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### **Education for Documentalists.\***

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The umbral region of documentation consists of documentation work and documentation service. The penumbral region consists of reprograph work, translation, and use of machinery for retrieval, translation, abstracting, and indexing. The work of the documentalists lies only in the umbral region with a dash of interest as for top management in the work of the penumbral region, which belongs to different kinds of technicians. Education for documentalists should cover depth classification, subject heading, cataloguing, facet analysis of enquiry of reader, administrative subjects such as selection of documents, acquisition, circulation work, and intimate familiarity with documentation periodicals and other reference books, layout and fittings and furniture of documentation centre, and the national and international organisation for documentation. Recent fundamental research has opened the way for continuing developmental research in the umbral region. The teaching method should be largely discussional and exploratory backed by tutorial work, practical work and study by students, colloquium work, and project work. The training should fire the imagination of the students and stimulate faith in them about the unending challenge of documentation as a career and as a social necessity. The current semantic confusion, caused by the use of the term 'Documentalist' both to denote the wing of the library profession working in the umbral region and also the different kinds of technicians working in the penumbral region should be removed.

### **0 Introduction**

#### **01 TERMINOLOGY**

The terminology in this paper conforms to the Indian Standard Glossary for classification and cataloguing terms respectively [2, 3].

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## 02 HISTORICAL BACKGROUND

The need for specialised bibliographies with emphasis on specialist readers and on nascent micro-documents appearing as articles in learned periodicals, is being gradually realised since the turn of the present century. Generally speaking, the library profession was largely preoccupied till recently, with generalist readers and macro-documents—that is books instead of articles, and those too not necessarily recent. Therefore sheer necessity drove the specialists themselves to prepare their own bibliographies of specialised kind. The term 'Documentation List' was brought into vogue to underline the characteristics of such a specialised bibliography. The subject knowledge of the specialist preparing a documentation list proved to be a help as well as a handicap. The handicap was the overlooking of the possibility—nay the necessity—for forging a technique for the preparation and presentation of a truly helpful documentation list. After World War II, the downpour of learned articles in hundreds of specialised subjects highlighted this handicap. Realisation came slowly that the conservation of research potential demanded that documentation work should be treated as the work of a specialist of a new kind and that the specialist in this field better belonged to the library profession than to any other. Before this idea would get stabilized and some deeper thinking on the techniques needed—such as depth classification, chain procedure for subject heading, and facet analysis of readers' enquiries—could be widely practised among the library profession, electronics appeared on the scene. During the last ten years, the library profession is turning with wonder to the electronic engineer, fondly longs to emulate him and nimble at the fringe of applied electronics and consequently go slow in thinking on his own legitimate technique and even abandon it.

In my visits to the training centres for documentalists in some countries, I could see the adverse effect of all such forces on the content of a course in documentation, in the method of teaching, on the initial qualifications expected in the candidates for admission, and above all on the food for future thinking provided to the students by such centres. But time has already

come for realising that the best advantage of the versatility of electronics cannot be had unless the library profession keeps on continuously sharpening its own techniques falling in the umbral region of documentation.

The ideas embodied in this paper are based on my experience

- 1 Mentioned in Sec 38;
- 2 Gained in teaching;
- 21 Mathematics and Physics from 1917 to 1923;
- 22 Library science in general since 1929; and
- 3 Gained intensively in giving an advance course in Documentation at the Documentation Research and Training Centre, Bangalore, since 1962.

### 1 Area of Documentation

"What is the area of documentation in which training should be given?"—This is the first question to be considered. In this area we can recognise two regions—

- 1 the Umbral; and
- 2 the Penumbra.

### 2 Umbral Region

The umbral region consists of the following sub-regions:

S N	Description	Short name
1	Preparation of documentation list	Documentation work
2	Finding the specific needs, at the moment, of a particular reader or a class of readers	Documentation service
3	Supplying the appropriate documents—nascent micro-documents mostly—pin-pointedly, exhaustively, and expeditiously	

Work in these sub-regions belongs essentially to the library profession. A member of the library profession specialising in this work is called a "Documentalist".

## 21 LIBRARY TECHNIQUES

The specialised forms of library techniques needed to do this work efficiently are—

1 Depth classification—representing in the Class Number, each relevant facet of the subject by a Co-extensive Isolate Number; this requires the help of an analytico-synthetic classification based on postulates and guiding principles;

2 Chain procedure—establishment of subject headings. This is best based on Chain Procedure yielding chain indexing or its approximations such as uni-term and co-ordinate indexing;

3 Correct methods of building a classified catalogue—with a classified part profuse in subject analyticals that is, cross reference entries—and an alphabetical part with author and other index entries and cross reference index entries to minimise the trouble due to variant forms of name of one and the same person or corporate body or any other entity, figuring as the heading in the alphabetical entry; and

4 Facet analysis of the enquiry of the reader done along the same lines as the facet analysis of the thought-content of a document is done at the time of its being classified.

## 22 DEVELOPMENTAL RESEARCH

During the last ten years a considerable amount of fundamental work has been done on all the above library techniques. To exploit the results of this fundamental research, the library profession should put forth a vast amount of developmental research, with the aid of a vast team working in relay. This work has just begun.

## 23 EFFECT ON CURRICULUM

The effect on the curriculum for a course of training for documentalists, of the progress in the fundamental and developmental research during the last ten years is twofold.

## 24 TRAINING THE SERVICEMAN

All the students in the training course should be helped to absorb intelligently the practical methods of preparing documentation list and giving documentation service to readers. For this purpose each student should be helped to gain good familiarity with the important reference books and documentation periodicals—indexing, abstracting, and reporting ones—covering different fields of knowledge. In practice it is found that the students elect sooner or later certain specific areas of subjects in which they desire to specialise. In the area selected by a student he must be trained, by the assignment of suitable subject projects to

- 1 Scan all worthwhile periodicals in the subject;
- 2 Pick out relevant articles;
- 3 Classify each article minutely;
- 4 Catalogue each article thoroughly with all the necessary entries;
- 5 Prepare an abstract of the article; and
- 6 Assemble the entries in a helpful sequence.

He should also be given opportunity to do floor duty, meet specialists, find out their requirements, and pick out the relevant documents. The serviceman should also be trained in the administrative aspects of librarianship such as book selection, book ordering, acquisition of periodical publications, accessioning, circulation work, maintenance of books, periodicals, trade catalogues, pamphlets, clippings, etc and their periodical weeding out, lay out of the library, fittings, furniture, lighting, etc, all with a bias towards the specific need of service to specialist readers.

## 25 TRAINING IN DESIGN WORK

A few in each batch of students are likely to show special aptitude for developmental research in documentation techniques. They should be spotted out in the course of the normal period of training for the serviceman. They should be retained for a further period for training in research methods. In the case of

some, it will be an advantage to send them out for a few years to gain experience in a library or a documentation centre—the preparation of documentation list as well as documentation service—and then brought back for training in research methods.

### 3 Methods of Teaching

#### 31 ONE-WAY TALK, ONLY OCCASIONAL

'Mass lecturing' should be avoided. There may be need for an occasional one-way talk, of an inspiring kind. Their number, timing, and spacing should be decided by actual context.

#### 32 TWO-WAY FLOW IN TEACHING

The normal method of teaching should be discussional and exploratory. All the students should collectively take part in this work.

#### 33 EXTRA-CLASS-ROOM WORK

There must be tutorials for individuals and small groups. More than half the time should be devoted to students' own work—practical and observational, study of documents, group discussions among themselves, and so on.

#### 34 ULTIMATE OBJECTIVE

The objective should be to energise each student to reach his own fulness, at his own speed, along his own lines, in the context of the team life he leads in the training centre. Each student should be fired with enthusiasm and faith in the opportunity to fulfil himself by working as a documentalist.

#### 35 POTENTIALITY OF COLLOQUIUM TECHNIQUE

Weekly colloquium is an effective tool in education. The collection of documents on library science should be co-operatively explored by the students to prepare a bibliography on the topic of each colloquium. They should then study the relevant documents. This is preparatory work. In the colloquium itself

one or two controversial issues should be thoroughly discussed. Every student should participate. Every participant should quote his authority-chapter and verse.

#### 36 PROJECT METHOD

There should also be during term time, the preparation of one documentation list on an assigned topic, covering specified periodicals over a specified period. Each student should have his own topic. This project may have to be spread over a little less than half the duration of the course.

#### 37 POST-COURSE TREND REPORT

Each student should also prepare a trend report on the topic assigned to him. This may be completed in about six months as a post-course project even while serving in a library or a documentation centre. Each student should be helped to carry away the "Ferment" with him. It should not only make him enjoy documentation work and service but also to pick up, while on duty, new problems for investigation and creative work. No student should degenerate into a low level routine worker devoid of ambition to achieve something new in the umbral region of documentation.

#### 38 PERSONAL EXPERIENCE

From 1948 to 1955, I had been adopting this method of teaching in the course for the Masters Degree in Library Science in the University of Delhi. Since 1962, the Documentation Research and Training Centre (DRTC) established in Bangalore by the Indian Statistical Institute has been refining this method of teaching year by year. Some reports of the discussion in the class-room have been published at intervals [4-6, 8-10].

#### 4 Penumbral Region

The penumbral region of the area of documentation consists of the following sub-regions:

- 1 Reprograph service;

- 2 Translation service; and
- 3 Use of machinery for retrieval, translation, abstracting, and indexing.

A documentation centre should have the plant and the technicians needed for each item of work in the penumbral region—in the measure of its jurisdiction and resources and the organisational set-up within a country and in the international field. The interest of the documentalists in these three sub-regions is more like that of the top management in an industry than that of the production engineer. While the actual work in each of those three regions should be left to the technicians concerned, the documentalist should have sufficient familiarity with the plants and the processes concerned to ensure himself that prompt and efficient service is given by the technicians—that is productivity is maintained at the highest level possible.

#### 5 Semantic Confusion

The course for a documentalist should not include in it a course as for a technician in reprography or as for a translator or as for a hardware engineer specialising in Machine Retrieval or Machine Translation, or Machine Abstracting, or Machine Indexing. The term 'Course in Documentation' is now unfortunately used in a loose way to cover these to some extent or other. Sometimes it is taken to cover only one or other of these sub-regions of the penumbra. This is causing confusion almost to the exclusion of the sub-regions of the umbra. It even makes some members of the library profession to feel as it were "No bother of documentation for us. Technicians, Translators, and Electronic Engineers will manage it". This is traceable to the semantic confusion caused by the loose usage of the term 'Documentation' and inexperienced persons mistaking the penumbral region to be the essence of documentation. Every endeavour should be made to remove this semantic confusion.

#### 6 Courses for Specialist in Penumbral Region

The curricula for the different persons needed for service in the penumbral region should be drafted by the specialists



concerned. The courses for such persons should be given by organisations different from those giving courses to documentalists. Reciprocally, the curriculum for the course for the documentalist should be drafted by the documentalists.

## 7 Holistic Development

The subject in the umbral region as well as each of the subject in the penumbral region should be developed along its own lines. It should be developed with the knowledge that every other subject also is being developed. The specialist in any one subject should not strive to do the work of the specialist in any other region. The training in any one of these subject fields should not be loaded with the details of any of the other of them. These several training courses should be conceived holistically so that the maximum service is given to specialists according to the Principle of Holism.

## 8 Syllabus for a Course for Documentalists

Since 1948, the Syllabus for a Course for Documentalists is being continuously refined. The source for the syllabus at each of the different stages is given in the bibliographical references in Sec 9 [1, 7, 12].

## 9 Bibliographical References

- Note:*
- 1 The following is the list of documents used.
  - 2 Column 1 gives the SN of the respective documents.
  - 3 Column 2 gives the number of the Sec in the text, containing the reference.
- 1 Sec 8 DOCUMENTATION RESEARCH AND TRAINING CENTRE (Bangalore). Training in documentation: Prospectus and syllabus. 1966-67.
  - 2 Sec 01 INDIAN STANDARDS INSTITUTION (New Delhi). Indian standard glossary for cataloguing terms. (IS: 795: 1965) [In preparation].
  - 3 Sec 01 —. Indian standard glossary for classification terms (IS: 2550: 1963).
  - 4 Sec 38 NEELAMEGHAN (A) and RANGANATHAN (S R). Use of symbolic language in teaching: Case study. (An lib sc. 9; 1962; Paper R).

- 5 Sec 38 RANGANATHAN (S R). Array change or level change? (Lib sc. 2; 1965; Paper F).
- 6 Sec 38 ——. Classification of linguistics. (Lib sc. 1; 1964; Paper K).
- 7 Sec 8 ——. Course of training in documentation. (An lib sc. 6; 1959; Paper N). (Also published in Ranganathan (S R), *Ed.* Documentation and its facets. 1963. Chap D5).
- 8 Sec 38 ——. Documentalist and subject specialist. (An lib sc. 10; 1963; Paper K).
- 9 Sec 38 ——. Evolution of reference and documentation service. (Lib sc. 2; 1965; Paper Q).
- 10 Sec 38 — and NEELAMEGHAN (A). Design of a classification schedule, (An lib sc. 10; 1963; Paper B).
- 11 Sec 38 ——. Effective decade. (An lib sc. 9; 1962; Paper Q).
- 12 Sec 8 UNIVERSITY OF DELHI (Delhi) Diploma and degree course in library science. (*In* Ranganathan (S R). Preface to library science. 1948. P 178-92).