

Chapter 1

Introduction

“Sanskrit was at one time the only language of the world. It is more perfect and copious than Greek and Latin.”

.....Prof. Bopp

1.0 Introduction:

Library and information centers are playing vital role in the information society by providing required pinpointed information to the users. The functions of libraries are three-fold i.e. to acquire information, organize information in such a way that it can be retrieved whenever required, and disseminate the information, the library has acquired to users through various services like reference and information services. Reference services fulfill last function and may vary from library to library, but most of the libraries have an information or reference desk where assistance from librarian is made available to users. Library profession is expanding fast and helping readers in getting right and accurate information as promptly as possible using different published sources of information. The reference and information services are essential in all types of libraries that help users in getting proper information. The reference sources also possess its own specific criteria and use is also need based.

There are three main types of reference assistance made available to users from the libraries:

- Use of library, including location of materials, use of the catalog, use of computers to access information, and the use of basic reference sources.
- Identifying library materials needed to answer a question and solve the query.
- Providing brief, factual answers to questions, such as addresses, statistics, phone numbers, meaning of the words, meaning of terms etc.

Reference service has received prominence in any library as it solves the questions of the users may be a trivial one like knowing the exact meaning of term and words used in expressing the language. For providing reference services different reference tools are also made available and used based on its utility and content. The different reference

tools consulted while providing reference services are : encyclopedia (General and Specialized) (which covers a large collection of paragraphs or essays about one or many subjects, often arranged alphabetically), directories (names and addresses of persons, organizations, or businesses, industries etc), dictionaries (all kinds meaning attached to a particular word or phrase or term e.g. biographical, acronyms and abbreviations, sign and symbols, language, technical glossaries, thesaurus, etc. covers brief definitions of a word, or very detailed entries which include the etymology of a word etc), almanacs, atlases and year books (collections of facts, charts and statistics, news events from that year, famous birthdays, and lists of Presidents / Prime Ministers etc.), concordances (index, or listing of words in a book or text, referring the reader to the section of the book where the word appears), gazetteers (contain a list of names of places, usually with some additional information), field guides (a manual for identifying objects in the field of interest), handbooks and manuals (procedures for doing things, such as activities, or writing references), abstracting and indexing journals (contain references to sections of works, such as journal articles, conference papers, but also other literature which is difficult to find in library catalogues, such as theses, reports, patents, standards etc.) etc. Every reference tool has its own characteristics and speciality and helps users in getting basic information. While providing reference service to the users, especially ready reference service these reference tools, (except indexing and abstracting) are very useful and required in libraries to respond to day to day queries of users. Among these encyclopedia and dictionaries are the more powerful and useful and users themselves use these resources for getting the basic desired information.

1.1 Reference Service:

Reference Service is the *Summum Bonum* (Latin word meaning highest good service) of all library activities, because through this process, information embodied in the sources such as books, periodicals etc, and transfers to the targets of utilization. It is essentially humanistic in approach. Perhaps quoting Foskett's observation ".....reference service is humanism in practice, because the aim is to help people, in one way or the other, to secure greater happiness through the possession of knowledge", here would be in order (Foskett 1952 and 1964). Hutchins (1948) also defined reference service as "a service

that includes the direct personal aid within a library to persons in search of information for whatever purpose, and also various library activities especially aimed at making information as easily available as possible”. Ranganathan (1961) defined the term simply as “the process of establishing right contact between a reader and his document in a personal way”. Similarly Katz (1969) also defined reference service but added basic information sources used for providing reference service to the users and these includes all the reference tools like encyclopedia, dictionaries etc.

These definitions covers basic facts about the functions of reference service which answers the queries received from users using different reference tools and sources as well as providing regular reference services to users. However for reference service to be efficient, availability and utilization of good reference tools are essential pre-requisites. These definitions also indicate the functions and activities covered in reference service and assist users for:

- i) Providing information on the queries received from users
- ii) Helping users in using reference tools and sources to get the desired information
- iii) Preparing reading lists and bibliographies as well as providing indexing and abstracting services
- iv) Providing CAS and SDI services

Reference service comprehends a wide variety of activities and involves broadly the following objectives:

- i) Providing information using reference books in response to specific queries of the users.
- ii) Giving instructions in the use of, and guidance in the choice of documents, and
- iii) Giving referral services for queries which the information centre/ systems cannot answer.

1.1.1 Types of Reference Services :

The types of reference services are mainly grouped in two heads viz. ready reference service and Long range reference service. But different scholars identified different types based on the queries solved or information provided.

James I Wyer (1931) identified and proposed three theories of reference service i.e. conservative, moderate and liberal. Where as Samuel Rothstein called them minimum, middling, and maximum.

i) Conservative: It includes giving occasional personal assistance to the inexperienced and bewildered reader. It limits the help to pointing the way only and so it is traditional in nature.

ii) Moderate: The moderate reference service goes beyond providing mere instruction to actually helping the reader in using the book or finding the document and facts, etc.

iii) Liberal: It includes the provision of the full and direct supply of reliable information to the readers.

Edward B. Reeve and others (1976) have categorized the activities of reference staff into the following five categories on the basis of related functions. (also at <http://www.netugc.com/types-of-reference-and-information-service>)

i) Instructional Activities: These are characterized by explicit teaching function for consulting reference sources.

ii) Skill Maintenance Activities: These are related to up-dating the knowledge of reference tools and its proper utility.

iii) Patron Service Activities: This deals with providing information to the users of the reference service.

iv) Maintenance Activities: These are house keeping activities.

v) Surrogate Activities: These are those activities which the reference staff who performs on behalf of the other departments / sections of the library.

S. R. Ranganathan (1961) identified two aspects of reference work - Ready reference service and Long range reference service.

i) Ready Reference Service: Most of the ready reference services are of the nature of fact finding types that can be finished in a very short time – in a moment if possible. The librarian generally uses reference book for providing such kind of services. The need of ready reference services arises from the fact of the complex nature of a reference book, its artificiality, and arrangement of information. The eminent person, foreign dignitaries or scholars generally approach for such type of services. Sometimes some regular

customers also need the fact finding reference service because of shortage of time on their part.

iii) Long Range Reference Service: The long range Reference Service is based on consulting every possible source of information to arrive at the required information; as such, it is not possible to render this type of service immediately. The time needed may range from half an hour to weeks. The search in the long range reference service starts at the reference books and then goes to the ordinary books, pamphlets, reports, articles in periodicals, etc. If the information is not available in the library then the search can even go to other local libraries and occasionally to the other libraries in the country. The long range reference service provided today can become the ready reference service tomorrow, as by this time the reference librarian will be able to locate the material quickly from his past experience. Slowly, the scope of long range reference service started expanding. The bibliographical service, referral service, translation service, etc. are considered as long range reference services.

In 1942, the American Library Association (ALA) undertook a series of library job analysis. This association has stated the following six functions of Reference Service

i) Supervision Function: This function consists of the proper organization of facilities, reference section, selection of reference materials, direction of personnel, and study of the library clientele.

ii) Information Function: There should be an Information Desk where enquiries are received and routed to proper section. The Reference Librarians should be prepared to answer all types of questions and should be able to produce the sources that would answer the questions.

iii) Guidance Function: The Reference librarian should be able to recommend a good book for respective fields. He should be able to give guidance to the readers regarding higher education, career related information or profession or vocation. He can also give guidance to the readers in the location of the document, in the choice of books and other reading materials.

iv) Instruction Function: The Reference librarian should instruct the readers about the working of the library, the location of the material, the use of the catalogue card, the reference book, etc. An initiation or orientation program should be arranged to familiarize

the readers with the library practices and procedures.

v) Bibliographic Function: There should be a preparation of bibliographies of interest to the readers so that they are able to know about the books and other reading materials required for their respective subjects.

vi) Appraisal Function: The libraries should possess the right kind of materials and reference collections and the staff should be able to get the most out of it.

The focal point of reference service is answering questions posed by the user. Based on the activity that are performed to meet the user demand, the Reference and Information service can also be categorized as:

a) Instructional: Instruction in using the library and library resources (bibliography, encyclopaedia, OPAC), assisting the end user to locate the appropriate material within and outside the library, etc. are an important function associated with the Reference and Information Service of a library. Questions that range from as simple as "Where are the bound volume?" or "Where is the catalog?" to research questions that may take hours or even days to properly answer are to be dealt with in this section.

b) Referral Service: It directs enquirers to a source of information which may be an organization or an individual expert. Generally, when a library or information centre does not have the material and cannot obtain it from the sources but it knows the exact location of the document / information, then it can refer the user to the sources of information.

c) Information Scouting: Information scouting service consists of keeping abreast of who has what information and where. Then it can refer the request to the appropriate person and place in the organization or outside it or both. Information scouting is an extended form of referral service.

d) Citation Verification Service: Citation Verification Service is intended to verify the citations/references and authentication of bibliographical details of books, articles, reports, theses and other published materials obtained from sources other than the authoritative indexing and abstracting services offered by reputed publishers and licensed database producers. The library patrons need this type of service for the preparation of assignments, dissertations, theses, and project proposals.

e) Literature Search / Bibliographical Survey: Literature search may be defined as a systematic search for literature in any form on a particular topic. It forms the very first step of a research pursuit. Otherwise, if a research work is duplicated the valuable time, money and labour of the researcher will be wasted. The literature search is also needed to present the latest available facts in writing articles or topic on any theme. Special library and information centres generally provide literature search facilities to its patrons on demand. Later, the result of the literature search is circulated to the enquirers. A sub type of this service is also known as Database Search Service (DBSS), which intends to obtain information critical to the proposed or ongoing dissertations, theses, post-doctoral research and other project work by consulting different online and offline data bases.

Based on the above mentioned objectives, researcher isolated different types of reference services which have been developed in general. They are;

1. **Ready Reference Service:** This service consists of finding answers to specific queries put by users and usually involving search in the extraction of information from a reference book such as an encyclopedia, a handbook, a directory n, a dictionary etc. The finding of the answers usually takes a vey short time.
2. **Referral Service:** As no information centre/system is self-sufficient in its resources, it should at least be able to direct enquires which it can not answer to other institutions or individuals who may be able to provide the appropriate answer. This service should be facilitating through the use of aids, such as directory of institutions in the field, directory of the specialists in the field etc.
3. **Reader Guidance:** This service consists essentially in guiding the reader to identify sources of information in their fields of interests and to locate the relevant information in the center's library or elsewhere. Knowledge of the display and location of various materials can be provided through guidebooks, flowcharts, self-orientation kits, demonstration lectures etc.
4. **Retrospective bibliographies:** This service involves the compilation of the documents on a specific subject in response to a reader's query. It includes activities such as retrospective search, selection and listing of all documents- books, articles, technical reports, etc. with necessary annotations and abstracts.

1.1.2 Pre-Requisites for Reference Services

One of the essential pre-requisites for providing reference service is an efficient and effective Reference Librarian who possesses following qualities and skills. (Karisiddappa 1983)

- a. Knowledge of reference books or resources available
- b. Knowledge of user needs for providing information
- c. Knowledge of evaluation methods and skills as well as gathering the information from different sources
- d. Ability to interlink information user needs to appropriate reference sources and tools
- e. Provide information and reference services to the users.
- f. Fairly good knowledge of different technologies and handling internet surfing , information retrieval system etc.

Another pre-requisite is the availability of reference tools. But, the world of information users is a changing fast. It not only means that the users themselves may change from time to time due to various socio-economic forces, but it may also imply that the same user may change in his mental makeup over a period of time. Thus, information built at one time may not be sufficient and may not be useful at all time to come. In addition, new resources may enhance the value of already existing resources or may make the earlier resources absolute. Thus the work of reference work goes on changing. Thus the work of reference books has to be kept ever up-to-date to make the collection useful. For this purpose, a mechanism- with suitable guidelines- has to be developed for evaluation of reference works. These guidelines for evaluation should cover factors such as authority, scope, and coverage, treatment, format, timelines, special features, etc.

1.1.3 Reference Tools:

A reference work is a socio-economic product. It is the result of a kind of economic activity. A reference work hastens the deliverance of information for use. Thus the reference work is a carrier of information transfer. Therefore in its compilation and production, the information needs of the potential users should be kept in mind. Hence

there is always a need to identify the information requirements of the users and to tailor-make the reference works. As a result, a variety of reference works are generated to meet the demands of a variety of users.

Reference Book: The term “Reference book” is an elusive term which seems to defy an explicit meaning. Therefore Ranganathan (1961) rightly choose to define a ‘Reference book’ by internal characteristics of it, instead of basing the definition either on function or on the practice of library classification. To quote him “... it (a reference book) is characterized internally by an ensemble of disjointed entries of short, through varying lengths. The sequence of entries is not determined, strictly by intimates thought sequence. It is determined by the scheme of arrangement chosen. It is often alphabetical in main. It is occasionally asymmetric. Even then, the connection between consecutive entries is not as compelling and continuous or as free from jerks as between the paragraph in an ordinary statistics, diagrams, tables, maps or lists including lists of document with or without abstracts, annotations and other features” (Ranganathan 1961).

Reference sources such as dictionaries, encyclopedia, almanacs, atlases, etc. are the basic tools helps in getting the answers to fact finding answers. Reference sources provide answers to specific questions, such as brief facts, statistics, and technical instructions; provide background information; or direct you to additional information sources. In most libraries, reference sources do not circulate and are located in a separate reference collection. Reference sources are designed to be consulted rather than read through. Their design is generally dependent on the type of information and treatment provided. Although the term reference "book" is frequently used while providing reference services but, reference sources also covers books, serials, on-line databases or the Internet in the present era. Reference sources are selected choosing the right one based on the requirement and the base of the query.

In this present work documents that are used for providing ready reference services have been referred to as reference tools, reference books, reference works, etc. These terms have been used interchangeably to avoid monotony. However when a distribution was

sought be made for the different varieties of reference tools, terms such as “Dictionaries, Encyclopedia, Bibliographies etc.” have been used.

1.1.4 Different Types of Reference Tools:

Two major categories of reference materials used are general and subject. General sources include all subjects and present overviews of topics. Reference materials focused on specific subjects can provide more in-depth coverage. There are reference sources that provide information on specific subjects as well as general sources that provide information on many subjects. In general, reference sources are either general or subject specific. Collins (1994) pointed out that despite the wide variety of reference sources available they are categorized into a handful of groups and selected right type of reference sources based on the requirements. The following table elaborated the usage of the reference sources.

Table 1.1: Use of reference tools.

Queries	Reference tools or sources used
Words	Dictionaries
General information/Overview of topic	Encyclopedia
Names & addresses of people, organizations, institutions, companies	Directories
Profiles of people	Biographical Dictionaries
Places/Maps	Gazetteers or Atlases
Facts and Statistics	Almanacs
Formula, Tables, How-To-Do-It	Handbooks and Manuals
A person's work	Reviews or Criticisms
Dates, outlines, historical timelines	Historical tables, Chronologies, Historical yearbooks
Periodical Articles	Indexes or Abstracts
Books and other sources	Bibliographies or Guides to Literature...

(Source: <http://library.uaf.edu/l101-reference-services>)

Thus varieties of reference tools or sources used frequently are Dictionaries, Encyclopedia, Biographies, Bibliographies, Catalogues and Indexes, Gazetteers, Maps and Atlases, Travel Guides, Directories, Handbooks and Manuals, Almanacs and Yearbooks etc.

1.1.5 Reference Tools Useful for Library Services:

Library and Information Science is an empirical field which studies relation between the knowledge seeking behavior of individual and the knowledge content in the documents and in other information sources. It is a field in which every user's information needs are related to the information works from the point of view of its use, which can be very well derived from the principles of Library and Information Science. One of the most important sets of principles in Library Science is Dr. Ranganathan's five laws of Library Science. It says "Books are for Use". Here the term 'use' interrelated to mean intellectual use for the productive purpose. Further the definition of the 'use' is defined, perhaps, explicitly by the other laws – "Every reader his or her book", "Every book its readers", "Save the time of the readers", "Library is a growing organism". In other words, Ranganatha's five laws of library Science can form the basis for a critical evaluation of Sanskrit dictionaries in the present study.

Every reference tool has its own characteristics and speciality which helps users in getting basic information. While providing reference service to the users, especially ready reference service the above cited tools (except indexing and abstracting) are very useful and required in libraries to respond to day to day queries of users. Among these encyclopedia and dictionaries are the more powerful and useful and users themselves use these resources for getting the desired information. To provide reference service efficiently it needs the proper collection of reference tools which is the prerequisite of the service. Similarly there is a need to understand the real resource selection and its contents. Using the reference tools it is possible to provide fact finding services and quick reference services to the users.

1.2 Importance of Dictionaries:

Dictionaries are proved to be the best reference tools for providing fact finding information to different users for different purpose. Dictionaries are always referred by the users for finding out the proper meaning and usage of the terms or words. There are different types of dictionaries available for getting required data and its scope also varies in its scope e.g. biographical, encyclopedic, historical, etymological, general and special

purpose dictionaries etc. A dictionary or encyclopedia is treated as best information tool used for getting authoritative primary information and proper use of words or terms in their writing in various contexts and these are referred quite often by the learner and teaching professionals.

Every language has brought out numerous dictionaries in different forms and formats for various uses and purposes covering different contents in to it. These are broadly grouped as general and special dictionaries as well as glossaries, thesaurus, biographical etc. The purpose behind developing such dictionaries is very specific. In all the languages the meaning of the words and terms varies in different concepts similarly is the case of Sanskrit language. In Sanskrit language manuscripts and literature is available in abundance as this is the base language or primitive language and all the languages are based on this language. The use of terms and words or phrases varies based on the concepts and hence every time users have to refer to the terms enlisted in it. Sanskrit is the basic language and its importance is different among all the languages. There are many projects established for creation of Sanskrit dictionaries using traditional literature available in various organizations.

1.3 Need of Dictionaries:

Language is the vehicle for communication among human beings. Language has phonetic, written, semantic and syntactic features. To make languages standardized and communicative to large number of person, dictionaries are needed. Dictionaries are basic, common and familiar reference tool used by all for different purpose to get the proper meaning. A dictionary lists out the words of a language or subject in specific context and for different usage. Dictionaries are termed as “Lexicons”; and the word is derived from Greek word “Lexickon” meaning list of words of ancient language with meanings and the art of preparation of lexicon was called as Lexicography and the compiler of lexicon as Lexicographer. Thus dictionaries have traditional usage and also have importance in understanding the words used in classical literature. Dictionaries are available in different types and its use is also specific. It is just to consult and has reference value. Now online dictionaries are also available over the net. Different languages have developed dictionaries either monolingual or bilingual or multilingual for proper use of words as

well understanding the meaning of text developed by someone for reading or academic purpose. Since the dictionary is useful to learners and teachers it has received great value in education and research sector. There is need to study the different features and also record the different types of dictionaries available in different languages since past. Such type of compilation is not available but useful for the educationist of different spears and librarians can also perform the task well in providing reference services to users by understanding the meaning of terms spelled out by the users in different relations. Such studies may be very useful to the research scholars, academicians and literary experts as well as librarians to support user's expectations.

1.4 Reason for Selecting the Research Topic:

The art and science of preparing or compiling dictionary is known as lexicography. Before the development of modern Sanskrit dictionaries the dictionary compilation process started with developing monolingual, bilingual, trilingual or multilingual dictionaries. The dictionaries were compiled to serve the different purposes. Lexicography was defined as the writing or compiling of lexicon or dictionary, the art of writing dictionaries or the science of methods of compiling dictionaries. The term lexicography was coined as early as 1680 (Bharati 1991). Sufficient numbers of "Kosas" are available in manuscript form and also later edited and printed in book form. The kosas or lexicons were devoted to coverage of several domains from celestial (used to describe things that have to do with the heavens such as angels, spirits, stars and planets) to terrestrial mostly covering the synonyms, meaning of words and homonyms. All the lexicons do not claim to have exhaustive or complete, the purpose is to just amplify the meaning of words occurring in Sanskrit texts. The traditional lexicons in Sanskrit were having the linguistic principles base but the modern dictionaries in Sanskrit are not based on linguistic principles.

Increasing changes are occurring in the usage of different languages and have continued to upgrade and add the new words in it and becoming more complex for getting each word known to a layman. However to get the proper meaning of the words or terms to use and describe the concept it is difficult to present without understanding the meaning of the word used in language. The need of the dictionary is felt in such cases. A

dictionary is a very important tool for anyone who is learning a new language or gaining mastery over the language as well using a word after understanding the proper and appropriate meaning. Different types of dictionaries are available and it is necessary to evaluate them for its proper usage. Technical studies of dictionaries might be useful for increasing the use of dictionaries. The efforts made towards listing of dictionaries and its annotations definitely are useful to the learners, teachers and researchers in different areas. There are variety of dictionaries and types are available but there is no proper compilation and also not annotated for its effective use. The researcher has worked in the institute where the development of encyclopedic dictionary in Sanskrit language is in progress and assisted in compiling the Sanskrit literature available in the institute and performing the assistance task, came across many challenges in aggregating the dictionary sources in Sanskrit languages and hence it was decided to conduct a study to compile compendium of the available Sanskrit dictionaries since 1800 AD and also annotated physically available Sanskrit dictionaries to enhance its usage for the research and study purpose.

The researcher was actively participated in the project of Sanskrit encyclopedic dictionary development and involved in different activities related to library for assisting to Sanskrit scholars in rearrangement of entries of titles of books according to concept in required order and arrange as per the dictionary order for them. The requirements of scholars are fulfilled form the indexing of the terms i.e. vocables and locating the documents in Sanskrit department, for this purpose a unique development of Sanskrit related subject coding / grouping was developed by researcher to locate the physical references. The main purpose behind this activity was to develop an encyclopedic dictionary as well as preserve the literature in systematic way and also initiated a digitization project in the department to digitize the documents and vocables on the slips. The system developed by the Sanskrit scholars to locate the vocable references in the original document was mapped by the scholars and the documents were reorganized in the department accordingly to refer to the original document if required by the user. The experience of developing information products at institute developed a concept of collecting the data from Sanskrit literature and develops dictionaries.

While searching for the meaning of the Sanskrit terms, Sanskrit dictionaries available in institute were consulted and were used but it was noticed that sometimes single dictionary do no serve the purpose and more than two three dictionaries are to be consulted for getting proper or different meanings associated with the term. Hence the researcher searched for the availability of dictionaries in other libraries of Pune city. It was noticed that there is no proper compilation available for the dictionaries in Sanskrit language and hence tracing the availability of Sanskrit dictionaries were difficult. There are few exercises and efforts made by national library Kolkota and developed a compilation “A Bibliography of Dictionaries and Encyclopedia in Indian Languages”, published in 1964. Since the compilation was for all the languages in spite of that the Sanskrit dictionaries recorded in it till 1964 were nearing to 600. But the publication covers only list and bibliographical details to get an idea of publication of dictionaries in Sanskrit, but contents and usage based evaluating criteria of a reference tool is not applied in it (Not annotated). Hence it was thought that there is a need of annotated compilation of Sanskrit dictionaries and made it available to the researchers for making best use of dictionaries. However, an effort of analyzing dictionaries from the ancient to the current is a fruitful exercise based on evaluating criteria, which provides guidance pointing which dictionary source is more useful to researchers as well as laypersons. Thus a proposed plan was made to annotate Sanskrit language dictionaries.

Further the compilation of Sanskrit dictionaries with annotations is going to be a useful source for researchers in Sanskrit language. Hence the concept developed in to action and decided to collect the possible available data of Sanskrit dictionaries published from 1800 AD, the beginning of developing the dictionaries. An effort is also made to trace Sanskrit dictionaries published before 1800 AD and this might be a best compilation for the Sanskrit language and literature. Hence the topic selected for the research study is “A Technical Study of The Dictionaries Published in Sanskrit Language since 1800 A.D”. In this process efforts are made to elucidate importance of dictionaries, their types and development, historical growth, as well as evaluation of dictionaries and typology for designing the dictionaries.

1.5 Development of Sanskrit Language:

Sanskrit is a historical Indo-Aryan language, the primary liturgical language of Hinduism and a literary and scholarly language in Buddhism and Jainism. Developing from Vedic Sanskrit, today it is listed as one of the 22 scheduled languages of India and is an official language of the state of Uttarakhand. Sanskrit holds a prominent position in Indo-European studies. The corpus of Sanskrit literature encompasses a rich tradition of poetry and drama as well as scientific, technical, philosophical texts etc. Sanskrit continues to be widely used as a ceremonial language in Hindu religious rituals and Buddhist practice in the forms of hymns and mantras. Spoken Sanskrit has been revised in some villages with traditional institutions, and there are attempts at further popularization. The language is grouped in to Vedic Sanskrit and Classical Sanskrit. (<http://en.wikipedia.org/wiki/Sanskrit>)

Thus, Sanskrit is the classical language of Hinduism and world, and also is the oldest and the most systematic language in the world. This language has gigantic literary treasure related to all branches of science and all works of life. The vastness and the versatility, and power of expression can be appreciated by the fact that this language has 65 words to describe various forms of earth, 67 words for water, and over 250 words to describe rainfall. The Sanskrit grammarians wished to construct a perfect language, which would belong to no one and thus belong to all, which would not develop but remain an ideal instrument of communication and culture for all people and for all the time. Varakhedi et al (2007) rightly indicated in his publication “An effort to develop tagged lexical resources for Sanskrit” that Sanskrit is the first language to have a very precise grammar formalizing authored by Paa.nini, two thousand years ago. No other language has such a great tradition of grammar, formalism, which is sound, perfect and very formal in nature.

The Sanskrit scholars have deeply studied Sanskrit language and have developed various reference and information sources using Sanskrit literature to make the proper use of language and connote the meaning of the words to the followers. The original sources are available in the form of manuscripts and then in printed forms. Different information sources available in Sanskrit language like dictionaries, encyclopedia, bibliographies etc.

are scattered and are also not well organized. There is a need to conduct a study and find out various reference tools especially dictionaries stating different terms and relates to types developed using Sanskrit language and literature for better usage in different areas. Sanskrit is still one of India's official languages, although its use is limited only in the vernacular. Early Sanskrit was written using Brahmi or Kharosthi scripts. It is now usually written with the Devanāgarī alphabets and script.

Librarians working in the institutes or organizations, where more Sanskrit literature is available are busy in preserving the Sanskrit literature and also building new information resources for different usage like dictionaries, reference collections, bibliographies, compilations, encyclopedia, encyclopedic dictionaries, multilingual dictionaries etc. To maintain and use the resources there is a need to develop reference sources and make them available to users. The difficulty in using the resources is that there is no proper record of the collection of the resources at one place. As knowledge disseminators (libraries) have responsibility to develop and preserve the information products from the original literature with the help of Sanskrit scholars and library professionals for developing terms and finding appropriate meaning and its proper indexing and systematic presentation in useable form respectively.

In India Sanskrit and Indological Research Institutes are established at various parts. The function of these institutes is to develop information resources from the available collection or to record the resources properly. University departments, research institutes, Indological institutes, are the backbones in the development of Sanskrit information products based on literature. In Maharashtra State alone there are nine organizations managing and maintaining Sanskrit literature and out of these few prominent institutes in Pune are Bhandarkar Oriental Research Institute (BORI), Deccan College Post Graduate and Research Institute, Pune University (Center for Advanced Studies in Sanskrit), are also imparting in generating information products using traditional Sanskrit literature.

Sanskrit literature is the base for all knowledge and need to preserve for developing various information sources. A review of information sources available in Sanskrit literature is necessary and need to compile such sources available since 1800. Among

various information sources available, dictionaries are used for getting meaning, concept, etymology, usage of different references in various contexts etc.

1.6 .Related Studies in the Context of Research Study

Generally the literature review is an objective analysis of contributions made by authors, researchers, experts including technical specialists. It is a chronological presentation of growth and development of literature in a particular field over a period of time. The present review analyzes the way in which subject fields have grown indicating various components that have added value. The very purpose of a literature review is to understand the experimented methods, techniques and skills of a phenomenon and its procedural presentation. This is believed to guide the researcher to formulate and identify the objectives, hypothesis, methods for collection and analysis of data. Literature review enables the researcher to restructure, reorganize and recast the presentation in light of work done at various levels. Therefore review of a related literature is considered as an integral part of research studies.

While conducting literature review, the different secondary information resources and reference books were consulted. These include Library and Information Science Abstracts (LISA), Library, Information Science & Technology Abstracts (LISTA), Allen Kent's Encyclopedia of Library and Information Science, popular databases like Emerald, Jstore, Ebesco, Vidhyanidhi, Proquest UMI, Australian Digital Thesis Program, Science Direct, INFLIBNET Theses Database, etc. These resources enabled the researcher to get the information published in different forms and assisted in looking at the problem from various angles.

The effort was made to investigate the studies made so far in framing annotated compilation of dictionaries in Sanskrit or any other languages or any compilation available. The review of literature indicated that there are only efforts made in compiling bibliographical sources for dictionaries or reference sources in different languages but the literature related to Sanskrit annotated bibliography is not come across in search. The following few research studies or compilations are reported but they reflect in different concepts:

- 1) Kulkarni, V V (1951) Reference literature in Marathi, Thesis submitted to Nagpur University (Unpublished Thesis)
- 2) A Bibliography of Dictionaries and Encyclopedia. 1964, National Library, Calcutta
- 3) Bibliography of Indian Literature 1901-1953 and 1962-1974. Sahitya Academy, New Delhi.
- 4) Karisiddappa C R (1983) Reference tools in Kannada published since 1800AD : A technical Study. (Thesis submitted to Gulbarga University, Gulbarga). Research Guide: Dr S R Gunjal. (Unpublished thesis).
- 5) Encyclopedia of Indian Literature (1987) , Sahitya Academy, New Delhi
- 6) Varma, Ajay Kumar (1988) Origin and development of reference literature in Hindi : A critical study. Thesis Submitted to Jivaji University, Research Guide: Dr S M Tripathi (Unpublished Thesis)
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However the present study focused only on Sanskrit dictionaries which are prominent reference tool used by every one. After analyzing these studies researcher felt to undertake the study in Sanskrit language dictionaries entitled “A Technical Study of The Dictionaries Published in Sanskrit Language since 1800 A.D.” which is the compilation of dictionaries with annotations.

1.7 Major Studies Having Exclusive Focus on Dictionaries in General:

Dictionaries plays different role for different sectors and for different users, the main role is in education, learning and teaching, researchers, scholars, towards development of concepts, useful to translators, etymologists, for machine translations etc. Generally the users are relied on dictionaries as an authoritative source of information. The dictionaries ensure the successful access to information. Dakun (2001) made a detailed study on the usage and role of dictionaries and identified the best role is to assist users especially researchers, students, learners and teachers. The role is to explain the meaning and vocabulary involved in terms and words or phrases. The author concluded that dictionaries, whether monolingual or bilingual, play an important role in language learning. Dictionary-users in research studies all tend to show a clear advantage over non-users in the number of words learnt.

The types of dictionaries presents by Winchell (2012) are general purpose dictionaries, specialized, abridged, unabridged, rhyming, slang, polyglot, historical, illustrated, etymological etc. The dictionaries available in different forms e.g. print, online and sometimes available in word processing software’s for usage. The author also listed world’s top ten dictionaries viz. The American Heritage Dictionary, Barlett’s familiar quotations, Dictionary of American Regional English, MacMillan Dictionary for Children, Merriam Webster’s Collegiate Dictionary, New Oxford American Dictionary, The Oxford English Dictionary, Roget’s International Thesaurus, Webster’s Third New International Dictionary of the English Language etc.

University of Alaska (<http://library.uaf.edu/lis101-reference-services>) has illustrated the types as general dictionaries (for definitions, pronunciations, syllabication, and usage), historical dictionaries (history of a word from its introduction into the language to the present), etymological dictionaries (analysis of components of words and emphasize the linguistic and grammatical history of the word usage), Dictionaries for foreign Languages, Subject dictionaries (definitions in a subject area), other dictionaries which include dictionaries of slang, abbreviations, synonyms, antonyms, acronyms, reversals, rhyming, idioms, phrases, and guides to correct usage etc.

Vocabulary.com site has listed the types of dictionaries as, bilingual dictionary (gives equivalent words in two languages specified), collegiate dictionary and desk dictionary (an abridged dictionary convenient to hold in hand and carry any where) , etymological dictionary (gives historical origins of the words), gazetteer (a geographical dictionary available at the end of atlas), learner's dictionary or school dictionary (specially written for learners of languages), little dictionary or pocket dictionary (Small enough to carry in pocket), Spell checker or spelling checker (and electronic dictionary in a word processor used to catch misspelled words), un abridged dictionary (a dictionary not shortened by omitting terms or definitions, and becomes comprehensive), Wordbook (a reference book containing words with meanings) etc.

(<https://www.vocabulary.com/dictionary/lexicon>).

Arvind Kumar (2011) in his communication compiled the views regarding preparation or making of dictionaries. In this communication he has expressed the tradition of glossaries, thesauruses and dictionaries. Author goes back to the Vedic age, between 3000 and 1500 BC. The world's first-known and extant thesaurus reported is Nighantu, a glossary of 1,800 Vedic words, arranged subject-wise. Its compiler, Kashyap, was bestowed with the lofty title of Prajapati, the progenitor. Nirukt, the sage Yask's treatise on Nighantu, may have been the world's first dictionary-encyclopaedia; it gives words and their meanings which are elaborated in great detail. He further added that there were several subsequent compilations of Sanskrit dictionaries. The Shabdakalpadrum, a Sanskrit dictionary of an unknown date, lists twenty-nine such works, most of which were arranged subject-wise and were, in a broad sense, thesauruses.

According to the views of Arvind Kumar (2011) Amarkosh (roughly written between the fourth and the tenth centuries AD) is the bible of all the Sanskrit thesauruses. Its author, Amar Singh (Amar Simha in Roman Devanagari) gave his work the title of *Namalinganushasan* (the Discipline of Names and Genders). It was also called *Trikaand*, because it was divided in three hierarchical cantos (main division of long poem) with twenty-five chapters having a total of 8,000 words in 1,502 *shlokas* or verses. It is popularly known as *Amarkosh* to acknowledge the achievement of its author, just as the English thesaurus, in all its editions and variations, is better known as *Roget's Thesaurus*.

Even before Independence, many individuals and organizations in India were making dictionaries in different languages and modern India's attempts in lexicography was continued. India's independence from British rule in 1947 greatly accelerated the process; the nascent nation had to come to terms with a new world. This gave a new urgency to dictionary making. He further added that there were several subsequent compilations of Sanskrit dictionaries. The *Shabdakalpadrum*, a Sanskrit dictionary of an unknown date lists about 29 such works and most of them are arranged subject wise and were in a broad sense treated as thesauruses.

Deccan College Post Graduate and Research Institute (Department of Sanskrit and Lexicography) a pioneer institute in rearing the Sanskrit culture and has also made an effort in bringing out the encyclopedic dictionary named 'An Encyclopaedic Dictionary of Sanskrit on Historical Principles' based on the historical principles, rare manuscript and print literature available at this institute. The Sanskrit scholars were involved in preparing the dictionary. It consists of over one crore data references (from various disciplines) extracted during 1948 up to 1973, from 1500 Sanskrit texts right from the Vedas up to Hāsyaṛṇava Prahāsana of 19th century, which cover the entire gamut of Sanskrit Literature. This scriptorium is the treasure trough of information which proves useful for the scholars forever. From 1973 editing of the Dictionary began and in 1976 the first part of the Dictionary was published. So far 25 parts of the Dictionary i.e. 8 Volumes (consisting of 3 parts each) and 1st part of 9th Volume have been published.

These volumes have been highly appreciated by Sanskrit scholars in India and abroad. (http://www.deccancollegepune.ac.in/dept_sanskrit.asp)

1.8 Aim of Research:

In the present research study an attempt is made to compile the Sanskrit dictionaries published since 1800 and also prepared the annotated bibliography of physically available dictionaries. An exhaustive bibliography is presented for which Sanskrit dictionaries are not physically available for evaluation. Thus main aim of research study is to compile the Sanskrit dictionaries and evaluate them for better usage.

1.9 Objectives:

The specific objectives considered for this research study are:

- 1) To study the various types of reference sources
- 2) To provide a historical perspective of growth and development of Sanskrit dictionaries.
- 3) To highlight the importance of dictionaries in the development of language and literature.
- 4) To compile a comprehensive bibliography of published Sanskrit dictionaries
- 5) To evaluate Sanskrit dictionaries in terms of the established evaluation criteria.
- 6) To highlight the typology adopted in the compilation of Sanskrit dictionary on historical principles.

1.10 Research Methods and Materials:

The present study has adapted the historical method of research wherein the sources are examined in terms of their physical format and extracting the bibliographical information along with the details of the competence of the lexicographer/s or compiler's or editor's or the institutions so as to establish the authenticity of the work. Apart from this as per the requirement of the historical research the content of the entire work is evaluated qualitatively as per the set parameters.

The historical method of research applies to encompass origins, growth, theories, personalities, crisis, etc. Both quantitative and qualitative_variables can be used in the collection of historical information. Generally steps followed to achieve a reliable result. Charles Busha and Stephen Harter (1980) detail six steps for conducting historical research:

1. The recognition of a historical problem or the identification of a need for certain historical knowledge.
2. The gathering of as much relevant information about the problem or topic as possible.
3. If appropriate, the forming of hypothesis that tentatively explaining relationships between historical factors.
4. The rigorous collection and organization of evidence, and the verification of the authenticity and veracity of information and its sources.
5. The selection, organization, and analysis of the most pertinent collected evidence, and the drawing of conclusions;
6. The recording of conclusions in a meaningful narrative.

Complementary to this method the researcher has also used the documentary sources in which the explanation, review, critical appreciation and other details are extracted and support the evidences collected through the historical research. In addition as complementary methods the researcher visited the established and reputed oriental research institutes for discussion and interaction with the scholars, pandits and the Sanskrit lexicographers or the experts involved in the process of compiling the dictionaries. This method of meeting with experts has enabled the researcher to consolidate the issues pertaining to publication trends of dictionaries in Sanskrit language.

Evaluation and comparison techniques are also being used to assess the dictionaries based on criteria and to prepare annotated bibliography.

1.11 Procedure of the study:

The following steps are considered for this research study

- 1) Identification of reference sources in general
- 2) Identification of types of dictionaries and their utility
- 3) Fixing the evaluation criteria for evaluating Sanskrit dictionaries
- 4) Preparing list of Sanskrit Dictionaries form different sources available since 1800 AD and preparing annotated bibliography.

1.12 Scope and Limitations of Research Study:

- This study focuses on technical evaluation of published and available Sanskrit dictionaries and preparing its list as well as annotated bibliography based on fixed criteria for evaluation by the researcher.
- In case of non availability of published dictionaries reviews appeared in literature are considered for preparing annotation.
- The dictionaries published but not available physically or in review form are included in the form of bibliography.
- The analysis of the study initiates form 1800 AD till 2010 and list the publications published during period mentioned.
- In this study reference tools in general are considered but focused mainly on Sanskrit dictionaries in different types.
- The survey covers major institutes from Pune city, like Deccan College, Tilak Maharashtra Vidyapeeth, and Centre for Advanced Study in Sanskrit, University of Pune, Bhandarkar Oriental Research Institute (BORI), Vaidika Samshodhan Mandal Pune and few private institutes publishing reference tools in Sanskrit.
- Apart from prominant major institutes there are few institutes also maintaining the sanskrit literature and brings out sanskrit publications viz. Vedashatrotejak Sabha,

Pune. They have very common dictionaries and hence omitted from the study. Few institutes like Kaivalyadham SMYM Smriti, Lonavala, Kaivaly Yog Institute Pune, K J Sommayya Center for studies in Jainism Mumbai, Yoga Institute, Lonavala, National Institute of Naturopathy Pune are also having Sanskrit literature but not having enough dictionaries with them and also available in the major iSanskrit institutes and hence not covered in the survey.

- Vedapathshalas are also excluded from the study as they are involved in teaching Sanskrit, Veda etc and not having literature related to this study.

1.13 Chapterization:

Chapter one is the general description of research work by highlighting the objectives, scope, methodologies, reason to undertake the study, related studies analysis, and conclusion. Chapter two presents a brief description of varieties of dictionaries available and which are very significant. This chapter forms the basis for the study. As far as possible in this chapter very general and prominent dictionaries are covered. In chapter three efforts are made to trace the growth and development of Sanskrit dictionaries. This is very selective work in which very significant landmarks are mentioned. Chapter four is the main substance of the study wherein evaluation of the Sanskrit dictionaries is presented. The evaluation is done on the basis of set of established parameters.

The chapter five depicts a systematic typology of the Sanskrit dictionaries on the historical principles. This is the major ongoing project of the institute and the typology is exclusively highlights the preparation of the major dictionaries on historical principles with a library science point of view. Chapter six provides the finding of the study in addition to these possible and viable suggestions are also listed. The conclusion is also provided at the end. Chapter seven makes an attempt to present the annotated bibliography of the physically available dictionaries irrespective of the categories. This is arranged according to chronological order. This chapter also presents the exhaustive bibliography of the dictionaries which are collected through referring to various catalogues, bibliographies, and online websites. As far as possible in this chapter the

bibliographic details are given under each category of dictionaries and of course the chronological order is maintained.

At the end of thesis a modest attempt is made to provide the list of institutes wherein the information regarding the research studies as well as accessing the varieties of Sanskrit dictionaries are made from time to time covering the period of research work.

Conclusion

Sanskrit literature and the language have a rich heritage. In fact Sanskrit has given birth to several languages and is still in a very commanding position to influence the modern languages. Scholars including communication and technology experts opined that Sanskrit language has been highly suitable for developing the computer language. Therefore the significance of Sanskrit is always realistic even in the internet era. This study is a comprehensive explanation of the total plan of the research. It gives an introductory presentation of the research work covering all essential components dealt in the thesis. In addition to this brief record of refernec service, types of reference services and different reference tools in use are dicussed and fuffill objective one in this chapter.

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