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Standardisation in Documentation and Book Science.

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[Standardi ation and documentation emerged as organised activities during the first half of the twentieth century. Conservation of resource and increasing productivity in every sphere of activity was the goal. Standardisation can be provided for in two forms: One in the form of a specification and the other in the form of guiding principles. Certain areas in the field of documentation and book science are amenable for standardisation in either one or both ways. The organisation and objectives of the Documentation Committees of the Indian Standards Institution, the British Standards Ins itution, the USA Standards Institute, and the International Standards Organization are described. The areas in documentation and in book science that are amenable for specification and/or guiding principles are mentioned. Published standards are also mentioned].

0 Introduction

Standardisation and documentation have the same ultimate objective — namely, to increase productivity in every sphere of activity and to promote an environment conducive to the acceleration of creative research. It is perhaps no coincidence that the movement for promoting standardisation and the movement for promoting documentation attempted to organise international support in the same year, 1895 (7). For, in that year, after several informal meetings, a group of workers in experimental engineering founded the International Association for Testing Materials with the object, among others, of developing and unifying standard methods of testing. Almost at the same time, Paul Otlet and Henri La Fontaine were planning to develop a universal bibliography of articles in periodicals and establish the International Institute of Bibliography to promote this work. This was the beginning of an era in Documentation.

Social pressure, mainly generated by increasing population pressure, brought forth the need for increasing the pace of industrial and economic growth. This in turn, has given a pep to increased production and team-*cum*-relay research. This resulted

in increased attention towards the promotion of standardisation and documentation.

1 Standardisation

11 Definition

Standardisation is the setting up, by authority or common consent, of a quantity, quality, pattern, or method or a unit of measurement or as an example of imitation (4).

12 Items for Standardisation

Standardisation is resorted to conserve time and energy particularly creative energy. Standardisation can be applied with advantage to nearly all the affairs of business. Wherever an object or a method is used repeatedly and are amenable to mass production, there is likely to be an advantage in standardisation. It can also be applied to qualities and sizes of materials, to processes and working procedures and performance.

13 Forms of Standardisation

Standardisation may be in one of two forms: One is specification. Specification stipulates dimensions and other qualities of a commodity or product, such as milk bottle, screw, and catalogue card. Some standard specifications may be made mandatory. For example, safety specification for insulation of electrical goods is a mandatory standard. There are also, standards that may be taken as recommendations. For example, the standard for specification of items of information on the title page of a book is a recommendation.

Another form of standardisation is the provision for guiding principles such as Guiding principles for the presentation of the text of a book or an article or Design of library buildings.

14 Advantages of Standardisation

Standardisation and simplification is not to be interpreted to mean that all individuality is to be completely suppressed and that everything is to be reduced to dead level of mechanical routine. Standardisation is at best a compromise between the desire for individuality and variety and the need for economy. It merely represents making a necessary activity habitual and automatic. This, in fact, makes the process of standardisation as a net gain to humanity, releasing creative forces to invent newer and newer ideas and knowhows and standards.

15 Areas Not Amenable for Standardisation

Standardisation may not be helpful nor even desirable in some activities. For example, we cannot standardise or provide

guiding principles for creative thinking for generating new ideas. Similarly, we cannot standardise some areas of Reference and Documentation Service.

2 Documentation

21 Documentation Service

Documentation service implies the following:

1 To disseminate information about the sources of information such as books, articles in periodicals, standards, patents, and trade catalogues.

2 To select documents containing information needed by the reader; sometimes this may involve the finding of information contained in the document.

3 To give the reader a copy of the document in a form he can use conveniently.

22 Documentation Work

In order to achieve efficiency in performing these three functions, several different kinds of techniques and tools have been evolved during the last hundred years. These are collectively called "Documentation Work." The techniques are

1	Document selection	5	Document cataloguing
2	Document procurement	6	Document circulation
3	Document accessioning	7	Document maintenance
4	Document classifying	8	Administrative work

23 Need for Standardisation in Documentation Work

Documentation work involves a variety of repetitive work and design of forms and registers. It also needs instruction manuals for procedure. It has been found by experience that productivity in documentation work can be increased by establishing suitable standards in many areas of Documentation Work. It also helps by lessening the constraints in co-operative and centralised Documentation Work, particularly what is known as behind the screen work. In fact, some areas in documentation work such as Document Cataloguing cannot become operative unless some form of standards are agreed upon in respect of the physical form of the catalogue, size of the catalogue, and the structure and sections of an entry in the catalogue.

24 Areas amenable to Standardisation in Documentation

Standardisation in Documentation Work is largely in the form of recommendations. Most of the areas in documentation are amenable to specification and guidelines. Details of these are presented in the form of a table in Sec 8 of this Paper.

3 Allied Fields of Documentation

31 Book Science and Book Production

The standardisation in the area of documentation will be facilitated and productive, if the standardisation activities of the allied and closely related areas such as Book Science and Book Production are coordinated. For example, standardisation in respect of the presentation of the text of a document, also in respect of the titles and author statements in books and periodicals would not only bring in uniformised practices in book science, but also helps in promoting the pace of documentation work. Therefore, it is found that establishment of standards in the field of documentation, book science, and book production usually fall under the purview of one body.

32 Areas amenable for Standardisation in Book Science

The different areas amenable for specification and formulation of guiding principles are presented in detail in a table in Sec 8 of this paper.

4 Efforts Towards Standardisation in Documentation

Informal efforts towards standardisation in library work was in vogue in 1870s. Melvil Dewey is said to be the pioneer in promoting the catalogue cards of the size 125 mm × 75 mm. However, such efforts were sporadic. They were largely dependent upon the backing of library associations and library schools. The standardisation activity itself was not in circulation even among the industrial world. It was only in the first half of the twentieth century that a rising demand for national standards was generated in Europe, United States and in some advanced countries. In 1901, the Congress of the USA authorised the formation of the National Bureau of Standards. The same year also saw the establishment of a private national organisation devoted exclusively to the development of standards through the co-operative action of scientists, engineers, businessmen and others. It was the British Standards Association. The growth of international trade and the increasing interest of foreign industrial development that followed World War I brought forth the need for the establishment of an international organisation for standardisation. In 1926, the International Federation of the National Standards Association was established. After World War II, this was succeeded by the International Standards Organisation (ISO). The International Electrical Commission (IEC) was affiliated to ISO and was made incharge of standards in Electrical Engineering and the associated fields. The Indian Standards Institution was established in 1947, the year of independence of India. The establishment of these standards body,

ushered in an era of organised standards in the field of economics, research and industry. The need for establishment for standards in documentation and book science was also quickly realised. This paper, highlights the efforts of Documentation Committee of the Indian Standards Institution, the British Standards Institution, and the International Standards Organisation.

5 Indian Standards Institution

51 Documentation Committee

The standards concerning documentation, and book science in India are prepared by the Documentation Sectional Committee (EC 2) of the Indian Standards Institution. The subjects of its purview among others, are Library Science, Documentation work, Technique of intellectual work, indexes and abstracts, books and periodicals, proof correction, book binding, microfilms (1). This committee is working directly under the Executive Committee. It has constituted a number of subcommittees and panels for drafting standards on the subject. This was one of the very first committees to be established. It was mainly the personality and perseverance of Dr S R Ranganathan that was responsible for the establishment of this Committee. It also became one of the active participant in the Technical Committee for Documentation, set up by International Standards Organisation (ISO). Dr Ranganathan was the first Chairman of this Committee (1947–67). Under his leadership ISI has established several Indian standards on the field of documentation and book science.

52 Work Done by the Committee

The Documentation sectional committee has published so far 21 standards on library science, documentation and book science and production. Four standards have been published on library building and furniture.

The following table presents the distribution of standards by topic.

It is evident from the table the standards are largely specifications. The guiding principles are provided in the case of Presentation of the text, Preparation of the alphabetical index, Alphabetical arrangement, Design of library buildings and library furniture.

SN	Topic		Number of Standards
	Library science and documentation	..	10
1	Classification	.. 1	
2	Cataloguing	.. 6	
3	Maintenance work	.. 3	
4	Document Reproduction	.. 2	2
	Book Science	..	9
5	Presentation of text	.. 1	
6	Presentation of abstracts, reports	.. 1	
7	Layout of Learned periodical	.. 1	
8	Presentation of prelims of a document	.. 4	
9	Alphabetical Index	.. 1	
10	Printed page layout	.. 1	
11	Library building	.. 1	1
12	Library furniture	.. 1	1
13	Librachine	.. 1	1
14	Packages for used of libraries	.. 1	1
	TOTAL	.. 25	25

53 FURTHER WORK TO BE DONE

The achievement of the Indian Standards Institution in respect of the standards for documentation has been significant. However, it must be remembered that the standards established cover only a fringe of documentation work. Standards may have to be established for providing guiding principles for the procedure of classifying, for the design of a scheme for classification, for display feature cards and shelf guides, size of the catalogue, design of form for accessioning, for placing order for books, for periodical publication receipt and control, case study recording in reference service, and design of form statistical records etc.

6 British Standards Institution

61 DOCUMENTATION COMMITTEE

The Documentation Standards Committee OC/20 of the British Standards Institution is the policy committee responsible for British standards in the field of Documentation. This includes

working through all the stages of standardization from orientation to adoption. The committee also coordinates the work of other sections of British Standards Institution in respect of document reproduction, and other matters of interest of librarians and documentalists. It also is available for consultation on the format and presentation of other British Standards. It works through a number of policy panels. A series of technical committees are in charge of the formulation of technical standards on documentation. It also represents British view on standards on documentation at the international level.

62 WORK DONE BY THE COMMITTEE

The work of the British Standards Institution in respect of establishing documentation work are presented in the following table.

SN	Topic		Number of Standards	
	Library science and documentation			5
1	Classification	..	1	
2	Cataloguing	..	4	
3	Document reproduction	..	5	5
	Book science	..		5
4	Layout of periodical	..	1	
5	Typographical work	..	1	
6	Presentation of alphabetical index	..	1	
7	Sizes of the book	..	2	
8	Folders and file	..	1	1
9	Library furniture	..	1	1
	TOTAL	..	17	17

63 FURTHER WORK TO BE DONE

The Documentation Standards Committee of the British Standards Institution has plans to coordinate with other countries such as France, Germany and USA. It aims at establishing standards for a variety of methods and practices to meet the needs of international co-operation in documentation work and service (3).

7 USA Standards Institute

71 DOCUMENTATION COMMITTEE

The United States of American Standards Institute was formed at the end of August 1966. It superseded the American

Standards Association which was formed in 1928. The Sectional Committee Z-39 on Library Work, Documentation and Related Publishing Practices was sponsored by the Council of National Library Associations. It promotes standards for concepts, definition, terminology, letters and signs, and methods in the fields of library work, in the preparation and utilisation of documents, and in those aspects of publishing that affect library methods and use. The Z-39 Committee is affiliated as national member to the ISO/TC46. It works through sixteen subcommittees. The other related sectional committees are Z-85 on Library Equipment and Supplies, and PH-5 on Photographic Reproduction of Documents.

72 WORK DONE BY THE COMMITTEE

The work done by the USA Standards Institute Z-39 Sectional Committee in the field of documentation and related subjects is presented in the following table.

SN	Topic	Number of Standards
1	Cataloguing ..	2
2	Library statistics ..	2
3	Document reproduction ..	8
4	Presentation of text ..	1
5	Presentation of abstract ..	1
6	Layout of books and periodicals ..	1
7	Prelims of book ..	1
8	Presentation of index ..	1
9	Book Numbering ..	1
	TOTAL ..	18

73 FUTURE PROGRAMMES

The Z-39 Committee's scope has been recommended to be widened to include Mechanised Information Retrieval programs. It is current working on International Standard Serial Numbering, Technical report numbering, Bibliographic entries for Microfiche, Headers and Roll Microfiche containers, Advertising of books, Preparation of scientific papers for oral and written presentation, Terminology for information science.

8 International Standards Organisation

81 Documentation Committee

ISO/TC—46 is the Technical Committee of International Standards Organisation in charge of establishing International Standards in the field of documentation. It has twenty-three participant member countries and seventeen observer member countries. The Technical Committee has delegated powers to draft standards to different sub-commi tees and working groups. The ISO/TC 46 Office is at the Hague. Subjects related to certain aspects of documentation, are dealt with other technical committees of ISO such as Terminology (TC37), Photography (TC42), Duplicator and Reproducing Machines (TC95/SC4).

Standardisation procedure is initiated by submission of a draft proposal through a member body. The Council of ISO approves projects for standardisation and entrusts them to one of the national member bodies. The National Standards Body thereafter acts as Secretariat for the subject and organises working meetings and circulates papers among the various bodies which elect to participate or to play the part of observers. Every three years a plenary session of the ISO is held in one or other member countries, and a draft recommendation is ratified and voted upon.

82 Work done by ISO

The Documentation Committee and other related committees of ISO have established 36 standards on a variety of subjects in Documentation and allied fields. The following table presents a distribution of standards published till 1970.

SN	Topic		N of standards	
1	Cataloguing	..	5	5
2	Document reproduction	..	18	18
3	Book science	..		13
4	Presentation of text	..	3	
5	Presentation of abstract, etc	..	1	
6	Layout of books and periodicals	..	2	
7	Prelims of book	..	3	
8	Presentation of alphabetical index	..	1	
9	Typographical work	..	1	
10	Sizes of book	..	2	
	TOTAL	..	36	36

83 Programme for Standardisation of Items in Computer-Based Information Retrieval System

Since 1970, the ISO Technical Committee has been working for standardisation of the various aspects involved in the computer-based information retrieval systems. This programme has to be looked into in the context of the UNISIST recommendations 16 and 17, urging for a "network and cooperative cooperation of scientific and technical libraries, information analysis centres, and data centres across national frontiers". (6). This obviously involves the use and integration of a variety of computer-based information transfer networks. Therefore, the ISO has to accelerate the process of establishing standards on computer-based information transfer systems. A variety of problems will have to be tackled particularly in respect of the preparation of a model bibliographical record. This involves the establishment of an international coding "system" for uniform, abbreviated designation of all information about documents and other sources of information. ISO/TC 46 has also drawn up two codes, one for numbering of books and the other for numbering serial publications which can be used for making bibliographical records and other information-retrieval operations. These codes also help in establishing compatibility of publishers catalogues. Jean Lochard of Association Francaise de Normalisation has suggested (2) a programme for standardisation for elements in computer-based information retrieval systems. They are as follows:

1 Standardisation of catalogue entries and format: Each cataloguing item of information should be specified in respect of its position in a sequence. The form of type should be specified mainly with a view to automatic reading;

2 Standardisation of the form and presentation of abstracts, which should be suitable for text-based information retrieval, similar to the system evolved by the International Labour Office;

3 Standardisation of rules for the selection of terms adopted as descriptors, amplifying the useful rules established by Unesco in its *Guidelines* (5). These rules are to be genuinely international. They must be quite independent of features particular to any one language;

4 These guiding rules should contain rules for the selection of equivalent descriptors in the various languages, with a set in each language, of synonymous related or associated terms which will give the maximum number of correspondence between one language and another — correspondences that may not be exact but are at least acceptable. This is a difficult problem. It must be solved satisfactorily if a truly international documentation system is to be established;

5 In order to ensure that they reach the widest possible public, vocabularies of descriptors might be published as international standards, once the necessary unification of projects relating to the various branches of knowledge and specialised studies has been completed, so that the vocabularies, as a whole would be really common to them all. The only difficulty in such an operation would be caused by those fairly common terms which vary in meaning from one branch of knowledge or technique to the other; and

6 Finally, retrieval programmes require unification. Without going as far as standardised computer programmes, which would be difficult to use in all machines, it should be possible to standardise the minimum requirements and forms that should be used in different kinds of programmes which can be handled by machines of increasing capacity.

91 Summary Table of Standards

The following Tables present details about areas amenable for standardisation in Documentation and Allied Sciences. References to established standards are given wherever possible. Note.—Y = Yes.

SN	Area for Standardisation	Amenable to	
		Specification	Guiding Principle
a	*b*	*c*	*d*
	A LIBRARY SCIENCE AND DOCUMENTATION		
	A1 *Document Selection*		
1	Selection procedure	..	Y
2	Document Selection card	Y	..
	A2 *Document Procurement*		
3	Choice of vendors	..	Y
4	Form for Book Ordering	Y	..
	A3 *Document Accession*		
5	Physical Form	..	Y
6	Design of Form for Accession	Y	..
	A4 *Classification*		
7	Design of schemes for classification	..	Y
8	Lay-out for the scheme	..	Y
9	Subject Analysis	..	Y
10	Classification procedure	Y	..
11	Scheme for classification	Y	..
12	Terminology for classification	Y	..
	A5 *Cataloguing*		
13	Design of catalogue code	..	Y
14	Lay-out of catalogue code	..	Y
15	Physical form of catalogue	Y	..
16	Inner form of catalogue (Entry Specification)	Y	..
17	Structuring of Name of Author	..	Y
18	Structure of Name of Subject	..	Y
19	Determination of author	..	Y
20	Abbreviation of titles of periodicals	..	Y
21	Style of Recording	Y	..
22	Translation	..	Y
23	Transliteration	Y	..

Established Standards by

I S I	B S I	I S O	USANSI
e	*f*	*g*	*h*
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	1000–1961	..	..
..	..	..	..
..	..	..	..
1358–1967	..	..	..
..	1311–	..	..
..	..	R 30–1956	Z39·6–1965
..	..	..	Z39·4–1968
..	..	..	..
..	..	..	..
18–1970	4148–1963	R4–1953 R853–1968	Z39·1–1963
..	..	..	..
..	..	..	..
..	2979–1958	R9–1968 R233–1960 R259–1962 R843–1968	..

a		*b*	*c*	*d*
24		Alphabetical arrangement ..	..	Y
25		Preparation of guide cards or feature headings ..	..	Y
26		Bibliographical reference ..	Y	..
27		Glossary on cataloguing ..	Y	..
	A6	*Charging Discharging of Documents*		
28		Choice of system for charging and discharging ..	..	Y
29		Design of Reader's card ..	Y	..
30		Design of Book Card ..	Y	..
	A7	*Reference Service*		
31		Design of forms		
31		Case studies ..	Y	..
32		Reference questions and answers	Y	..
33		Aids for Reader-Libra ian Dialogue ..	Y	..
	A8	*Administration*		
34		Job-analysis ..	..	Y
35		Man-power Requirement ..	..	Y
	B	DOCUMENT REPRODUCTION		
36		Readability and sizes ..	Y	..
37		Choice of process (use of Chemicals) ..		Y
38		Reading apparatus ..	Y	..

e	*f*	*g*	*h*
382–1952	1749—1951	..	..
..	..	..	..
2381–1963	1629–1959	R 77–1958 R690–1968 R832–1968	..
796–1966	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	Z39·7–1968
..	..	..	..
..	4187–1968 4210–1968 4189–1968	R218–1960 R425–1965 R423–1965	PH5·2–1963 PH5·3–1958 PH5·4–1957 PH5·5–1961 PH5·6–1961
388–1963	..	..	..
3083–1966	1896–1960 4191–1968 1371–1956	R417–1965 R419–1965 R418–1965 R452–1965 R371–1964	PH4·1–1962
..	..	..	PH3·8–1953 (R1965) PH3·9 –1953 (R1965)

a	b	c	d
39	Testing and handling		Y
40	Terminology for micro copies ..	Y	..
	C LIBRARY BUILDING AND FURNITURE		
41	Design of elements		Y
42	Lidrary furniture ..		Y
43	Librachine ..	Y	..
44	Packaging of Books etc ..	Y	..
	D PREPARATION OF THE TEXT OF THE BOOK AND ARTICLE		
45	D1 Arrangement of ideas		Y
46	Exposition and expression		Y
47	Structuring the exposition		Y
48	Numbering structural elements		Y
49	Technical terminology		Y
	D2 *Aids to Exposition*		
	Presentation of ..		
50	1 Table ..	Y	..
51	2 Graph ..	Y	..
52	3 Illustratior		Y
53	4 Footnote		Y
54	5 Bibliographical reference ..	Y	..
55	6 Appendix ..	Y	..
	D3 *Aids to Reader*		
56	1 Preliminary pages		Y
57	2 Synopsis		Y
	3 Index		
58	Choice of rendering index entries		Y
59	Alphabetical arrangement		Y
	D4 *Editorial Work*		
	Proof Correction		
60	1 Text ..	Y	..

e	*f*	*g*	*h*
2797–1964 6299–1971	1153–1955	R420–1965	PH1–28–1958 PH1–29–R1964 PH 5.1:1959
..	..	R260–1962	..
1553–1960	...	..	..
1829–7961	1292–1945		..
2661–1964	..	..	..
2662–1964	..	..	..
4731–1968	..	R215–1961	..
..	696–1960	R128–1959	..
..	..	..	..
..	..	..	..
..	..	R919–1969	..
..	..	..	..
..	..	..	..
Draft Standard	..	..	..
..	..	..	..
18–1970	4148–1963	R 77–1958	Z39·5–1969
CS2381–1963	1629–1959	R690–1968 R832–1968	..
..	..	..	..
791–1956	..	R 18–1956	Z39·15–1971
792–1964		R1086–1968	
794–1956			
795–1956	..	R214–1960	Z39·14–1971
1275–1958	3700–1964	R999– 169	..
382–1952	1749–1951	..	..
1250–1958	..	..	..

a	*b*	*c*	*d*
61	2 Illustration ..	Y	..
	D5 *Physical make up*		
62	Lay out of Book ..	..	Y
63	Lay out of Periodicals ..	..	Y
64	Format (size of book) ..	Y	..
65	Paper-print contrast and kind and quality of paper ..	Y	..
66	Type ..	Y	..
67	Lay-out of a page ..	Y	..
68	Binding ..	..	Y
69	Book Jacket ..	Y	..

e	*f*	*g*	*h*
Draft Standard	..	..	..
4–1963	..	R 30–1956	Z39·15–1971
4–1963	2509–1959	R 8–1954	Z39·1–1967
1060–1966	1413–1966	R534–1967	
Draft Standard	1311–1955	R216–1961	..
		R435–1965	..
...	..	...	...
..	..	..	..
Draft Standard	..	..	..
4–1963	..	..	..
3050–1965			
..	..	..	..

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