J. S. Mitchell (2003) points out the historical background of the origin and the new updates of the DDC 22nd edition. OCLC planned to publish DDC 22nd edition in September 2003 and the "subscribers to WebDewey having had full World Wide Web access to the electronic version of the scheme since June 2003. The new edition contains several major updates, many new numbers and topics and a few structural changes, but no complete or extensive revisions." The article includes "details of these structural changes and the access to Web Dewey, with a discussion of the influence of Dewey users around the world".

DDC edition 23 features a complete overhaul of the representation of groups of people (Table 1), significant revisions to several standard subdivisions, numerous updates throughout the tables and schedules, and some structural changes. In the heading for Table 2, 'Persons' has been replaced by 'Biography'. Expansion is reflected in Table 3, 5 and 6. Several updates have taken place in the schedules like Computer Science, Religion, Social Sciences, Language, Technology, Arts, History, Geography etc. (New features in edition 23, n.d.).

Abridged Editions:

Kumar (2011) focuses on the abridged editions of DDC. Eleventh abridged edition of DDC appeared in 1979 with 618 pages and 2179 entries. This edition was primarily helpful for school and small public libraries.

Dhyani (1998) points out that to comply with the needs of small libraries DDC was also published in abridged editions with the first such edition coming in 1894. During 1989 DDC 20th edition's abridged version came containing only 857 pages.

Methods for Revision:

In 1937 Decimal Classification Editorial Policy Committee (EPC) was founded to work as an advisory body for determining and laying down general policies of the DDC. For revising DDC methods like 'relocations of numbers', 'Expansion of schedules, tables', 'complete revision' or 'phoenix schedule' of various classes or specific class numbers etc. are used. In the 20th edition of DDC the term 'phoenix schedule' has been changed into 'complete revision' wherein 780 Music and Table 2-711 British Columbia are complete revisions (Dhyani, 1998).

Comaromi and Satija (1988) mentioned that the preparation of a new DDC edition not only involves scientific and educational consensus but at the same time the consensus of a considerable body of librarians is also involved.

Translation and Use:

DDC was translated into many languages like Spanish, Turkish, Danish, Portugese, Japanese, Sinhalese, Hindi and the like. It has been adopted by a majority of libraries in English speaking and British Commonwealth countries. In England almost 99% of public libraries, 85% college libraries and about one-third of university libraries use DDC (Kumar, 2011).

"The DDC is the most widely used classification system in the world. Libraries in more than 138 countries use the DDC to organize and provide access to their collections, and DDC numbers are featured in the national bibliographies of more than sixty countries. Libraries of every type apply Dewey numbers on a daily basis and share these numbers through a variety of means (including WorldCat). Dewey is also used in a variety of applications on the web in support of categorization, browsing, and retrieval" (Introduction to the Dewey decimal classification, 2011).

Treatment of Subjects in DDC:

M. J. Fox's critical perception on the treatment of subjects in Dewey's magnum opus is built on a feministic approach. Fox's clear emphasis is on the treatment of men, women and trans-gender people in Dewey's scheme. According to M. J. Fox (2015) Melvil Dewey acknowledged the role of societal norms and looked at it with an open mind, which evidences a phenomenological approach, where he bracketed his assumptions, but it also could be that Dewey at that point was actually exposed to women; he had experienced them performing work within his field and thus his perceptions were tinged by experience rather than mere assumptions. Before giving Dewey too much credit, Fox wanted to focus on the outcomes of her study. In the classes "Law and Medicine, women are posed as having innate and immutable characteristics opposite of men's. In the first edition of DDC, this manifests as the 'othering' and exclusion of women." In reality women are represented in the classification in only limited aspects. Giving importance to what Code and Olson indicated, Fox has pointed out that the "transformation from subject to object reduces women to a collection of observable traits. If women are perceived by the 'enunciative modality', in this case Dewey, to be absent from intellectual life, then absence becomes the observable feature and therefore how they are defined ... Ontologically, women, men, transgender, and intersex people 'existed' in all timeframes, so their very existence cannot be denied. Clearly, Dewey knew at least that women and intersex people existed, and World Cat records show that literary warrant existed for topic inclusion in his classification. Omission from his first edition of the DDC separates them from the intellectual sphere of knowledge, thus creating a deterministic epistemology which the condition of being woman dictates domesticity, motherhood and exclusion from institutions. Without presence in the system as a non-maternal, non-domestic, included population, women who seek answers from that space cannot find it." Unlike the positivist legal field where conditions are accepted as they are because they are observed that way, or unlike medicine's 'purely objective' empiricism, Dewey accepts that his classification scheme is an artificial and socially formed discipline oriented structure which is meant for information retrieval. Fox also cautiously points out that critical realism assumes that a mind-independent reality exists, and in knowledge organization, that reality could be treated as the collections that form the warrant for which there exists the knowledge organization systems.

Dewey's focus on the physical weakness of women in his classification scheme is also criticized by Fox. Fox again points out the rhetorical space Dewey used in classification. To Fox, whether purposefully or not, Dewey did not include women in the classification, other than through the classes of "woman-education" and "woman suffrage." Education and voting rights could not be avoided, as those were the characteristics that thrust women into the public eye at the time. The only class with an explicitly gendered heading is 376 Education—Female. By adding the qualifier of female to education, the assumption is made that the education of females is anomalous from the males-only norm, which was represented by Education. No equivalent masculine qualifier exists, which implies that education alone means that the education of males is natural and normal. The only other explicitly feminine topic, 618 Obstetrics and Sexual science again expresses a devaluation based on where it is rhetorically situated. No other category includes feminine topics, and women are not explicitly mentioned in 640 Domestic Economy.

Comaromi (1976), a later editor of the DDC, in his largely complimentary history of the system, has no comment that the category of "women" was omitted altogether from the first edition, but does complain that Domestic Economy, an implicitly feminine category, should not be elevated "to the same level as medicine or engineering or any of the other skills with a heading in the Useful Arts". "Hermaphrodites," with a scientific aura, appears in the relative index, directing catalogers to 590 Zoology for animals or 612 Physiology for humans. The relative index is another of Dewey's innovations, a tool included with the DDC that helps cataloguers class topics that do not command classes names themselves or are alternative names for the same concept. Dewey (1876) explains, "Many subjects, apparently omitted, will be found in the Index, assigned, with allied subjects, to a heading which bears the name of the most important only". In other words, users are directed to the "correct" or preferred heading as determined by him. In the first edition's subject index, some feminine-identified concepts can be found, but they all in some way relate to education, reproduction, religion or exceptional circumstances which are parallels of the headings that exist in the classification.

Biasedness / Social Representation in Classification Schemes -

Olson (1998) said that the "existing literature has critiqued the most widely used classification in the world, the Dewey Decimal Classification, for its treatment of women, Puerto Ricans, Chinese and Japanese Americans, Mexican Americans, Jews, Native Americans, the developing world (including Africa, the Middle East, and Melanesia), gays, teenagers, senior citizens, people with disabilities and alternative lifestyles."

A.C. Foskett (1971) suggested that classificationists are the products of their times. Therefore, since classifications are the products of classificationists, classifications also reflect the biases of their times.

Examining the ideological construction and present needs for reconstruction of the former Soviet classification (Sukiasian, 1993) or the Confucian, and later Maoist, classification in China (Studwell, Wu, & Wang, 1994) makes it easy to observe that classifications reflect philosophical and ideological presumptions of their cultures and not only the times but also the places.

Olson (1998) again mentioned that classifications arrange concepts according to accepted cultural discourses whether those discourses are Leninist or Maoist communisms, the Seven Epitomes of Confucian doctrine, or Dewey's apparent reversal of Francis Bacon's classification scheme. Allocation of 80 percent of DDC's religion section (the 200s) exclusively to Christianity and the existence of a separate section for American literature (the 810s) when all other literatures are arranged by language is not surprising given the origins of this classification. Finding the topic "concubinage" under customs in 392.6 where it is gathered with topics such as chaperonage and dating or "suttee" in 393.9 and all combined with funerals, has a certain ethnocentric logic.

Olson, Ward (n.d.) focused that DDC marginalizes groups and topics related to women's issues. Their study focused on some of the biased treatment of DDC. Ghettoization is one such case which consists of isolating marginalized groups by concentrating them in one area. Visibility enforces ghettoization. Members of the mainstream are allowed to live in a more transparent

space than their marginalized counterparts who live within the barriers of the ghetto. In DDC 'Asian Studies' in 950 and 'African Studies' in 960 are ghettoized by the technique of making them historically and geographically defined. Placing them in 900 class denotes that they are taken out of the mainstream of everyday life in the world at large. Another example is the classification of women workers in specific industries. Class number 331.7 denotes the workers in specific occupation. But the women workers are placed in 331.4 denoting the fact that women workers are taken out of the mainstream and placed in a feminized ghetto. In case of colonialism, 'Colonization' is classified in 325.3 which shows colonies from the perspective of colonizers rather than the colonized.

According to P. S. K. Sharma (1976) before Swami Vivekananda's Chicago speech Indology was not popular in the whole world. Indian culture and philosophy became prominent after India's independence in 1947. So, only from the 15th edition of DDC, Indology started getting prominence in this scheme and in the seventeenth edition adequate provision exists for almost all the aspects of Indian philosophy and religion. Dewey himself wanted to give adequate space to Indological subjects and wrote to Ranganathan to suggest the possible line of expansion of D.C. for 'Asian topics'.

Dewey in Electronic Form:

The print version of the 23rd edition of DDC has been produced using the fourth generation of the Editorial Support System (ESS), introduced in 2010. During the development of this edition 23, OCLC has migrated the representation of DDC data from a proprietary format that has been in place since the 20th edition, to a new data format based on the MARC 21 formats for Classification and Authority data. When the data for printing is distributed, for inclusion in WebDewey, and to translation teams and other users, the representation has been transformed from the internal MARC formats to a MARCXML representation. There are also other representations of the DDC data, e.g., SKOS (New features in edition 23, 2011).

Songqiao Liu (1993) focused on the automatic decomposition of DDC synthesized numbers. According to Liu, "much literature has been written speculating upon how classification can be used in online catalogs to improve information retrieval. While some empirical studies have been done exploring whether the direct use of traditional classification schemes designed for a manual environment is effective and efficient in the online environment, none has manipulated these manual classifications in such a way as to take full advantage of the power of both the classification and computer. It has been suggested by some authors, such as Wajenberg and Drabenstott, that this power could be realized if the individual components of synthesized DDC numbers could be identified and indexed. This study looks at the feasibility of automatically decomposing DDC synthesized numbers and the implications of such decomposition for information retrieval. The following two research questions were posed for this study:

- Is it possible to decompose synthesized DDC numbers into component numbers accurately by the computer?
- How can the decomposition of DDC synthesized numbers improve information storage and retrieval?"

After an analysis of the instructions for synthesizing numbers in the main class Arts (700) and all DDC Tables, seventeen decomposition rules were defined, out of which 13 covered the Add Notes and 4 covered the Standard Subdivisions. Huge amount of DDC synthesized numbers (1,701) were decomposed by a computer system called DND (Dewey Number Decomposer) which was developed by the researcher. From the 1,701 numbers, 600 were randomly selected for examination by three judges, each evaluating 200 numbers. The decomposition success rate was cent percent and it was concluded that synthesized DDC numbers can be decomposed accurately and this can be done automatically. The study has implications for information retrieval, expert systems for assigning DDC numbers, automatic indexing, switching language development, enhancing classifiers' work, teaching library school students, and providing quality control for DDC number assignments. These implications were explored using a prototype retrieval system. The following example of decomposition done

by the researcher has been represented here for better understanding:

791.019 has been decomposed as follows:

791: Public performances
019: Psychological principles

The title of this book is:

245 00 #aPsychology and performing arts #cedited by Glenn D. Wilson.

The subject headings for this book are:

#aPerforming arts #xPsychological aspects #xCongresses.

#aPerforming arts #xTherapeutic use #xCongresses. (Liu,1993).

Conclusion:

From the above literature review it has been clearly manifested that in spite of so many research works on DDC, focus has not been given on the subject development of children in DDC. So a knowledge gap is seen in this regard. With the purpose of fulfilling the knowledge gap an effort has been made to pursue a research work on the treatment of subject descriptors on children in the various editions of DDC which is the ultimate motto of this literature review.

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