

SUBJECT GUIDE FOR GEOGRAPHY

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By

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DECLARATION

I hereby declare that the dissertation entitled “ **Subject Guide For Geography**” completed and written by me has not previously formed the basis for the award of any Degree or other similar title upon me of this or any other Vidyapeeth or examining body.

Place:

Research Student

Date :

CERTIFICATE

This is to certify that the thesis entitled “**Subject Guide for Geography**” which is being submitted herewith for the award of the degree of Master of Philosophy in Library & Information Science of Tilak Maharashtra Vidyapeeth, Pune is the result of original research work completed by Ms. Priya Shiram Unde under my supervision & guidance. To the best of my knowledge & belief the work incorporated in this thesis has not formed the basis for award of any Degree or similar title of this or any other University or examining body.

Place: Pune

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Date : /08/2015Research Guide

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CHAPTER 1: INTRODUCTION

- 1.1 Introduction
- 1.2 Subject Guide
- 1.3 Need for study
- 1.4 Aim and Purpose of the study
- 1.5 Statement of problem
- 1.6 Objectives of the study
- 1.7 Hypothesis
- 1.8 Research Method
- 1.9 Scope and limitations of the Study
- 1.10 Structure of the Study

1.1 Introduction

Digital revolution has changed the publishing trends of information sources and also the relationship between researchers and libraries. Wide variety of resources are now available in either free or commercial and are guiding the users to trace the exact and relevant information sources in the least possible time. The available reference or new information sources are scattered and it becomes a time consuming task for the researchers to gather and consolidate these sources as they are not available on a single common platform. This has given rise to the concept of preparation of subject guides which are also known as Subject Gateways, Subject Portals etc. The librarian is the best person who can provide guidance as subject experts by preparing a reliable and complete subject guide essential for the researchers. These guides may be in either printed or electronic formats. It is useful to prepare subject guides by subject librarian or librarian by providing a list of resources to assist researchers with their research needs. These lists of resources not limited to books but they also include Journals, websites, Encyclopaedias, databases etc. in both print and digital form.

1.2 Subject Guide

The subject guides are prepared by the librarians and these guides help the users in accessing the library resources, in their subject. These guides provide a starting point for research and some guides contain extensive information about research confined

to a specific discipline. The concept of subject guides is not a new one and was first mentioned by Tchangelova, N. and Feigley, A.(1973), wherein they stated that the format and terminology was different from present day subject guides and initially they were termed as Pathfinder. The librarians created a list of resources arranged subject wise which helped and guided the researchers to the exact sources of the library. The list of resources may cover any formats like print and digital or even both which assist the users in their research work. The present terminology used for subject guides is research guides, pathfinders, electronic library guides, webliographies, subject portals etc. The library guides are a type of subject guides used by librarians all over the world. The librarians and users may use LibGuide to create pages related to subject guides, course guides, information portals or research related links.

1.3 Need for Study

The subject guides offer a unique tool for users who are seeking information and they also give the librarian an opportunity to become familiar with the subject resources. The compilation of useful resources in Geography along with SubjectGuide provides the users all the possible reference sources in subject. This study is an essential pathfinder for the scholars, researchers, faculty and other users of the subject. This Subject Guides are more evident in the developed countries and not much has been done in the developing countries. Hence, this topic of study has been undertaken.

1.4 Aim and Purpose of the Study

The aim of this study is to prepare subject guide for users in Geography. It helps to understand the pros and cons of subject guide preparation. This study is intended to be launched for research resources in Geography listing the collection of selected materials available in different institutes in Pune and also by referring to various websites and databases published in pertinent literature.

1.5 Statement of problem

In the present ere where information is being generated in such huge quantities there is no consolidated list of resources available in Geography for the users in developing countries like India.

1.6 Objectives of the study

The following objectives have been set for the study

- To study the importance and background of subject and its role.(Chapter 3)
- To study the important information sources available in Geography by users. (Chapter 4)
- To review the list in which information is published for research or study purpose (print and online) and prepare a comprehensive subject guide.(Chapter 5)
- Prepare a model Subject Guide. (Chapter 6)

1.7 Hypothesis

- The study of Geography has gained importance in the modern era.
- There are various information sources available in Geography.
- There is a need to compile a subject guide for geography for effective use.

1.8 Research Methodology

Research methodology used in this study is descriptive research and survey is conducted of various institutes in Pune, to gather information sources in Geography. The researcher has visited few renowned institutes in Pune for this purpose. The survey helps to identify resources in printed and digital form in the subject. A consolidated list of the information sources available in the subject geography is prepared and reported in the dissertation. The researcher has also taken interviews of experts in Geography regarding the recent subject trends and their research requirements.

1.9 Scope and limitations of the study

The scope of this study is confined to compilation of Subject Guide in Geography and related subjects and prepares a compiled list of resources for users and librarians. The

study is limited to the main and allied subjects in Geography taught in TMV for M.A, M. Phil and Ph. D courses.

1.10 Structure of the Study

The present study is covered in six chapters covering different aspects as given below

Chapter 1 Introduction

In this chapter researcher gives introduction about Subject Guide. It also gives the need, purpose, objectives, hypothesis set for the study along with scope and limitations etc.

Chapter 2 Literature Review

This chapter covers the Literature Review reviewed by researcher. The researcher has consulted various articles, books, online databases and other information sources. The literature review covers topics like importance of literature search, resources consulted, and various facets of Subject Guides, role of librarian in developing Subject Guides, Components of Subject Guides and usage of Subject Guides.

Chapter 3 Basics of Subject Guide

This chapter covers the basics of Subject Guide along with some definitions. It gives information about importance and need, components, sketches of Subject Guides, role of librarian in developing Subject Guides along with use of Subject Guide. This chapter also highlights the responsibilities and skills of subject librarian.

Chapter 4 Importance of Subject Geography

The fourth chapter deals with Introduction of Geography, Nature and Importance of Geography, various research trends in the subject and other allied aspects.

Chapter 5 Information Sources in Geography

In this chapter the researcher has given a tabular presentation of data collected from various institutes and other sources like web pages, search engines, web portals etc.

Chapter 6 Suggestions and Conclusions

This chapter gives the findings, suggestions and conclusions derived from the research work. It also gives a proposed model of subject guide for the subject Geography.

Chapter Summary

The chapter gives the importance and background of the study of Geography. It highlights the objectives, need, hypothesis, scope and limitations of the research study. It also gives the structure of research study.

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CHAPTER 2: LITERATURE REVIEW

- 2.1 Introduction
- 2.2 Subject Guides : Role, importance and functions
- 2.3 Components of subject guide
- 2.4 Creation Of Subject Guide
- 2.5 Role Of Subject Librarian

2.1 Introduction

Literature Review is not a simple task. It requires good organization of resources to be referred. There is a need to be focussed on literature which is relevant to the proposed Research Study.

The Literature Review is important because it: --

- Describes how the proposed research is related to prior research.
- Shows research trends that are different from other studies.
- Avoids duplication of research work.
- Provides evidence that the research work is original.

The different facets on which literature review has been done for the present study are: -

- Subject Guides : Role, Importance and Functions
- Components of Subject Guide
- Creation of Subject Guide
- Role of Subject Librarian

2.2 Subject Guides: Role, importance and functions

Stevens, C.H., Canfield, M.P. and Gardner, J.J.(1973) in their article, “Library Pathfinders: A new Possibility for co operative reference service” treats subject guide as a co- operative Reference Service. According to them library Subject Guide is a kind of map to the resources of the library. It is a compact guide to the basic sources of information specific to the user’s immediate needs. Preparation of Subject Guide is

a skilled job by reference or subject Librarian. They have given an idea about design of Subject Guide. They used a word library Pathfinder instead of subject guide along with following definition. "Library Pathfinders are designed to help users begin to locate published information in specific fields are prepared under a grant from the council on Library Resources." Subject Guides are not exhaustive bibliographies. Format of Subject Guide is fixed but flexible. At the end of the article authors explains their very positive attitude towards the use of Subject Guides. They express their hopes that in future Subject Guides will be designed for users in many types of libraries including high school libraries, community college libraries, and public libraries of all sizes. They also state that when users need of information arises, Subjects Guides could continue to lead them into.

Wilbert, S.(1981) treats a Subject Guide as a library Pathfinder. She starts article, "Library Pathfinders Come Alive", with the need of library Pathfinder. For avoiding library clients from time consuming, lengthy frustrating information search, library Pathfinder proves as a self help tool. In the authors view library Pathfinders are more useful to academic libraries. It is useful to library staff as well as library patrons. A pathfinder proves more useful when it is more specific and exact to the search.

Sizer-Warner, A.(1983) says in his article, "Pathfinders: A way to boost your information handouts beyond booklists and bibliographies" that Subject Guide is an instructional tool and could be useful in reference service particularly when a subject expert was unavailable. He also emphasizes the usefulness of Subject Guides.

Author Tyckoson, D. A. (2001) gives us detailed information about reference service and its model in the article, "What is the best model of reference service?" According to him reference service is a set of core functions that have core values including accuracy, thoroughness, timeliness, authority, instruction, access, individualization and knowledge. In this article author states mainly three functions of library- select and collect information, organize the information and dissemination of information. For fulfilling these three functions reference models are essential. He introduces various reference models on the base of traditional reference models and technology based reference models. He also describes values and components of reference services.

Authors Courtois, M. P. et al(2005) given an idea about the helpfulness of Subject Guide in the view of users in their article, “Was this guide helpful? User’s perceptions of subject guides”. In this particular study 10 Subject Guides were selected for survey in which they contact their users and got their feedbacks. After analysing it they made a comment about their usefulness in positive manner. They also provide the basic information about Subject Guides and about their printed and electronic form. According to them mostly Subject Guides are in brief and include contact information of Subject Librarian for additional help. Researcher also found some articles emphasizing on the usage of Research guides as an instructional tool.

Brazzeal, B. (2006) points out in his article titled “Research Guides as library instruction tools” that reference guide have been a part of library world for decades. They may be either in print format or electronic. In electronic format mostly Research Guides are available on library websites. Authors state the two types of Research Guides – 1. Subject level Research Guide 2. Course level Research Guide. According to author Research Guides useful to users in getting started, quick facts, definitions & reviews, in finding books & other materials, In finding Journal articles, In finding Internet sites, for citing the sources and lastly for getting help for research. At the end of the article, author agrees with the importance of Research Guide but in spite this fact he states that Research Guide is not a substitute for the reference desk. It is a technique to teach users how to use library resources and services effectively.

Cervone, F.(2009) mentioned about library portals and Subject Gateways in his article, “Library Portals and Gateways”. They have several features and functions providing access to multiple sources of information. Author states that there is little bit difference between both the terms library Portals and Subject Gateways. Most gateways in the academic libraries are focused on specific subject or discipline and it designed for specific user communities. In the conclusion of this article author states that since 2004 library portals have been focused on building integrated resource discovery systems based on Meta searching. This sentence of the author relates the terms, library portals, gateways with the subject Guides.

2.3 Components of Subject Guide

In the article “An outstanding Research Guide”, Author Lissner, W. (1986) reviews the Robert Goehlerts political science Research Guide. Lissner, W. rates this Subject Guide as an outstanding Guide in the field of Political Science. This Guide gives us not only information about resources but also gives guidance in overcoming the limitation of that sources. This guide contents Indexes, Abstracts, and Monographs which is helpful to senior as well as junior research students.

Peterson, L. and Coniglio, J.W. (1987) says in their article, “Readability of Selected Academic Library Guides” explain the usability of Library Guides. Library handbooks, guides and pathfinders are not easy to write and read. While preparing it, creator must take care about it. Reference or Subject Librarian must possess evaluation techniques. Library guides must be prepared carefully and should attain their purpose and be readable. All these factors have a direct impact on effectiveness of library guides.

Most of Library and Information science experts tell us various aspects of Subject Guides where as Hernon, P. (1974) tell us in his article, "Pathfinders"/Bibliographic Essays and the Teaching of Subject Bibliography” that subject Guide is a tool of teaching a subject bibliography. Various efficient models exist for teaching subject bibliography and this article analyzes one of them. This scholarly works gives an idea about a format of Subject Guide which is flexible and can include whatever categories are desired by the creator.

Donna, M. (2000) gives various components of library pathfinders in her article, “Library Pathfinders: Research tool, Collection Map, or Both?” She explains that pathfinders usually consists of an alphabetical listing of topics with a brief description, related subject headings, call numbers, bibliographies of periodical articles, books, AV materials and websites that can be search for information. Pathfinder is considered as a research tool as users have a core group of materials with which they can begin research. Pathfinders are also useful while taking purchasing decisions of library media specialists. Considering all these advantages of library pathfinders the authors have treated them as a research tool and map to researchers. The base of a Subject Guide is a reference service.

Author Chowdhury, G. G. and Glasgow, S. (2007) called reference service and reference desk as a central place of Library. In their article, “Digital Libraries and Reference services: present and future” they have treated reference service as a personalised service. Digital libraries make reference service more effective. Reference librarian plays very important role in rendering reference services. She/he collects the information about users, their subject knowledge, purpose of finding the specific information and so on. Based on this information reference librarian picks up the most appropriate reference sources for the user.

Vileno, L. (2007) describes usefulness of library in the article, “From paper to electronic, the evolution of pathfinders: A review of the literature”. They gave the history of Subject Guide which explains that these guides were first introduced in 1950’s. At that time they were in the form of booklists which recommended readings on a particular topic. After that now-a-days they are found in almost all the forms on academic library websites. Thus the researcher finds it as a very useful tool for researchers at beginning stage of research.

Bluemle, S. R. (2010) describes how to prepare library pathfinders in the article, “Literary Resources: A pathfinder”. Literary criticism means the explanation of the meaning and function of all forms of poetry and prose. For this she differentiates resources in primary and secondary categories. In primary sources fictions, notifications, poetry, prose’s and related web resources are listed. In secondary category all reference sources are listed. In this section Bibliographies, Encyclopaedias, Dictionaries, Electronic databases, Monographs, Essays collections are shortlisted. From this article we can get an idea about contents of Subject Guides.

Ouellette, D. (2011) in his article, “Subject Guides in academic libraries: A user centred study of uses & perceptions” describes a qualitative research that investigates how students use the subject Guides and what are their likes and dislikes about the same. In this research he took eleven interviews of university students. It was found that students want Subject Guides in simple and clean format. Design of subject guides for student’s one size does not fit to all. Before preparing a Subject Guide, subject librarian must consult with students and faculties to access their needs and wants which makes the Subject Guide more useful.

Madhusudhan, M. and Nagabhushanam, V. (2012) gives the importance of computer technology and web based services in their article, “Web based library services in University libraries in India: An analysis of Librarians’ Perspective”. Web 2.0 creates new opportunities and challenges for libraries. Creation of knowledge, promotion, dissemination and storage of information get affected through Web 2.0 technology. The authors mentioned that all traditional library services get innovative ways to meet the information needs of users through web 2.0. Web based library services includes reference services also. It includes electronic document delivery services, electronic current awareness services, electronic research guides, virtual reference desk, etc. Web 2.0 tools serve traditional services in an innovative manner.

2.4 Creation of subject guide

Walves, T. (2005) seeks to share through a case study experiences and challenges of Open University library projects in UK. He share these views in the article, “Library subject guides: A content management case study at the Open university, UK” This project aim of delivering multipurpose Subject Guides content into multiple formats and for multiple use. A content of Subject Guides depends on their form. It is neither uniform nor standard.

Author Farkas, M. (2007) gives her views on Subject Guide with some different ways in her article, “Technology in practice: Subject Guide 2.0” Basically she talks only about online Subject Guide. She states that these Subject Guides are useful but when they are properly updated. Most of library websites and Subject Guides are not properly updated and not properly searchable. So she recommends us wikis with the example of Wikipedia, BizWiki and SJCPL Subject Guides.

Griffis, P. (2009) explains the free screen capture tools for building pathfinders in the article, “Building pathfinders with free screen capture tools”. This article covers benefits, drawbacks as well as the potential applications of free screen capture tools. Author has listed tools like -Jing, Trailfire, Wink, Slideshare, etc. Some of these tools are freely available, easy to use and they promote the discovery of library resources.

Chinese author Chang, S.H. (2014) in the article, “Energizing subject guide service with web 2.0” tells us creating Subject Guide is a very daunting task. It includes collecting sources, organizing typing, proof reading, formatting and publishing those

sources. Platform of Web 2.0 has simplified these processes to a great extent. In this article author has introduced various subject guide production tools. According to him LibGuide is mostly usable web content authoring and management tool among them. This tool does not require knowledge of HTML language to create a web page. In addition LibGuide also comes with a mobile friendly interface.

More than this author McMullin, R. and Hutton, J. (2010) in the article, “Web subject guides: Virtual connections across the University community” describes the advantages of web Subject Guides with the use of LibGuide at the West Chester University Libraries. LibGuide is one of string of library content management system. It is not open source software. Librarians at the WCU find LibGuides system beneficial that it allows them to be more responsive to needs of their campus community.

Foster, M., Hesper, W., etc all (2010) in their article, “Marketing Research Guides: An online experiments with LibGuides” makes an online experiment with library content management system- LibGuide. At San Francisco State University – J. Paul Leonard library, authors adopts marketing strategy to market their research guides through social networking sites. They conduct a marketing experiment to measure the impact of online marketing strategies on the usage of its guides explains us how LibGuide has been used by librarians in many ways with the help of various examples.

Blackburn, G. and Bastin, J. (2011) in their study on Subject Guide titled “SubjectGuides: Two different libraries, two different approaches.” In this survey Library of Wichita State University and Butter community college, both libraries face the similar problem to find a system that will manage library Subject Guides which will be simple to use. For preparing Subject Guides Butler community college has selected subscription based LibGuide content management system and Wichita State Subject University library selects open source system Subject Plus. At the end results shown as LibGuides has a modest price and technical knowledge required for the librarian is low. Subject Plus is free open source software but the librarian needs a moderate level of technical knowledge. Now it does depend on us which to choose for our library.

2.5 Role of subject librarian

Building a subject oriented Internet resource guide is a challenging task. For preparation of Subject Guide, traditional skills of Librarianship – identification, selection, evaluation, description, and organization of information resources are valuable. Merville, P.S. and Wickjorst, S.J.(1996) told us about the Subject Guide based on internet resources named Clearinghouse founded by Louis Rosenfield-Librarian at the University of Michigan in their article named, “ Building Subject Specific Guides to internet resources” This Subject Guide covers following topics – Philosophy, public policy and euro science. They used Archiplex software for preparing this Subject Guide in the clearinghouse. After conducting a survey the authors found that this Subject Guide has been very useful and successful.

When we talk about Subject Guide, the role of subject librarian is of prime importance. Battersby, R. (1996) has shared own experiences of University of Edinburgh in his article, “Teaching Quality Assessment: The role of the subject librarian”. Author gives advice to subject librarians on what should be done prior to an assessment visit. This article has given few guidelines for subject librarian.

Researcher came across many articles focussing on importance of Subject Guide but in one article by Pinfield, S.(2001) titled “The changing role of Subject librarians in academic libraries”. This article explains the changing authorities and liabilities of subject librarian. He treats Subject Librarian as a system itself. Keeping the library user centred is a main achievement by the Subject Librarian. Subject Librarian is an important interface between the user and the library. Along with the traditional professional skills (Classification, Cataloguing), Subject Librarian must possess new skills and knowledge in the field of subject expertise, people skills, Communication skills, IT skills presentation and teaching skills, Financial Management skills, Analytical and Evaluative skills, Team working and Team building skills, Project Management skills, Flexibility, Ability to learn quickly, vision. In the present electronic era while developing hybrid Library, Subject Librarian having all these new skills play a crucial role.

Subject librarians while playing their role have to perform their duty in an innovative way. Author Porter, S. (2003) also states this with the example of chat service in her article, “Chat: From the desk of a subject librarian”. She gives us an example of La

Trobe University. As per the authors opinion chat may prove to be the real solution to winning back. Chatting with users allows the reference librarian to conduct the reference interview in time. Here author suggests about software Live Person for chatting.

Another survey conducted by Rockman, I. F. (2005) also supports the above point in his article, “Distinct and expanded roles for reference librarians”. According to author in construction of Institutional Repositories reference Librarians are natural partners. Reference Librarians can make a forward move to establish new form of digital publishing. He should have knowledge about interface design, policy development and instructional techniques. For the success of Institutional Repositories, Reference Librarians plays a significant role.

The role of subject librarian is quite different from traditional librarian. He has to perform some additional duties and technical knowledge. Cassner, M. and Kate, A.E. (2008) discussed this topic in their article, “The subject specialist librarians role in providing distance learning services”. They discussed all qualities of subject Librarian but above all they treated subject Librarian as a subject specialist and discussed their role in rendering services for distance learning. Subject librarian must continue to move towards a proactive model of service provision teaching out to students who may not have a persistent connection to school.

In support to this article Gatson,R. (2009) gives his contribution and briefs about the changing role of the subject librarian in his article, “The changing role of the subject librarian, with a particular focus on UK developments, examined through a review of the literature”. His focus is on review of literature relating to concerned topic. He agrees the notable contributions of Martin and Pinfield from last 10 years which mainly focused on role of subject librarian.

Summary

This chapter focuses on published literature related to Subject Guide. The importance and use of subject Guide has been discussed. While creating Subject Guide which software can be used are also highlighted. Role of Subject Librarian, the changing duties, required skills, form of Subject Guides are also discussed in this chapter.

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CHAPTER 3 : BASICS OF SUBJECT GUIDE

- 3.1 Introduction
- 3.2 Definitions of Subject Guide
- 3.3 What is Subject Guide?
- 3.4 Difference between Subject Guide and Library Guide
- 3.5 Importance and Need of Subject Guide
- 3.6 Components of Subject Guide
- 3.7 Layout of Subject Guide
- 3.8 Challenges for Subject Guide creator
- 3.9 Creating a Subject Guide
- 3.10 Social Bookmarking sites
- 3.11 Role of Subject Librarian in developing Subject Guide

3.1 Introduction

A Subject Guide is a kind of bibliography which helps researchers at primary stage to get information about resources. The goal of Subject Guide is to gather most the useful, relevant, reliable resources together. Initially Subjects Guides were available only in print format, but with the use of World Wide Web they are also available online/electronic formats. Library Portals is a new form of subject Guides or library pathfinders. The content of Subject Guide includes books, Encyclopaedias, Bibliographic databases, Almanacs, Documentaries, Websites, search engines, Journals etc. Subject Guide acts as a unique tool for the information seekers and they also offer the creator of the Subject Guide the opportunity to become more familiar with the subject area.

Subject Guides are designed for beginners in research to find the fundamental information they need to get started with their research work. It also gives the essential information about information resources. At the beginning of research, research students make use of the Subject Guides. It helps them in finding literature in their subject and also helps them to develop their research strategies. According to many experts Subject Guides are a kind of map which helps users to use library resources effectively and properly. Subject Guides are prepared by a subject or reference librarian with the help of subject experts.

3.2 Definitions of a Subject Guide

As per the Library Glossary of Bostan College –

- Subject Guide is a list of books, databases and other resources for a specific subject. Each guide is compiled by a librarian with expertise in the Subject. This definition focused on contents of subject guides which includes lists of books, databases and other resources. While preparing a subject guide librarian has to take help of subject expert.
- According to Retiz, J.M.(Online Dictionary for Library and Information Science), Subject Guide is a printed or online resource that provides detailed information, instructions, and advice concerning the best strategies, techniques, and resources for research in a subject or field of study.

This definition has focused on usefulness of subject guide in the field of research and study which can be summarized as under:

- Subject guides are lists of resources created to assist students with their research needs.
- A set of resources designed to help patrons fully research and explore a topic.
- Lists of carefully selected resources that will help users begin finding the information they are looking for.

As defined by Wales (2005) the subject guides essentially distil and codify a body of knowledge relating to the location and retrieval of information in a given subject area or discipline for a defined set of users and/collection(s).

As defined by Stevens, C.H.et.al (1973) a subject guide is a kind of map to the resources of the library specially designed for exploration of a subject “A Subject Guide is a kind of map of the sources of the Library: It is an information locator for the library user whose search for recorded materials on a subject of interest is just beginning.”

From the above definitions it can be said that Subject Guide is

- Kind of Map.
- Information locator for the library users and Subject readers.
- Just a beginning for users who are interested in a specific subject.

3.3 What is Subject Guide?

Subject Guides are often used as a curriculum tools for bibliographic instruction. The guides help library users to find materials which they do not know. From the definition according to the Online dictionary for Library and Information Science Subject Guide is “Designed to lead the user through the process of researching a specific topic or any topic in a given field or discipline usually in a systematic step by step way, making use of the best finding tools the library has to offer.”

Subject Guides are researcher’s first step towards their research. Subject guide is a useful tool for researcher, faculty and for preparation of this tool libraries need skills and subject expertise and aware of different information sources.

3.4 Difference between Subject Guide and Library Guide

The scope of Subject Guide is confined to a specific subject taken in hand. It covers other related subjects.

While a library guide is a map which gives the locations of all the library holdings of a particular library. Its scope is not restricted to a specific subject.

3.5 Importance and Need of Subject Guide

Subject Guide instructs users to begin the search, using different information resources. In this era of information explosion the information is generated in vast quantities. Subject Guide works as a pathfinder and helps researcher to reach to their desired destination. Thus, it is a research tool useful as the starting point of the research. It gives an exact direction to the research. Researchers with the help of Subject Guide plan their research strategies. Subject Guide gives an exact direction to research work.

Subject Guides collect all reference resources under one title in particular subject area. While preparing Subject Guide, librarian has to keep himself update in particular subject as he knows about the available reference sources. While preparing online

Subject Guide the librarian must have some technical skills too. While preparing a subject guide librarian has to take help from subject experts and IT professionals. Library budget of any institute is not strong enough to purchase all the required information sources. At this stage Subject Guides are the new form of co-operative reference service.

3.6 Components of Subject Guide

The format of Subject Guide is fixed but at the same time it is also flexible. Contents of Subject Guide is reflected in their form which is neither uniform nor standard. Canfield, M. et.al. (1973) provided an outline of guidelines for creation Subject Guide creation. She termed Subject guide as path finder. According to them:

- All Materials referenced should be useful for the early stages of a literature search.
 - The arrangement of the pathfinder should reflect the search process.
- The purpose of preparing a subject guide has been given by Hemming, W. (Dunsmore) which covers the aspects related to:
- Connect users to quality resources of all formats.
 - Save the time of the researcher.
 - Offer an alternative to the reference desk.
 - Instruct users about resources and search strategies used for literature search.
- Similarly, few principles for designing subject guide have been given by Hemming, W. (Dunsmore) which have include:
- **Transparency/ Ease of Comprehension: -**
While preparing a Subject Guide whether in print or electronic format transparency should be maintained. Format of Subject Guide should be easy to understand for patrons. Language used in Subject Guides should be clear and precise. Users should not feel confused while using it. In case in electronic format links provided in subject guides should be technically correct and must easily opened from anywhere.

- **Consistency**
Information included in Subject Guide should be consistent. Subject Guide in both formats should be updated properly and regularly.
- **Selectivity**
When Subject Librarian select reference sources for preparing a Subject Guide it should be authentic and must have enough and adequate information to satisfy the researcher's needs. Mostly resources covered in Subject Guide are evaluated and then added.
- **Accessibility**
Reference Sources included in Subject Guide mostly in electronic format should be accessible to researchers. The sources must be updated and should be easily accessible.

Traditionally, Subject Guides were prepared only in print format. Digitization in the field of library and information science, application of Web 2.0, now Web 3.0 has now brought a great change in the forms of Subject Guides.

Stevens, C.H. et.al (1973) whose contribution in the field of library pathfinder can never be denied as they have given specific guidelines on how to write Subject Guides in print format. They indicated that in the upper right hand corner of a file the pathfinder title should be given. Below the title the arrangement must be in two columns. Each entry should include call number and location information. Each pathfinder begins with a scope note, a phrase.

Miller, D. (2000) in her article has said that, "pathfinders usually consist of an alphabetical listing of topics with a brief description, related subject headings, call numbers, sometimes bibliographies of periodical articles, books, AV materials and websites that can be searched for information." Thus, the guideline helps in structuring the contents of Subject Guide.

3.7 Layout of Subject Guides

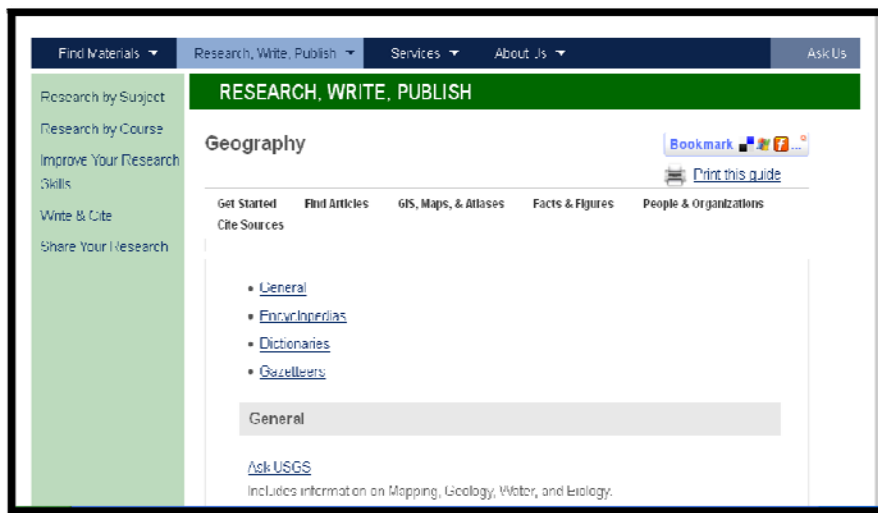
While compiling a Subject Guide the layout of page is an important consideration to be taken into account. The layout should consider

- **Templates:** - There should be a uniform layout or template for an institution's Subject Guide. It is necessary to have templates to create consistency among Subject Guide.
- **Images:-** Subject Guides must include images related to subjects, photographs, screenshots and other graphics including text and provide a appealing layout. Use of images in Subject Guides must not only be of eye catching view but also user friendly.

3.7.1 Components of Subject Guides

Mostly the contents of Subject Guides are books, journals, reference books, other secondary sources, pertinent literature in subjects etc. Some examples of subject guides in Geography have been given below.

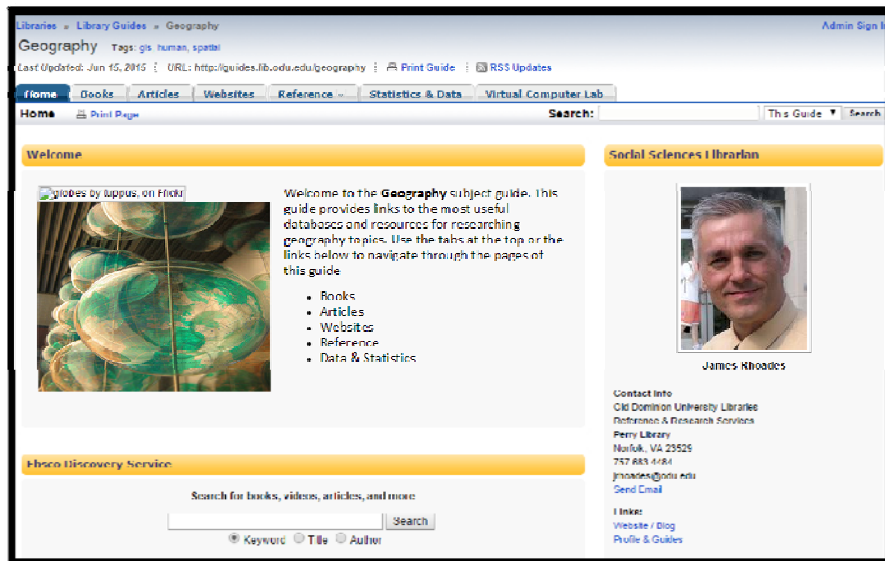
Image No. 3.1: University of Arizona's Subject Guide for Geography



(Source:<http://lro.library.arizona.edu/subject-guide/324-Geography>)

In the above snapshot of subject guide of Geography we can see the main page which includes books on general topic , Encyclopedias, Dictionaries and Gazetteers. It also includes research articles, GIS, Maps, Atlases, Collection of facts and figures and markeable contribution by people and organizations.

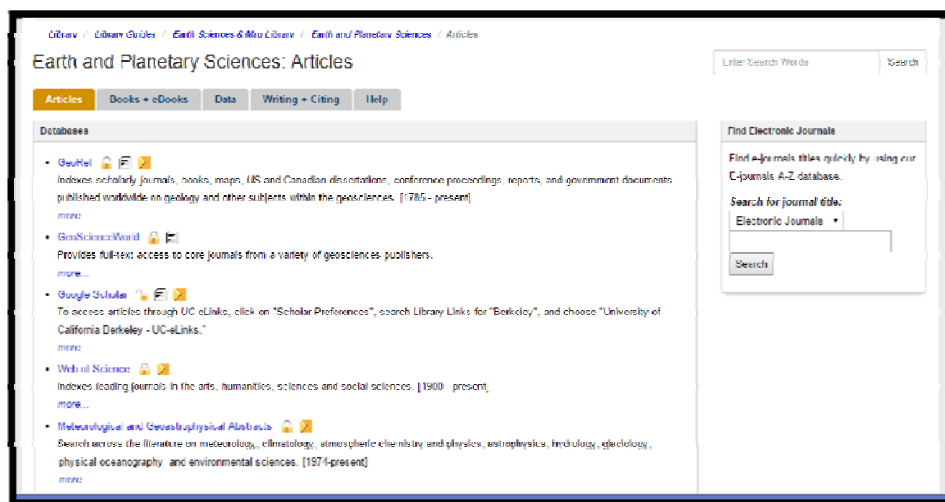
Image No3.2: Old Dominion University's Subject Guide for Geography



(Source: <http://guides.lib.odu.edu/geography>)

The above image includes books, articles, list of related websites, reference sources, data and statistics. It also gives information about the subject librarian along with his contact number. This subject guide also gives a link of Ebsco discovery service for quick search of books, videos, articles and many more related resources

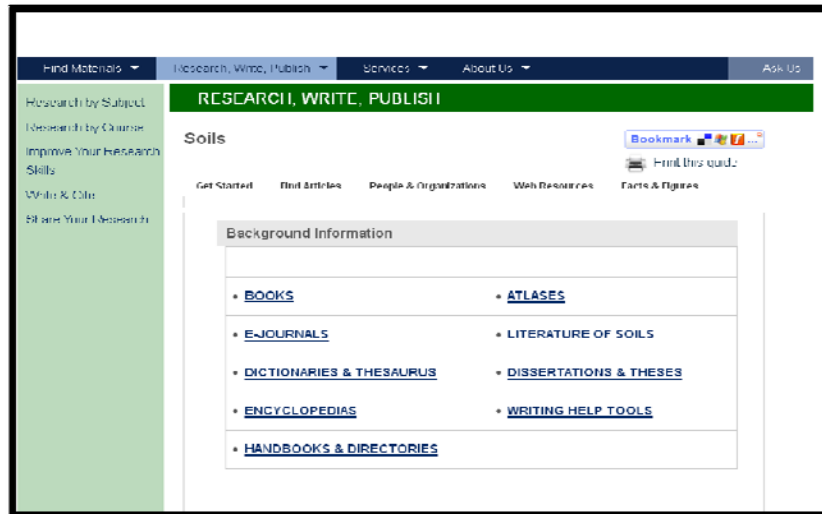
Image No.3.3: Berkeley Library's Subject Guide For Earth and Planetary Sciences



(Source: <http://guides.lib.berkeley.edu/earth>)

In above image we can find articles, books, data, citing sources and link for e journals and e books. We can also see the list of databases in Geography like web of science, Geoscience World etc.

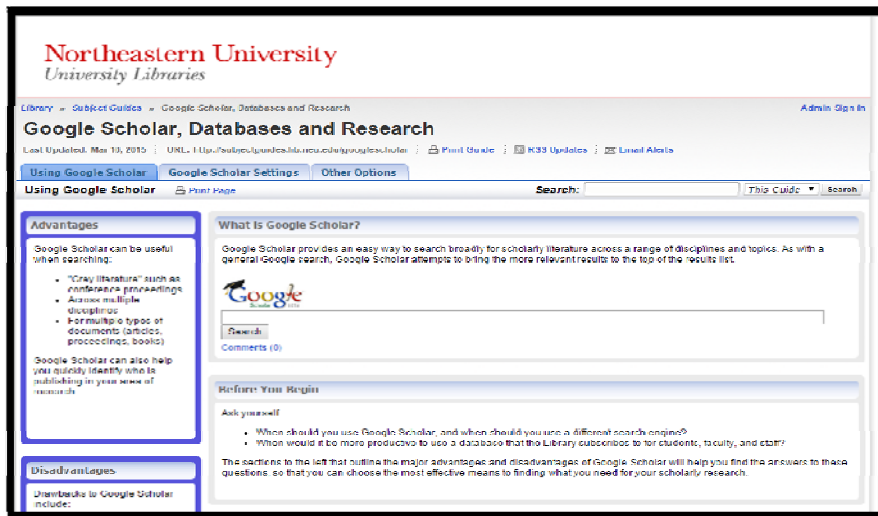
Image No.3.4: University of Arizona's Subject Guide For Soils



(Source:<http://lro.library.arizona.edu/subject-guide/346-Soils>)

The above sample of subject guide includes books, atlases, e journals, dictionaries and thesaurus, encyclopedias, handbooks and directories, atlases, literature of soils, dissertations and thesis, facts with figures, other web resources along with help option with history of subject. Under the heading writing help tools link for reference works are given titled Ref Works Guide. It helps users to create their own personal database. Citation guides for print and electronic resources are also given here as well as link for handbook for technical writers and editors. A link for handbook of technical and scientific writing web site also given here.

Image No.3.5: North Eastern University's Subject Guide



(Source:<http://subjectguides.lib.neu.edu/googlescholar>)

Above subject guide has been created by Northern University for Google scholar. This subject guide gives detailed information about Google Scholar, its settings, how to use it, advantages and disadvantages, guidelines about databases and research material available through Google Scholar.

From these snapshots we can see a clear picture of components of subject guide. While preparing a model subject guide these images will prove very helpful. The following items are also included in subject guide.

- **Catalog** -When users are new to the library, then library's catalog includes a description of how to use the catalog. While creating an online subject guide, a link to your library's online catalog may be included. Links to any tutorials the library holds on using the catalog are helpful as well.
- **Reference/Sources** - List a handful of useful reference books and general collection books. Many reference sources are available in print and online. The sources to be listed should be carefully noted with call numbers for print versions and links to online versions. Especially in reference books where the entire work is often not devoted to one single topic, it is useful to include access points and an annotation explaining what users can expect.

- **Indexes/Databases** - While making an online subject guide links to the indexes or databases can also be included. It is useful to include a brief statement explaining what the database covers and does not cover, whether it has full-text articles, how to use citations to find the article.
- **Journals/Magazines** - List key journals or magazines that the library owns which may be useful sources of information on the topic. Include a few citations (or links to articles) to show users what they can expect to find.
- **Government Documents** - Government documents can also be a useful source of information and much of it is available online. It is definitely worth exploring what is out there on your topic.

- **Archives and Special Collections: Primary Sources for Research**

Archives and special collections are rich resources for research using primary sources in many different subject areas. If the library holds archives or special collections then it is essential to include links to their website and to any relevant resources they may have. It is necessary to check with the special collections/archives staff about additional resources in other archives available in local area. Many special collections departments have digitized portions of their collections and made them available online.

- **Citing Sources**

It is essential that when sources for a project or paper are used they must properly cited both in-text and at the end for the list of references. Most databases have a citing feature that can generate them automatically. Link of APA style manual and other related links can be an important part of subject guide which might helpful to researchers.

- **Others**

Depending on the topic, it may be helpful to include other types of resources such as video collections, audio samples, dissertations, teacher kits, conference proceedings etc.

3.8 Challenges for Subject Guide Creator

Preparing a Subject Guide is a time consuming task. Creating and maintaining a Subject Guide takes a lot of time, patience and consistency. Knowledge about computer technology is a challenge for the librarian in their busy schedule. Morris and Grime (1999) conducted a study about librarian's attitude towards Subject Guide. They concluded that librarians have to give their time and energy for preparing and maintaining the Subject Guide but still their value to users is questionable and definitely its affects librarian's attitude. In short we can say that time, energy, teaching new technologies, interaction with technical staff, subject knowledge are the challenges to subject librarian. Many sources are available in the market for creating and updating Subject Guides. Some of them are on subscription basis and some of them are free open source.

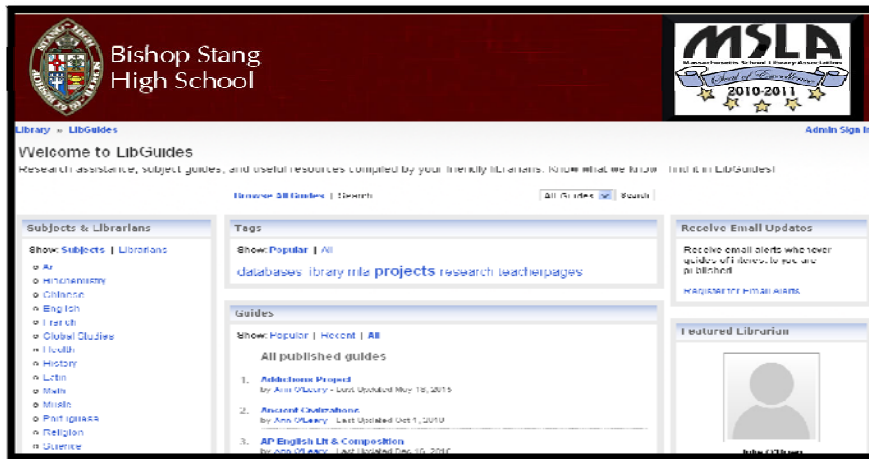
3.9 Creating a Subject Guide

Creating a subject guide is a collaborative work. It is a team work of librarian, subject expert and Information Technology department. Only creation of subject guide is not important but updation is also important part of it. While creating a subject guide selection of sources are works of responsibility. Contents of subject guide, form of subject guide, language used in subject guide makes a considerable impact on its usefulness.

Many sources are available in market for creation of subject guide. It is up to subject guide creator to select the best and most relevant source from among all sources available. Some sources of subject guides have been listed below:

3.9.1 LibGuides: - It is a subscription based content management system. It provides a variety of support options for libraries like a support blog, Twitter account, FAQ pages etc. By using LibGuides, librarians have built subject guides for the library's Web page, produced individual guides for researchers, and customized subject guides that faculties can include in their courses. An example of LibGuide has been given below

Image No.3.6 : Bishop Stang High School's Subject Guide created through LibGuides



(Source: <http://bishopstang.libguides.com/>)

3.9.2 MyLibrary: -MyLibrary was one of the first tools to maintain web based Subject Guides. The lead developer of MyLibrary is Eric Lease Morgan. Today MyLibrary is now much more than simply a Subject Guide portal. However, it was designed in such a way that by selecting subjects, users would have access to materials that were selected by subject specialists for that discipline. MyLibrary is now much more than simply a subject guide portal. While creating dynamic WebPages, such as subject guides MyLibrary is a full-fledged digital library framework and toolbox. Librarians have various options to import content into the system. Apart from accepting manual data-entry, MyLibrary can import MARC data and OASI-accessible data.

3.9.3 SubjectsPlus: - SubjectsPlus is a database driven Subject Guide maintained by Andrew Darby of Ithaca College. It is designed to manage three aspects of library website. It allows librarians to maintain subject guides, A-Z database lists and a staff list that is sortable by department and subject specialist. SubjectsPlus makes it possible for librarians to easily add resources of all kinds to subject guides

3.9.4 LibData: - It was developed by the University of Minnesota in 2003. LibData provides an authoring environment for three different types of Web pages. The three different pages are subject guide pages (Research QuickStart), course related pages

(CourseLib) and general purpose Web pages (PageScribe). LibData is designed to be very flexible and allows for great local variation. LibData contains approximately forty different database tables and appears to be more complicated architecturally than Pirate Source or SubjectsPlus. This means that libraries will most likely require greater local expertise to install and maintain LibData and a successful installation will require more cooperation between librarians and systems staff.

3.9.5 ResearchGuide: - University of Michigan released its Subject Guide application under the MIT open source license. Research Guide provides a web platform to create Subject Guides and information pages. ResearchGuide is somewhat less complicated architecturally than LibData, having fewer than ten database tables. Research Guide requires that PHP and MySQL be installed. The current downloadable version is 0.5, released January 29, 2002. Although Research Guide has not been updated in more than six years, it is being used in at least six universities in three countries.

3.9.6 Jing: -Screen casting and screen capturing tools are becoming more intuitive to learn, use and can be downloaded for free. As such, these tools are becoming an efficient and effective method for building pathfinders for users. It is a freeware that is easy to download and use. Jing allows for short screencasts of five minutes or less to be created and uploaded to a remote server on Screencast.com. Once a Jing screen cast is uploaded, Screencast.com provides a URL for the screen cast that can be shared via e-mail or instant message or on a webpage. Another function of Jing is recording screenshots, which can be annotated and shared by URL or pasted into documents or presentations. Jing serves as an effective tool for enabling librarians working with students via chat or instant messaging to quickly create screenshots and videos that visually demonstrate to students how to get the information they need.

3.9.7 Trailfire:- This is another screen capturing tool that can be utilized in the same manner. Trailfire allows users to create a trail of webpage screenshots that can be annotated with notes and shared with others via a URL. Such trails can provide users with a step-by-step slideshow outlining how to obtain specific resources. When a trail is created with Trailfire, a URL is provided to share.

3.9.8Wink:-This was created for producing software tutorials, which makes it well suited for creating tutorials about how to use databases. It can capture screenshots,

add explanation boxes, buttons, titles and voice to the tutorials. Screenshots are captured automatically as you use your computer on the basis of mouse and keyboard input. Wink files can be converted into very compressed Flash presentations and a wide range of other file types.

3.9.9 SlideShare: -This allows for the conversion of uploaded PowerPoint, Open Office, or PDF files into online flash movies. An option to sync audio to the slides is available and widgets can be created to embed slideshows onto websites, blogs, subject guides or even social networking sites.

3.10 Social Bookmarking Sites

For creating Subject Guides some librarians are uses social bookmarking sites. Some of them listed below

3.10.1 Del.icio.us:-Del.icio.us can be much more than a list of websites. We can create a new account for each subject or topic, or create bundled topics within one account. There is a limit by the amount of tags that could create before the page becomes unmanageable. With a bit of imagination and skill, one can use the tags to create bundled weblinks for many topics on one page. As key wording (or tagging) should be second nature to any librarian, this should be a relatively easy job which will prove of immense value to teachers and students.

3.10.2 Blogs: -Blogs are used for both personal and professional communications. A blog is a discussion or informational site published on the World Wide Web and consisting of discrete entries typically displayed in reverse chronological order. Until 2009 blogs were usually the work of a single individual occasionally of a small group, and often covered a single subject. More recently "multi-author blogs" (MABs) have developed with posts written by large numbers of authors and professionally edited like newspapers, other media outlets, universities, think tanks, advocacy groups and similar institutions. The rise of Twitter and other "micro blogging" systems helps integrate MABs and single-author blogs into societal new streams.

3.10.3 Wikis: -Farkas, M.C. (2007) mentions in her article that Subject Guides are easy to update, searchable and collaborative through wikis.. A wiki invites all users to edit any page or to create new pages within the wiki website. Wiki promotes meaningful topic associations between different pages by making page link creation

almost intuitively easy and showing whether an intended target page exists or not. A wiki enables communities to write documents collaboratively, using a simple mark-up language and a web browser. Single pages in a wiki website is referred to as a “wiki page”, while the entire collection of pages, which are usually well interconnected by hyperlinks, is "the wiki". A wiki is essentially a database for creating, browsing, and searching through information. Example Subject Guide: Library Success: A Best Practices Wiki. This wiki is a gem for teacher-librarians.

3.11 Role of Subject Librarian in developing Subject Guide

The role of subject librarian in developing Subject guide is important along with subject expert. They typically provide user education sessions tailored to the needs of departments, manage the library’s collections to keep them effective and relevant and help users at all levels to make best use of library resources. Role of Subject Librarian has always differed from institutions to institutions. Role of subject librarians is to cultivate a close communication between the University and academic departments and programmes and to ensure that the library’s resources are relevant and used effectively to support teaching and research.

According to Qobose, E.(2000) the main function of a subject librarian while compiling Subject Guide include:

- Liaison with the academic departments
- Providing information retrieval and reference services
- Training and user education of students and staff
- Collection Development and Maintenance of the subject specific collections
- Promote and market Library services and products

The librarian must know the needs of academic departments and users in order to draft a suitable Subject Guide. The librarian should concentrate on:

- Attending/participating in departmental or faculty meetings
- Visiting individual academicians
- Academics visiting the subject librarians
- Using e-mails or web resources for communicating information
- Attending academic workshops, open lectures, etc.
- Prepares library reports for program reviews and accreditations

To keep the academics current, the subject librarians have to seek feedback and gather different types of literature to include in Subject Guide.

- New additions to Library resources (new books ,journals and databases)
- New library services (Online like whatsapp, facebook, twitter etc.)
- Library learning opportunities for faculty and students
- Developments in scholarly communications
- Information on any library developments that may be relevant
- Contact new department members to introduce them to the library resources and services, and learn their specific needs

However Subject librarians have to ensure the library resources which can be used effectively and the subject librarians can:

- Identify courses or programmes and ensure that the required resources are available in the library to support these activity
- The subject librarians can work with the academic staff responsible to incorporate library instructions through the Virtual Learning Environment (VLE) or Subject web pages.
- Developing relevant course/assignments/projects instructions through the Virtual Learning environment.
- Advising the users on assignment involving library or its resources

3.11.1 Information Retrieval and Reference Service

Information retrieval (IR) is the activity of obtaining information resources relevant to an information need from a collection of information resources. An information retrieval process begins when a user enters a query into the system. Queries are formal statements of information needs. User queries are matched against the database information. This service involves the following activities provided by the subject librarians:

- Identify user needs
- Develop client information profiles
- Handling telephone, face-to-face interaction and e-mail queries from clients
- Develop appropriate and efficient search strategies
- Identify and select the most relevant resources to use

- Conduct searches by using a range of resources
- Provide current information & develop a focused alerting service
- Provide advanced research assistance to academics and students

3.11.2 Helping with Collection Development and Maintenance

It is a subject librarian's responsibility to build, manage and maintain a balanced and relevant collection (print and electronic) which supports in teaching, learning and research. This can be done in the following ways:-

- Regular interaction with the academics, students, book and journal publishers to ensure that they keep up-to-date with the latest developments
- Analyse and recommend materials for purchase where gaps in the collection exist
- Provide to academics publishers catalogues and useful electronic websites for selecting new resources
- Reviewing the donated materials and make recommendations for additions to the library collection
- Reviewing journal subscriptions and options for alternative access
- Provide regular feedback to the academics on the status of the budget
- Make recommendations to the Departments and Faculty on acquisitions or cancellations of resources.
- Participate in maintenance and management of the subject specific collection

3.11.3 Responsibilities of Subject Librarian: --

The librarian has to perform a number of responsibilities including the regular library services like

1. Interact with users.
2. Handle enquires at Enquiry desks.
3. Select reading materials taking into account user recommendations.
4. Managing collections particularly in specific subjects.
5. User education – Library induction

6. Production of Subject Guide.

7. Managerial responsibilities.

3.11.4 Skills of Subject Librarian

Other than above duties subject librarian has to perform some additional duties including teaching and maintaining quality, research quality assessments and mainly working with technical staff. For developing Subject Guides, Subject librarians have to fulfil above listed responsibilities along with the traditional ones (classification, Cataloguing etc.) For performing this role Subject librarian must possess some qualities and skills like:

1. Subject expertise
2. Communication skills
3. IT skills
4. Presentation and Teaching skill.
5. Financial Management skill.
6. Analytical skill
7. Project Management skill
8. Team working skill
9. Flexibility
10. Ability to learn quickly
11. Vision

By applying the above skills subject librarian can enhance their performance. While performing the duties the main aim of subject librarian is to support the learning and research activity of parent institute. He is considered as an important interface between the user and library.

Summary: This chapter covers the Subject Guide as an essential component for searching resources either in print/digital etc. Librarians need to adapt new skills for this purpose. Subject librarians must recognise the competencies that the different departments expect from their students and identify the role of the library in achieving them. The subject librarian should be informed if there are particular activities that the Library undertakes in order to address the teaching needs.

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CHAPTER 4

IMPORTANCE OF SUBJECT GEOGRAPHY

Image No. 4.1 Welcome to Geography



(Source - www.stmarysnewry.com/gcse_Geography.aspx)

4.1 Background of the Subject: Geography

4.2 Definitions

4.3 Nature of Geography

4.4 Branches of Geography

4.5 Institutes/ Colleges/Universities for Geography in India

4.6 Recent trends in Geography

4.1 Background of the Subject Geography

Geography is a subject which gives information and knowledge of places and environments throughout the world. It involves an understanding of maps which are helpful in identifying and also can be used for solving problems of different areas, places etc. Geography focuses on understanding and resolving issues about the environment and sustainable development. It is also an important link between the natural and social science. Geography is an interdisciplinary subject that unites the

social sciences and natural sciences in the knowledge of the Earth. Geography applies the unifying vision required by many contemporary environmental and social problems.

Wikipedia has defined geography as earth-description. The subject has its roots in Ancient Greece and was established as a modern academic discipline in the mid-1800s. The subject was then divided into Earth science, Physical Geography, Human Geography. There is now a shared ambition to once again see geography as a whole, in order to understand how humans shape and use the landscape. The need for the integration of human and physical geography is increasing in social planning, environmental issues and other traditional geographic tasks. Geographic studies often relate to the location and dimensions of housing, workplaces, services and transport systems, but also the interaction between man and environment in a wider perspective. An interdisciplinary approach allows human geographers to examine issues relating to land and water use for different purposes. In the Greek language Geography means, geography which refers to the "earth description". This is a field of science dedicated to the study of the lands, the features, the inhabitants and the phenomena of Earth. The first person to use the word "geography" was Eratosthenes (276–194 BC). Four historical traditions in geographical research are spatial analysis of the natural and the human phenomena (geography as the study of distribution), area studies (places and regions), study of the human-land relationship and research in the Earth sciences. This is the reason that Geography is now called as a Earth Science. Geography is divided into two main branches: human geography and physical geography. The former largely focuses on the built environment and how humans create, view, manage and influence space. The latter examines the natural environment and how organisms, climate, soil, water, landforms produce and interact. The difference between these approaches led to a third field, environmental geography, which combines the physical and the human geography. The ancient Greek scholar Eratosthenes is called the "father of geography" as he was the first to use the word geography and he had a small-scale notion of the planet that lead him to be able to determine the circumference of the earth.

4.2 Definitions

1. As per the www.yourdictionary.com, Geography is the descriptive science dealing with the surface of the earth, its division into continents and countries and the climate, plants, animals, natural resources, inhabitants and industries of the various divisions.

2. Mr. Bowerman's definition of geography states it as the study of the world, its people and the interactions between the two.

3. As per the www.geographyworldonline.com/definition.html, The science of space and place that brings together Earth's physical and human dimensions in the integrated study of people, places and environments.

4. As per definition given in hyper dictionary, geography is the study of the earth's surface; includes people's responses to topography and climate, soil and vegetation. From the above definitions the meaning of Geography can be narrated as discipline science dealing with surface of earth and environment of different countries of the world.

4.3 Nature of Geography

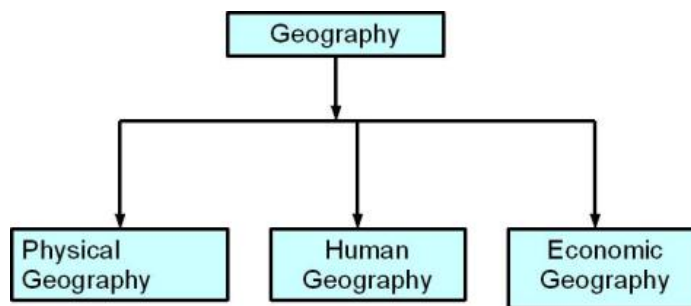
The subject, geography is viewed in nature as:

- **An academic discipline** – A body of knowledge given or received by a student. It is a branch or sphere of knowledge or field of study that an individual has chosen to specialize in. Modern geography is an all-encompassing discipline that seeks to understand the Earth and all of its human and natural complexities.
- **A field of science** – Widely recognized category of specialized expertise within science and typically embodies its own terminology and nomenclature. Such a field will usually be represented by one or more scientific journals, where peer reviewed research is published. There are many geographies-related scientific journals.

- **A natural science** – Field of academic scholarship that explores aspects of the natural environment (physical geography).
- **A social science** – Field of academic scholarship that explores aspects of human society (human geography).
- **An interdisciplinary field** – A field that crosses traditional boundaries between academic disciplines or schools of thought, as new needs and professions have emerged. Many of the branches of physical geography are also branches of Earth science.

4.4 Branches Of Geography

Image No. 4.2 Branches of Geography



(Source: www.iasforidiots.wordpress.com)

Subject Geography mainly has three branches as per shown in the above image.

4.4.1 Physical Geography: -- Physical Geography is a sub-discipline of two larger fields of study namely- Geography and Earth Sciences. The main purpose of Physical Geography is to explain the spatial characteristics of the various natural phenomena associated with the Earth's hydrosphere, biosphere, atmosphere, and lithosphere. Physical Geography can be divided into several sub subjects as follows: --

- **Geomorphology:** -- Geomorphology is the field concerned with understanding the surface of the Earth. Geomorphology as a field has several sub-fields that deal with the specific landforms of various environments.

- **Hydrology:** -- Hydrology is predominantly concerned with the amounts and quality of water moving and accumulating on the land surface and in the soils and rocks near the surface and is typified by the hydrological cycle.
- **Glaciology:** -- Glaciology is the study of glaciers and ice sheets, or more commonly the Cryosphere or ice and phenomena that involve ice.
- **Biogeography:** -- Biogeography is the science which deals with geographic patterns of species distribution and the processes that result in these patterns. The field can largely be divided into five sub-fields: island biogeography, pale bio geography, phylo geography, zoogeography and phytogeography.
- **Climatology:** -- Climatology is the study of the climate, scientifically defined as weather conditions averaged over a long period of time. Climatology examines both the nature of micro (local) and macro (global) climates and the natural and anthropogenic influences on them.
- **Meteorology:** -- Meteorology is the interdisciplinary scientific study of the atmosphere that focuses on weather processes and short term forecasting.
- **Pedology:** -- Pedology is the study of soils in their natural environment. It is one of two main branches of soil science, the other being edaphology. Pedology mainly deals with pathogenesis, soil morphology, and soil classification. In physical geography Pedology is largely studied due to the numerous interactions between climate (water, air, temperature), soil life (micro-organisms, plants, animals), the mineral materials within soils (biogeochemical cycles) and its position and effects on the landscape.
- **Paleogeography:** -- Palaeogeography is a cross-disciplinary study that examines the preserved material in the stratigraphic record in order to determine the distribution of the continents through geologic time.
- **Coastal geography:** -- Coastal geography is the study of the dynamic interface between the ocean and the land.
- **Oceanography:** --Oceanography studies the Earth's oceans and seas. It covers a wide range of topics, including marine organisms, ecosystem dynamics, ocean currents, waves, and geophysical fluid dynamics, plate tectonics and the geology of the sea floor etc.
- **Landscape ecology:** -- This is a sub-discipline of ecology and geography that address how spatial variation in the landscape affects ecological processes

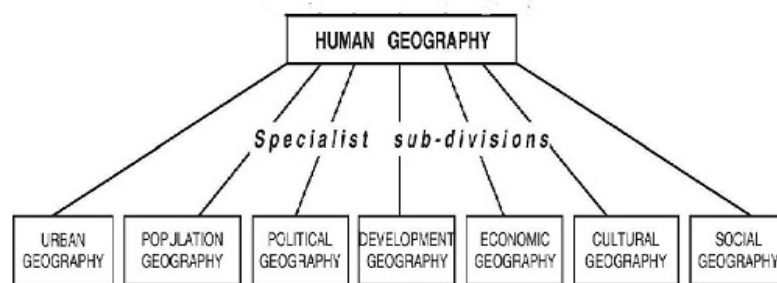
such as the distribution and flow of energy, materials and individuals in the environment.

- **Geomatics:** -- Geomatics is the field of gathering, storing, processing and delivering of geographic information. Geomatics includes geodesy (scientific discipline that deals with the measurement and representation of the earth, its gravitational field, and other geodynamic phenomena, such as crustal motion, oceanic tides, and polar motion) and GIS (a computer based system for capturing, storing, analyzing and managing data and associated attributes which are spatially referenced to the earth) and remote sensing (the short or large-scale acquisition of information of an object or phenomenon, by the use of either recording or real-time sensing devices that are not in physical or intimate contact with the object).
- **Environmental Geography:** -- This is a branch of geography that analyzes the spatial aspects of interactions between humans and the natural world. The branch bridges the divide between human and physical geography and thus requires an understanding of the dynamics of geology, meteorology, hydrology, biogeography, and geomorphology, as well as the ways in which human societies conceptualize the environment.

4.4.2 Human Geography:--This is the branch of the social sciences that deals with the world, its peoples, and their communities and cultures, by emphasizing their relations of and across space and place. Human geography features various philosophical and theoretic methods for the study of the cultures and communities of the peoples of the world.

4.4.3

Image No.4.3 Sub divisions of Human Geography

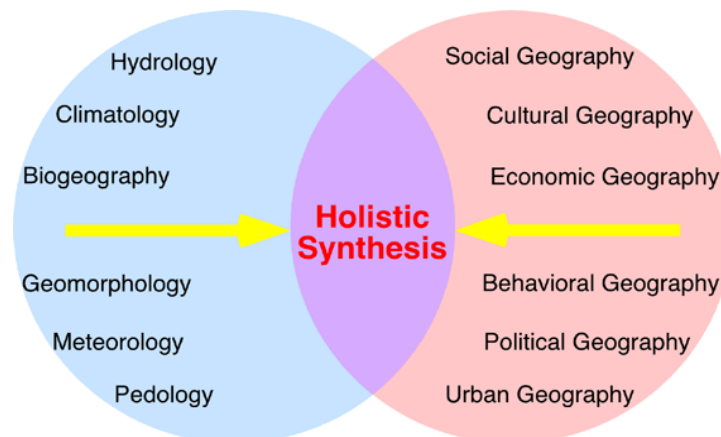


(Source: www.assignmenthelp.net/assignment-help/human-geography-assignment-help)

- **Urban Geography:** -- The study of cities and towns in relation to their location, size, shape and function.
 - **Population Geography:**-- The study of the geographical distribution of humans and the analysis of changes in distribution patterns. Population geographers study a variety of statistical information, including birth and death rates and migration patterns.
 - **Political Geography:**--The study of the influence of geography on nations, national interests, and international relations. Such things as area growth and development, boundaries, and territorial size, shape, and location are considered.
 - **Development Geography:** -- This is a branch of human geography which refers to the standard of living and quality of life of its human inhabitants.
 - **Economic Geography:**-- The study of how people make a living. It is especially concerned with the earth's natural resources and how they are used. Specialized phases of the study include agriculture geography, manufacturing geography, and transportation geography.
 - **Cultural Geography:**--The study of the geographical distribution of cultural traits. Cultural geography is a highly diverse discipline that includes the study of the geography of languages, religions, and music.
 - **Social Geography:** -- The study oft closely related to social theory in general and sociology in particular, dealing with the relation of social phenomena and its spatial components.
- 4.4.4 Economic Geography:** -- This is the study of the location, distribution and spatial organization of economic activities across the world. Economic geography has taken a variety of approaches to many different subject matters, including but not limited to the location of industries, economies of agglomeration, transportation, international trade, development, real estate, gentrification, ethnic economies, gendered economies, core-periphery theory, the economics of urban form, the relationship between the environment and the economy and globalization. The metrically, economic geography can be divided into following sub disciplines

- **Geography of Agriculture:**-- It is traditionally considered the branch of economic geography that investigates those parts of the Earth's surface that are transformed by humans through primary sector activities.
- **Geography of international trade:**-- The geography of international trade focuses on the exchange of goods among nations and other territorial divisions.
- **Geography of resources :**-- Everything available in our environment which can be used to satisfy our needs, provided, it is technologically accessible, economically feasible and culturally acceptable can be termed as 'Resource'. This detailed study of resources covered under geography of resources.
- **Geography of transport and communication:** -- Transportation geographers research transportation networks (both private and public) and the use of those networks for moving people and goods.
- **Geography of finance:**--Geography of finance focuses on issues of financial globalization and the geographic patterns of finance. It studies the effects of states overignty, culture and different kinds of barriers that affect the spatial distribution of finance, such as uneven development and financial exclusion, and the global and local connectivity of financial flows and networks. It also includes the creation of new financial centres around the world, both offshore and onshore. The field of geography is a vast academic field with many of researchers working in interesting sub-disciplines or branches of geography.

Image No.4.4 Major Sub disciplines of physical and human geography



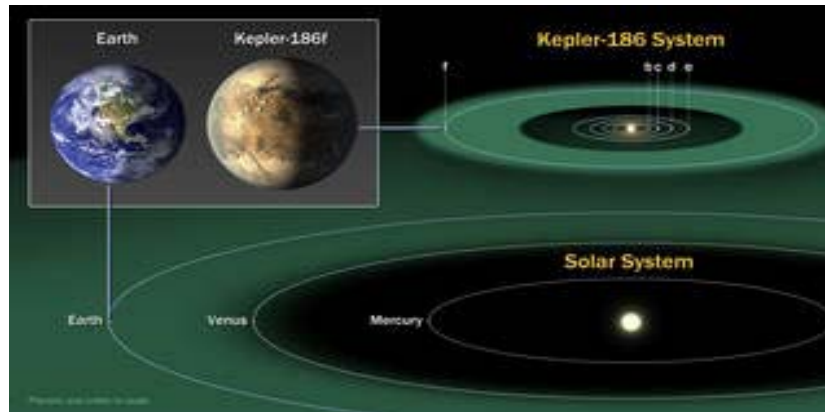
(Source: www.physicalgeography.net)

The website of Canadian Council for Geographic Education lists ten reasons why the study Geography should be undertaken and they are :

- To understand basic physical systems that affect everyday life eg- earth-sun relationships.
- To learn the location of places, physical and cultural characteristics of those places.
- To understand the Geography of past times and to understand important role of Geography in the evolution of people.
- To explain how the process of human and physical systems have arranged and changed the surface of the earth.
- To understand the spatial organization of society.
- To recognize spatial distributions at all scales, local and worldwide.
- To be able to make sensible judgements about matters involving relationships between the physical environment and society.
- To appreciate earth as the homeland of humankind and provide insight for wise management decisions about how planet's resources should be used.
- To understand global interdependence and to become a better global citizen.
- To develop a mental map of your community, territory, country and the world so that you can understand the 'Where' of places and events.

Apart from these reasons, study of Geography gives knowledge about natural disasters like earthquakes, flood and our recent problem like land sliding. Study of Geography take our nation on the way of progress. Worldwide renowned National Aeronautics and Space Administration, USA (NASA) had a great contribution in the field of Earth Sciences. Recent achievement of this organization is , astronomers have discovered the first Earth-size planet orbiting a star in the "habitable zone" -- the range of distance from a star where liquid water might pool on the surface of an orbiting planet. The discovery of Kepler-186f confirms that a planet the size of Earth exists in the habitable zone of stars other than our sun. While planets have previously been found in the habitable zone, they are all at least 40 percent larger in size than Earth and understanding their makeup is challenging. Kepler-186f is more reminiscent of Earth.

Image No. 4.5 Kepler 186 System



(Source: www.nasa.gov)

All these points explain the need and importance of study and research in Geography. Being a part of any research process, librarian community have to provide a platform or links for researchers. Creating a Subject Guide in Geography is an important step that can be taken by the researchers.

4.5 Institutes/Colleges/Universities for Geography in India

4.5.1 CSIR National Geophysical Research Institute, Hyderabad

National Geophysical Research Institute (NGRI), a constituent Laboratory of CSIR, The Council of Scientific and Industrial Research was established in 1961 with the mission to carry out research in multidisciplinary areas of Earth Sciences. The Institute plays a pivotal role in the exploration of Hydrocarbons, Mineral and Groundwater resources in addition to studies in Engineering Geophysics, Seismology, Geo dynamics and Geo environment.

NATIONAL GEOPHYSICAL RESEARCH INSTITUTE

Uppal Road, Hyderabad-500007.

Andhra Pradesh, India.

F: +91 40 27171564

www.ngri.org.in

4.5.2 Indian Institute Of Geographical Studies , Bangalore

The Indian Institute of Geographical Studies (TIIGS) is situated in Bangalore. They have established the GeoVidyaa Geography Centre of Excellence at the campus of the APS, Kamaraj Road, Bangalore. At the GeoVidyaa Centre, students engage in interactive learning to see connections between geography and their own lives. They learn about Earth (latitudes, longitudes, processes such as earthquakes, floods, tsunamis, climate change, volcanoes, etc.), how human beings and Earth interact (pollution, building cities, transportation changes), and how populations organize themselves on earth (ie. how human settlements are arranged on Earth, how people migrate, how our populations change etc.). Teachers learn about the nature of geography as a discipline, why it is important for students to receive a good geography education, and how to teach it interestingly. They learn how to make geography learning an exciting life-long experience of understanding and skills.

GeoVidyaa Geography Centre of Excellence

Army Public School

K. Kamaraj Road

Bangalore 560 042

<http://tiigs.org/>

4.5.3 International Institute For Population Sciences, Mumbai

The International Institute for Population Sciences (IIPS) serves as a regional Institute for Training and Research in Population Studies for the ESCAP region. It was established in Mumbai in July 1956, till July 1970 it was known as the Demographic Training and Research Centre (DTRC) and till 1985 it was known as the International Institute for Population Studies (IIPS). The library of the institute has various information sources on population studies and related areas. It includes books, journals, bound volumes, indexed articles, reprints, seminar papers and CDs. Library has online databases like JSTOR, SCOPUS, Science Direct etc.

International Institute For Population Sciences

Govandi Station Road,
Near Govandi Station Over Bridge,
Deonar, Govandi, Mumbai,
Maharashtra 400088
Phone: 022 2556 3255
www.iipsindia.org

4.5.4 The National Institute of Oceanography (NIO), Goa

The National Institute of Oceanography (NIO) with its headquarters at Dona Paula, Goa and regional centres at Kochi, Mumbai and Visakhapatnam, is one of the 37 constituent laboratories of the Council of Scientific & Industrial Research (CSIR), New Delhi. The institute has since grown into a multi-disciplinary oceanographic research institute of international repute. The principal focus of research has been on observing and understanding special oceanographic characteristics of the Indian Ocean. The results have been reported in more than 5000 research articles so far. The institute has created their own Institutional Repository. They have very rich collection of monographs.

National Institute of Oceanography

Dona Paula - 403 004, Goa, India
EPABX : +91 (0) 832 - 2450450;
Fax : +91 (0) 832 - 2450602 & 2450603
<http://www.nio.org/>

Few renowned institutions imparting knowledge in subject Geography in Pune.

4.5.5 Indian Institute Of Tropical Meteorology , Pune

Indian Institute of Tropical Meteorology (IITM) is one of the best institute working in Meteorology and atmospheric sciences situated at Pashan, Pune. The Institute has very large and full equipped knowledge management centre. It includes Books, Journals, Thesis, Seminar reports. It has many online journals and databases like SCOPUS and Web of Science.

Indian Institute of Tropical Meteorology

Dr. Homi Bhabha Road, Pashan,

Pune 411 008

Maharashtra

India

Phone: +91-20-2590-4200

<http://www.tropmet.res.in/>

4.5.6 Central Water and Power Research Station (CWPRS), Pune

The Central Water and Power Research Station, Pune was established in 1916 by the then Bombay Presidency as a "Special Irrigation Cell" with a limited mandate to modify irrigation practice to meet agricultural requirements. It is one of the foremost organizations in the world in the field of hydraulics and allied research. CWPRS provides specialized services through physical and mathematical model studies in river training and flood control, hydraulic structures, harbours, coastal protection, foundation engineering, construction materials, pumps and turbines, ship hydrodynamics, hydraulic design of bridges, environmental studies, earth sciences, and cooling water intakes. The institute has developed a library and information system for engineers and scientists. It includes books, journals, technical reports, e journals and bound volumes.

Central Water and Power Research Station

Khadakwasla, Pune-411024

Maharashtra, India

Phone: +91 (20)24103200/24380511/24380825

Fax: +91 20 24381004

Supers. Gov. In

4.5.7 Deccan College Postgraduate and Research Institute, Pune.

The Deccan College, Postgraduate and Research Institute, Pune are the third oldest Educational Institute in India. The college has department of archaeology. Under this department M.A. and P.G. diploma has been run. The University has an exclusive museum on Indian Archaeology. The University has a unique library having collections mainly in the fields of Archaeology. It includes books, journals, e journals, bound volumes, thesis, manuscripts, microfilms, macro cards, audio video cassettes etc.

Deccan College Postgraduate and Research Institute

Deccan College Road,

Yerawada, Pune 411 006.

Maharashtra, INDIA

Telephones: 020-26513200, 26513207

Website: www.dcpune.ac.in OR www.deccancollegepune.ac.in

4.5.8 Institute of Indian Geographers , Pune

The Institute of Indian Geographers is an Association of Geographers, established in 1979 with the Department of Geography, University of Pune, as its registered headquarters. The membership of the Institute is largely drawn from earth scientists and other allied disciplines, though it is open to anyone interested in the knowledge of the earth and its environment. The Institute strives to promote geographical knowledge by research, teaching and such of the activities as will directly or indirectly lead to the growth of Geography. Since its foundation, the Institute has been regularly publishing the biannual journal, the 'Transactions of the Institute of Indian Geographers' and brought out some monographs. The Institute regularly organizes annual Geographers' Meets at University Centres in different parts of the country.

Institute of Indian Geographers

c./o. Department of Geography

University of Pune

PUNE 411 007

<http://iigeo.org/>

4.5.9 Sir Parashurambhau College , Pune

The New Poona College today known as Sir Parshurambhau College was founded in 1916 at the hands of well known British Governor Lord Willingdon who took a lot of interest in education. Department of Geography is very strong area of this college. It was founded in 1955. Specialization offered in the field of Geomorphology and Economic Geography. There is aM.Phil and Ph.D .research centre since 1986.

Sir Parashurambhau College

Tilak Road, Sadashiv Peth,

Pune, 411030Maharashtra

Phone: 020 2433 1978

www.spcollegepune.ac.in

4.5.10 Savitribai Phule Pune University, Pune

Savitribai Phule Pune University, one of the premier universities in India, is positioned in the North-western part of Pune city. The university houses 46 academic departments. It is popularly known as the 'Oxford of the East'. The Department of Geography, established in 1950, has completed 65 years as a Post-Graduate centre offering courses leading to M. A. and M. Sc. in Geography, M.Sc. in Geoinformatics, P. G. B. Sc. (Applied) in GIS and Remote Sensing, and Ph.D. degree in Geography. The faculty and students of the department are engaged in research in diverse subject areas. Some teachers in the department are also involved in collaborative research programs with scientists from other national and international universities/institutes. The department to its credit has undertaken several major research projects sponsored by Indian funding agencies such as UGC, DST, ISRO, ICSSR, CPCB, etc. and overseas funding agencies such as European Commission. In the last ten years, twelve research projects were completed. The number of ongoing projects is five. In addition, the faculty is engaged in several projects funded by BCUD, University of Pune. Some of the faculty members are also involved in consultancy projects. The Department has been recognized as a FIST sponsored department by DST, New Delhi. The department has also received special grants from ISRO and UGC (under Innovative Program) for strengthening the infra-structural facilities.

Savitribai Phule Pune University

Department of Geography

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<http://www.unipune.ac.in/>

4.5.11 Tilak Maharashtra Vidyapeeth, Pune

Tilak Maharashtra Vidyapeeth (TMV) is situated in Gultekdi, Pune. It offers various graduation, post graduation, M. Phil, Ph. D courses in various knowledge streams. The Tilak Maharashtra Vidyapeeth library was established in 1965. It has a collection of more than 1,00,000 books 171 periodicals (national & international) in subjects like Social Sciences, Sanskrit Literature, Philosophy, Religion, Indology, Ayurveda, Management, Biotechnology, Education, Law, Library Science, Engineering and

Earth Sciences. The Library provides services to all the students, research scholars, teaching, non-teaching staff of this Vidyapeeth. The library is equipped with INFLIBNET facilities. The Library operations are fully automated with SLIM21 software. The P. G Department of Geography now the Earth Sciences was established in 2004 where initially only the M. A / M. Sc course was conducted. In 2006 the department started with its research program by offering M. Phil and Ph. D courses. All the courses are conducted as per the UGC norms. The Department has till date to its credit 21 Ph.Ds and over 75 M. Phil's. The department strives to achieve the objectives by conducting various activities like guest lectures especially on Environment and Remote Sensing, field visits, surveying etc. All the faculty members are well qualified and devoted for building the career of the students. Dean Dr.Shrikant Karlekar renowned scholar in Geography is the head of this department.

Tilak Maharashtra Vidyapeeth

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Website: www.tmv.edu.in/

4.6 Recent Trends In Geography

As per the information given in the Association of American Geographers regarding the recent trends, globalization at an increasing pace and scale, phenomena that compel greater understanding of the world, places, people, and natural systems that affect us as a planet and as global citizens and consumers are to be include in recent trends. It includes a recent proliferation of geographic technologies, such as GPS in cell phones and cars, online mapping at your fingertips, cable news reports using spatial visualizations, and many more applications in modern business and government services that underlie operations, planning, and progress in all sectors everywhere we live and work. It also includes an academic trend toward greater interdisciplinary, especially a renewed focus on big questions that matter but that require a breadth of knowledge and multiple fields to tackle. Geography's long-standing intellectual traditions in crossing those usual disciplinary boundaries are now better understood, increasingly seen as relevant and more widely respected in

scholarly circles. Apart from this the new research trends can also be seen in the fields given below:

- Progress in Geomorphology
- Recent advances in meteorology and climatology
- The ecosystem and the community in biogeography
- Soils in geography
- Progress in hydrology
- Population geography
- The economic geography of agriculture
- Progress in Industrial Geography
- The diversity of urban geography
- Area studies
- Geographical information systems

Summary: -- In this chapter importance and background of subject Geography has been discussed along with three main branches and sub branches with the help of some images. Information about institutes/colleges/Universities who are providing education in the field of Geography also given. Some of recent trends in Geography have been listed.

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Chapter 5 : Information sources in Geography

5.1 Printed sources – General Books

5.2 Reference Sources

5.3 List of Journals

5.4 Geography E-Journals

5.5 Databases in Geography

5.6 Human resources in Geography

The information sources collected from various institutes and websites have been presented in this chapter.

5.1 Printed sources: General books

Table No. 5.1 General Books

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	21st century Geography : a reference Handbook, Vol. 1 & 2	Joseph Stoltman, Ed.	Sage pub.	Los Angeles, 2012	Geography, Handbook
2	Advanced Atlas of modern Geography new series	Bartholomew, John	McGraw Hill	New York, 1956	Geography, Atlas
3	Advanced plant Geography	Shiv Manikand Dubey	Swastik pub.	Delhi, 2012	Geography
4	Agricultural Geography	Singh, J			Geography, Agriculture
5	Agricultural Geography	B. W. Ilberry	Oxford University press	Oxford, 1985	Geography, Agriculture
6	Agricultural Geography	Majid, Husain, Ed.	Anmol pub.	New Delhi, 1994	Geography, Agriculture
7	Agricultural Geography	W. B. Morgan	Methuen pub.	London, 1971	Geography, Agriculture
8	Ancient Geography of India	Cunningham, Alexander	Low price pub.	Delhi, 1990	Geography, India
9	Animal Geography	George, Wilma	Heinemann pub.	London, 1962	Animal Geography
10	Applied Agriculture Geography	Sharma, B. L.	Rawat pub.	Jaipur, 1991	Geography, Agriculture
11	Anglo America: A regional Geography	Shaw, E.B.	John, Wiley & sons	New York, 1959	Geography

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
12	Applied Geography & Development	Institute for scientific co-operation	Institute for scientific co-operation	Tubingen , 1983	Geography
13	Advanced Geological Map Interpretation	Frank, Moseley	Arnold	London, 1979	Geography, Geology
14	Applied Geography & Development, Vol. 21-23	Institute for scientific co-operation	Institute for scientific co-operation	Tubingen, 1983	Applied Geography
15	Applied Geography	Stamp, L. D.	Penguin books ltd	England, 1960	Applied Geography
16	Applied Medical Geography	Pyle., G.F.	John, Wiley & sons	New York, 1979	Medical Geography
17	Arid lands: A Geography appraisal	Halls, E.S., Ed.	Methuen pub.	London, 1966	Geography
18	Arts & science of Geography integrated readings	Dikhshit, R D., Ed.	Prentice hall of India	New Delhi, 1994	Geography
19	Asia, East by south: A cultural Geography	Spencer, E. & Thomas, W. L.	John, Wiley & sons	New York, 1971	Geography
20	Asia,: A regional & Economics Geography	Stamp, L.D.	Methuen pub.	London, 1959	Economics, Geography
21	Astronomical and mathematical foundation of Geography	Cotter, C.H.	Hollis & Cater	London, 1966	Geography
22	Atlas of world Geography	Jones, E.	Sundial pub.	New Delhi, 1967	Geography, Atlas
23	Australia : A Geography	Jeans, D. N.	Routledge & Kegan paul ltd	London, 1977	Geography, Australia
24	Between two words : New introduction to Geography	Harperand, R. A. & Schmudde, T.H.	Houghton, miffin	Bostan, 1973	Geography
25	Costal Eco-systems : Hazard Management	Ratan K. Dutta	Daya pub. House	2008	Costal Eco-systems , Hazard Management , Geography
26	1960 to 1995 Evolution of geographical thought	Husen Majid	Rawat pub.	2007	geographical thought
27	Aarthik Bhugol	Magar Jai Kumar	Vidya prakashan	2008	Aarthik Bhugol

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
28	Aashiya	Karmarkar R. P.	-----	-----	Aashiya, Geography
29	Aadiwasi Vasti : Bhugol, Vol. 1 to 3	Kshirsagar , K. P.	-----	-----	Bhugol
30	Advance Geography : Concepts & Cases	Paul, Guinness	Hodder & Stoughton	2002	Geography , Concepts , Cases
31	Aerial Photography & Remote sensing for soil survey	Leslie Paul White	Clarendon press	1977	Aerial Photography , Remote sensing , soil survey, Geography
32	Africa:A study Geography for advanced students	John M. Pritchrd	Africana pub. Co.	1977	Gegrophy, Africa
33	Africa	Stamp D.			Geography, Africa
34	Agriculture Geography	Symons Leslie	West View pub	1979	Agriculture Geography
35	Agriculture Geography	Jasbir Singh	McGraw Hill	2004	Agriculture Geography
36	Biosphere : a Geography of life	Samuel Thomas & K. Siddhartha	Kisalaya pub. Pvt. Ltd	New Delhi 2007	Geography
37	British isles a systematic Geography	Watson, J. W., Ed.	Thomas nelsond & sons ltd	London, 1967	Geography
38	British pioneers in Geography	Gilbert, E.W.	David & Chartes	Neuton abbot, 1972	Geography
39	British isles : a systematic and regional Geography	Dury, G. H.	Heinemann pub.	London, 1961	Geography
40	Companion to Economic Geography	Sheppard, Eric	Wiley, Blackwell	UK, 2012	Geography, Economic Geography
41	Comprehensive Geography of west Africa	UDO Reuben K.	Holmes & Meier	1978,	Geography, world Geography
42	Concepts & techniques of Geographic information systems	Chor, Pang Lo	Prentice hall	New Delhi, 2002	Geography, GIS
43	Concise atlas of the world	Metcalf, Jonathan	DK pub.	London, 2013	Atlas, Geography, World atlas

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
44	Dursanvedan	Karlekar, Shashikanth	Dimond pub.	Pune, 2012	Geography
45	Agro ecological regions	J. L. Sehgal	National Bureau of soil survey	1990	Agro ecological Geography
46	Airport strategy & Planning : Theory & Practice of Geography	Kenneth R Sealy	Oxford univ. Press	1976	Airport strategy Theory, Practice, Geography
47	Aldous Huxley : The surch for perennial religion	Kishor Gandhi	Arnold-Heinemann pub	1980	Aldous Huxley , perennial religion
48	An Introduction to Geographical Information systems	Ian Heywood	Prentice hall	2012	Geographical Information systems
49	Analysis and interpretation of topographical maps	Nelson, Petire	Orient Blackswan	2007	topographical maps , Geography
50	Animal Diversity in the forest Biome	Sarkar Amita	Saujanya books	2013, Delhi	Animal Diversity, forest Biome
51	Animal Geography	Wilma George	Heinemann	1969	Animal Geography
52	Analns of the association of American Geographers, Vol. 63 to 65	Association of American Geographers	Association of American Geographers	197,319,74 1,975	American Geographers
53	Anuurja va upyog	Surendranath Marathe			Anuurja ,upyog
54	Aapli Prithwi	Mohan Apte	Abhishek typewriters & publishers		Prithwi, Geography
55	Aapli Prithwi, Vol. 11 & 12	Wagh D. M.			Prithwi, Geography
56	Approaches to environmental science	aamir Khan & Fouzia Ishaq	Discovery pub. House	2013	environment al science
57	Arid & semi arid Geomorphology	Andrew S. Goudie	Cambridge university press	2013	
58	Aarthik va vyapari bhugol	Karmarkar P.R.			Bugol, Aarthik Bhugol

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
59	Asia:Modern Geography	Cornish, W. B.	Rag books	1972, London	Geography, Modern Geography, Asia
60	Teach yourself Geography	Kingsland, J. C. & Cornish, W. B.	The english universities press	1939, England	Geography
61	Modern Geography book V:Asia	Cornish, W. B.	University Tutorial press	1960, London	Geography
62	Asia & its Geography	Sharieff Afzal	Sarup books & publishers	2010,	Asia, Geography
63	Asian regional Symposusium on rock slapes 7 to 11 dec 1992 New Delhi	Varma, C.V.J. Editor	Asian regional Symposusium on rock slapes 7 to 11 dec 1992 New Delhi	1992, New Delhi	Asian Symposusium, Rocks, earth sciences
64	Asia's lands & peoples	Cressey G.	McGraw Hill	1951, New Delhi	Asia, Geography
65	Geography of transport: aspect geographys	Robinson, H.	Macdonald & evans	1978, London	Geography
66	At Last of middle eastern affairs	Pounds, N. J G.	Methuen, Young books	1966,	Atlas, Geography
67	Atlant of soviet affairs	Taaffern	Praeger pub.	1965	Atlas, Geography
68	Atlas of the world	Currie, Andrew M. Editor	Callings pub.	1984, London	Atlas, World atlas, Geography
69	Audyogik Bhugol	Khandve M. A.			Audyogik Bhugol
70	Australia & Newzeland	Stamp D.			Australia , Newzeland
71	Australia :Geography	Jeans, D. N. Editor	Routledge & Kegan	1978	Australia :Geography
72	Bases of economic Geography	Boyce, Ronald Reed	Holt McDougal	1978	economic Geography
73	Basic Biogeography	Pears, Nigen	Routledge	1985	Biogeography
74	Geography : Basic facts	Jilbert John	Harper collins	1992, UK	Geography
75	Basic Geography	Malkin age	Elsevier science ltd.	1969	Geography
76	Bhurup shashra	Magar Jaykumar	-----	-----	Geography

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
77	Biogeography	Pienou, E. C	Wiley	1979	Geography, Biogeography
78	Biogeography: Aspect geographics	Robinson, H.	Macdonald Evans	1972	Biogeography
79	Biogeography, Part I	Husen Majid	Anmol pub	1994, New Delhi	Biogeography
80	Book 1 : Foundations of Geography	Preece	University Tutorial press	1967,	Geography
81	British Isles	Nixon, Brian	Collins education	1978, UK	British Isles, Geography
82	British Isles : A geographic and economic survey	Stamp D.	Longman	1962, London	British Isles, Geography, Economic survey
83	Business environment in India 1990-1991	Chopra K. S.	Wiley estern ltd.	1992,	Business environment , Geography
84	Census mapping survey	Prithvish Nag editor	Concept pub. Co.	1984, New Delhi	Geography, Maps, Census survey
85	Certificate map Interpret	Jennings J.H.	Cambridge university press	1976, Cambridge	Geography, Map Interpretation
86	Channels of Synthesis perception & Defusion	Sarre, Philip	Open university press	1972	Geography,
87	Bhartacha Bhugol	Kalpana Deshmukh	-----	-----	Bhugol
88	Bhrtache aarthik aani vyapari bhuidyan	Pathak, S. P.	-----	-----	Economic Geography, commercial Geography
89	Bharat:Samanya aani pradeshik bhuidyan	Date, S.P.	-----	-----	Reginal Geography, Geography
90	Bhartache bhugolik vishleshan	Praveen Saptarshi	-----	-----	India, Geography
91	Bhartachi khanije	Wadiya, D. N.	-----	-----	India, Minerals
92	Bhugolik mahiti pranali	Shrikant Karlekar	-----	-----	Geographical information system, Geography

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
93	Bhugol aani naisargik aapatti	Praveen Saptarshi	-----	-----	Geography, Disasters
94	Bhugol parichay	M.D. Tawade	-----	-----	Geography
95	Bhugol shasratil sanshondhan padhati	Shrikant Karlekar	-----	-----	Research methods, Geography
96	Bhugol shasrachi multattve	Kolte K.T.	-----	-----	Geography
97	Bhugol shasratil sankhyasashriya padhti	Shrikant Karlekar	-----	-----	Geography, statistical methods
98	Tourism:theory, planning & practice	Krishnan Kamra	Indus pub.	1997	Tourism, Geography
99	Belgium studies in industrial Geography	Riley Raymond	Dawson pub	1976, UK	Industrial Geography
100	Bengal in maps	Chatterji,	-----	-----	Maps, Geography
101	Bhartacha aarthik va vanijya bhugol	Dhoot, S. B..	-----	-----	India, Aathik Bhugol, Vanijya Bhugol
102	Blue plant, 2nd ed	Botkin, Daniel B.	John Wiley & sons	New Delhi, 1995	Geography, Environment
103	Disaster Management act and Management	Ghanekar, V. V.	Institute of rural development & education	Pune, 2007	Economics, Disaster Management , Geography
104	Insect	Mound, Laurence	Alfred A. Knop & inc	New York, 1990	Natural science, Geography
105	Erosion and sedimentation	Julien, Pierrey	Cambridge university press	Delhi, 2010	Geography, Major research project
106	Farewell Austria	Schuschnigg, Kurt Von	Cassell & co. Ltd	London, 1938	Geography
107	Hindustancha nakasha				
108	International seminar on the Indian Ocean	Ray, Harprasad	Jawaharlal Nehru University	New Delhi 1985	Geography
109	Introduction to water Pollution	Rao, S. V.	The university press	India, 2006	Geography, Water, Pollution
110	Vastunishta Bhugol	Sangle Shailaja	Diamond pub.	Pune, 2009	Geography
111	Aadarsha samaj rachnechya shodhat	Patil, R. K.	Sadhna sadan prakashan	Wardha 1970	Geography, Yugoslavia

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
112	Aapatti Niwaran	Pathare, Sambhaji	Diamond pub.	Pune, 2007	Geography
113	Aapatti Vyavasthapan, 3rd ed		Diamond pub.	Pune, 2010	Geography, Disaster mgmt.
114	Aapjalatun Spain	Godase Ravindra	Granthali Jnanyajna	Mumbai, 2002	Geography, Tourism
115	Aadwatevarcha Maharashtra	Null	Snehal Prakashan	Poona, 1992	Geography, Maharashtra
116	Agricultural Geography	Husain, Majid	Rawat Pub.	New Delhi, 2010	Agricultural Regionalization, Indian Agriculture
117	Agricultural Geography	Shrivastava, D.	Intellectual book bureau	Bhopal, 2006	Geography
118	Air sea interaction	Csanady, G.T.	Cambridge university press	United Kingdom, 2001	Geography, Major research project
119	Akhil Bhartiya Shabdavali Bhugol	Vaidnyanik tatha Takrukishabda vali Aayog	Manager, Govt. Of India press	New Delhi, 1986	Geography
120	Ancient Geography of India	Cunningham, Alexander	Indological book house	Varanasi, 1979	Geography
121	Ancient Kurukshetra	Bhardwaj, O. P.	Harman Publishing house	New Delhi, 1991	Geography, Sociology
122	Andhra pradesh District Gazetteers	Rajagopal, M. Y.	Govt. Of Andhra pradesh	Hyderabad, 1974	Geography
123	Applied agricultural Geography	Singh, Vaishali	Alfa Pub.	New Delhi, 2011	Geography, Agricultural Geography
124	Applied Geography	Stamb, L. Dudley	Penguin books	Middlex , 1960	Geography, Applied Geography
125	Aarthik Bhugol	Major, Jaykumar	Vidhya Prakashan	Nagpur, 2010	Geography
126	Asa ha Gomantak	Madhav Gadkari	Kohinoor Prakashan	Goa, 1974	Geography
127	Asia and its Geography	Sharieff, Afzal	Sarup book publication pvt. Ltd	New Delhi	Geography, Asia
128	Asia's Land & People	Null			
129	Aspects of historical	Sarkar,	Naya prakash	Calcutta,	Geography

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	Geography of Pragjyotisa Kamaeupa	Ichhimyddin		1992	
130	Aspects of teaching secondary Geography	Smith, Maggie	The open university	New York, 2002	Education, Geography
131	Bharat Bhraman	Joshi, Shripad	Chetak Pustake	Mumbai, 1969	Geography, Tourism
132	Bhartiya sagar aani kinare	Brahme, S. B.	Continental prakashan	Poona, 1994	Geography
133	Bhartiya Teerthakshetre	Deglurkar, Dhundumahara j	Indrayani sahitya	Pune, 1996	Geography, Pilgrimage, Tourism
134	Bhaugolik mahiti pranali (GIS)	Karlekar, Shrikant	Diamond pub.	Pune, 2006	Geography
135	Bhaugolik Vichardhara	Velapurkar, B. G.	Abhijit prakashan	Latur, 2005	Geography
136	Bhaugolik Vichardhara, 2nd ed	Rathod, H. B.	Abhijit prakashan	Latur, 2005	Geography
137	Bhugol Shikshan	Sinha, Yogesh Kumar	A.P.H. Pub. Corporation	New Delhi, 2004	Geography
138	Bhugol aani Naisargik Aapattee	Saptarshi, Praveen	Diamond pub.	Pune, 2009	Geography
139	Bhugol Adhyapan Paddhati	Jadhav, M. R.	Chaitanya Prakashan	Kolhapur, 2005	Geography
140	Bhugol parichaya	Null	Mehta pub. House	Mumbai, 1988	Geography
141	Bhugolatil Pratyakshike	Shende Kanchan	Diamond pub.	Pune, 2007	Practicals, Geography
142	Bhugolshashrachi multatve	Puranik Madhav	Vidya prakashan	Nagpur, 2003	Geography
143	Bhugolshashrachi olakh	Gharpure, Vitthal	Pimpalpure & co.	Nagpur, 2009	Geography
144	Bhukampshashra va Jwalamukhi	Nagtode, P. M.	Vidya prakashan	Pune, 2003	Geography
145	Bhunandanvan Kashmir	Kulkarni, Dattatraya Digambar	Pravasi prakashan	Pune 1977	Geography
146	Bhurupshashra aani sagarvidhana	Pandit Bapat S.	Shree sainath prakashan	Nagpur, 2009	Geography
147	Bhurupshashra va sagarvidhana	Nagtode, P. M.	Vidya prakashan	Nagpur, 2004	Geography
148	Business Geography	Tomar Dinesh	Vista international pub. House	Delhi, 2010	Economics, Geography
149	Causes and consequences of	Oberai, A. S.	Oxford University	Delhi, 1983	Geography

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	internal migration				
150	Challenges of sustainability tourism	Kumar D.	Intellectual book Bureau	Bhopal 2006	Geography, Tourism
151	Challenges of sustainable development in India	Reyazuddin Md.	Deep & Deep pub.	New Delhi 2010	Geography
152	Chambers world Gazetteer	Munro, David, Ed.	World and chambers ltd.	Edinburgh, 1988	Geography, Gazetteer
153	Chronology and dictionary of biological disaster Management	Singh, Ranjeet kumar	Rajat pub.	New Delhi, 2010	Dictionary, Biological disaster management, Geography
154	Coastal Environment- Toward integrated costal and marine sanctuary management	Klee, Gary A.	Prentice hall of India Pvt. Ltd	New Delhi, 1999	Geography
155	Coastal processes and landforms	Karlekar, Shrikant	Diamond pub.	Pune, 2009	Geography, Coastal Geoenvironment
156	Computational methods for Geodynamycs	Zadeh Alik Ismail	Cambridge university press	United Kingdom, 2010	Major research project, Geography
157	Concise atlas of the world	Heath, Thomas			
158	Concise encyclopedia of Geography	Tunney, C. J.	Purnell books	Berkshire, 1976	Encyclopedia, Geography
159	Concise world Atlas	Phillip's	George Phillip ltd	London, 1990	Geography, World Atlas
160	Concepts and practices in disaster Management	Marathe, R. P.	Diamond pub.	Pune 2006	Sociology, Geography, Disaster Management
161	Core Geography cities	Martin, F.	Hutchinson & co. Ltd	London, 1983	Geography
162	Core Geography leisure	Martin, F.	Hutchinson & co. Ltd	London, 1982	Geography
163	Cultural Geography	Varma, J.K.	GNOSIS	Delhi, 2009	Geography
164	Developmental Geography and	Chander, Y. S.	Swastik pub.	Delhi, 2010	Economics, Geography

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	Economic theory				
165	Rocks & Minerals : The practical guide to Geology	Dougal Dixon	Greenwich editions	London	Rocks, Minerals, Geology
166	The great barrier reef: The worlds wide places.	Craig McGregor	Time life International	Amsterdam	World wide places
167	Flora of Sindhudurg	B. G. Kulkarni	Botanical survey of India	Culcutta	Flora, Sindhudurga
168	Wonders of the Oceans	Walt Disney	-----	-----	Ocean
169	The Guinness book of weather : Facts & Feats, 2nd ed	Ingrid Holford	Guinness superlatives ltd.	Great Britain	Gunness book, Facts, Feats
170	Flora of Mahabaleshwar and ad-joinings Maharashtra, Vol. I & II	Sandhya Deshpande & B. D. Sharma	Botanical survey of India	Culcutta	Flora, Mahabalesh war, Maharashtra
171	Flora of Yawatmal district : Maharashtra	S. Kartikayan & Aanandkumar	Botanical survey of India	Culcutta	Flora, Yawatmal, Maharashtra
172	Flora of Raigad district:Maharashtra state	M. J. Kothari & S. Moorthy	Botanical survey of India	Culcutta	Flora, Raigad Maharashtra
173	Flora of Maharashtra state	B. D. Sharma & S. Kartikayan, Ed.	Botanical survey of India	Culcutta	Flora, Maharashtra
174	World Geographical Encyclopedia, I to V	Sybil Parker	McGraw Hill	New York	World Geographica l Encyclopedi a
175	World development report 2010 : Development and climate change	The world bank	-----	Washington	World development report, Climate change
176	Encyclopedia of India : Karnataka, Vol. 1 To 29, 31,32	S. P. Gulathi	-----	New Delhi	Encyclopedi a , India , Karnataka
177	Encyclopedia of social sciences, I to 3	B. R. Joshi & Sulbha Ternikar,Ed.	Dimond pub.	Pune	Encyclopedi a ,social sciences
178	Encyclopedia of	M. J. Kashy	Rima pub.	New Delhi	Encyclopedi

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	India : KERALA, Vol. 20		House		a , India , KERALA
179	Philips foundation Encyclopedia	Bill Hemsley, Ed.	Philips	London	Encyclopedi a
180	The Columbia Encyclopedia, 3rd ed.	William Bridge water, Ed.	Columbia university press	New York	Columbia , Encyclopedi a
181	The new Columbia Encyclopedia, 4th ed	William Bridge water,Ed.	Columbia university press	New York	Columbia , Encyclopedi a
182	Encyclopedia of the social sciences, vol. 15	Edwin R. A Seligmn, Ed.	The Macmillan	New York	Encyclopedi a , social sciences
183	Aadhunik Jagachi aadhunik Varshiki - Vishwakosh Varshiki 2005	Dr. Shrikant Jichkar, Ed.	Maharashtra Rajya Vishwakosh nirmiti mandal	Mumbai	Varshiki, Vishwakosh
184	Indian states at a glance 2006-07:performance, facts & figures, vol. 20	Lavish Bhandari & Sunita Kale, Ed.	Pearson education	New Delhi	India, Facts , Figures
185	India 2003 : A Reference annual	Research reference& Training divison, Ed.	Ministry of information & broadcasting Govt. of India	New Delhi	India, Annual
186	India 2006 : A Reference annual	Research reference& Training divison, Ed.	Ministry of information & broadcasting Govt. of India	New Delhi	India, Annual
187	DM Silveira's India Book 1996-97	DM Silveira	Classic pub.	Goa	DM Silveira's , India
188	Maharashtra Rajya Manchitra Sangrah (Jilhe va Taluke)	N. G. Aapte, Ed.	Maharashtra Gramkosh Mandal T. M. V.	Pune	Maharashtra Rajya , Manchitra Sangrah
189	The Encyclopedia of the Indian DIASPORA	Brij V. Lal, Ed.	Oxford university press	New Delhi	Encyclopedi a , India , DIASPORA
190	India's water wealth : It's Assessment, uses and projections.	K. L. Rao	Orient Longman ltd.	New Delhi	India, water wealth
191	Encyclopedia of Lands & Peoples	Sue Grabham, Ed.	King Fisher	London	Encyclopedi a

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
192	Maharashtra state Gazetteer's Ratnagiri district, Aurangabad, Nanded, Dhuliya, Nashik, Bihar, Amrawati, Buldhana, Bhandara, Chandrapur, Ahmednagar, Bhir	Government of Maharashtra	Director govt. printing stationary and publications	Mumbai	Maharashtra, Gazetteer's

5.2 Reference Sources Table No 5.2 Reference Sources.

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
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2.	Disaster Management	G. K. Ghosh	APH publishing corporation	New Delhi	Disaster Management
3.	Encyclopedia of disaster management, Vol. 1 to 3	S. L. Goel	Deep & Deep pub	-----	Encyclopedia, disaster management
4.	Khagolshashra	Syman & Jaklin Metan Anuwadak : R. W. Soani	Oxford university press	Mumbai	Khagolshashra
5.	Macmillan Encyclopedia of the environment, Vol. 1 to 6	Stephen R. Keller, Ed.	Simon & Schuster	New Delhi	Encyclopedia, environment
6.	New Knowledge Library : Universal reference Encyclopedia, Vol. 1 to 35	Susanbures & Peter Coulter et all.	Bay books	Sydne	Knowledge Library
7.	Sandarbh Maharashtra : Rajyewa jilhe ek drushtikon, Vol. 1 to 5	K. K. Sharma, Ed.	International book bureau	Bhopal	Sandarbh Maharashtra
8.	Book of Nations	World book		Chicago	Nations
9.	Pune shahracha	Dr. S. G.	Pune	Pune	Gnankosh

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	gnankosh	Mahajan	shahracha gnankosh Pratishtan		
10.	Bombay: The cities within	Sharda Dwivedi & Rahul Melhotra	India book house Pvt. Ltd.	Bombay	Bombay
11.	Greater Delhi : A study in urbanisation 1940 to 57	V. K. R. V. Rao & P. B. Desai	Asia pub. House	New York	Greater Delhi
12.	Uttar pradesh A-Z The Department of tourism The Government of uttar Pradesh	-----	-----	-----	Uttar pradesh, Government
13.	Dictionary of Geography, 3rd ed.	Susan Mayhew	Oxford university press	New Delhi	Dictionary , Geography
14.	Dictionary of Ecology, 2nd ed.	Michael Allaby	Oxford university press	New York	Dictionary , Ecology
15.	Seismotectonic Atlas of India and its Environs	Dasgupta, Sujeet Pande, et all	Geological survey of India	Culcutta	Seismotectonic Atlas ,India
16.	National Atlas of India II & I	National Atlas & thematic maping organization	Department of science & Technology	Culcutta	National Atlas, India
17.	The Encyclopedia of world Geography	Grahm Bateman & Victoria Egan, Ed.	Rajendra pub. House	Bombay	Encyclopedia , world Geography
18.	India Administrative Atlas 1972-2001 : A Historical prospective	Jayantkumar Banthiya	Government of India		India Administrative, Atlas
19.	Atlas of India : A Complete guide to India	Vedprakash & Prashant Gupta, Ed.	Dreamland pub.	New Delhi	Atlas, India
20.	Various MAPS : * Pune District * Maharashtra * World political wall map * Mahabaleshwar Map * Drinking water sources & location	-----	-----	-----	MAPS

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	* Central Electricity Authority major transmission network of India * Yawatmal District * Improvements in sources of drinking water 1981 to 2001 * Bid District * Dhudgao taluka Dist. Nandurbar				
21.	Maharashtra in Maps	K. R. Dixit	Maharashtra state board for literature & culture	Bombay	Maharashtra, Maps
22.	Geographical Atlas of the world	forwarded by William R. Mead	Bramley books	England	
23.	Land slide hazard zonation Atlas of India public building materials & Technology promotion council	-----	Centre for Disaster, Mitigation & Management	Chennai	Atlas, India, Technology
24.	The Economist Atlas : The shape of the world today	-----	The Economist books	Singapore	Economist Atlas
25.	Srushtignan aakashdarshan Atlas or Ha tara konta?	G. R. Paranjape	Maharashtra rajya sahitya sanskruti mandal	Mumbai	Atlas
26.	Great world atlas		The readers digest association	New York	world atlas
27.	A state of India : Maharashtra	Sanju Hingne & Dhananjay Karnik	Beaconway pub.	Mumbai	Maharashtra
28.	Geothermal Atlas of India	-----	Geological survey of India	Culcutta	Geothermal Atlas ,ndia
29.	Statistical Atlas of bombay states	-----	Bureau of Economics & Statistics	Bombay	Statistical Atlas , bombay states
30.	Administrative atlas of India	Dr. C. Chandramouli	office of the registrar general & census	-----	atlas , India

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
			commitioner of India		
31.	Atlas of Landforms, 3rd ed	H. Allen Curran & Drew M. Young II	John willey & sons	-----	Atlas , Landforms
32.	100 most beautiful cities of the world : A journey across 5 continents	Manfred Leier,Ed.	Rebo International	Netherland	beautiful cities
33.	Census of India 1961 : Census Atlas, Vol 1	Dr. P. Sengupta	Census Commissioner of India	-----	Census, India
34.	The Atlas of the world's worst natural disasters	Lesley M. Newson	Dorling kindersley	New York	Atlas ,natural disasters
35.	A Social & Economic atlas of India	-----	Oxford university press	Delhi	Social Atlas, Economic Atlas, India
36.	Scheduled Tribe Atlas of India	R. P. Singh	Registrar General & Census Commitioner of India	-----	Scheduled Tribe , Atlas ,India
37.	Changes in the boundry of Administrative units 2001-2011	Sr. C. Chandramouli	Registrar General & Commitioner of India	-----	Administrati ve units
38.	World Environment Atlas	-----	Bartholomew	Edinburgh	World Environment , Atlas
39.	The National Geographic society : 100 years of adventure & discovery	C. D. B. Bryan,Ed.	the national geographic society	Great Braitain	National Geographic society, adventure , discovery
40.	District census handbook : Ahmadnagar	compiled by the maharashtra census directorate	-----	Bombay	Census, Handbook
41.	District census handbook : Vardha	compiled by the maharashtra census directorate	-----	Bombay	Census, Handbook
42.	National geographic atlas of the world	-----	National Geographic	Washington	National geographic ,

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
			society		atlas
43.	Atlas of women and men in India	Saraswati Raju & Peter J. Atkings	Kali for women	New Delhi	Atlas
44.	The times Concise of the world, 3rd ed	-----	Times book	London	Concise, World
45.	Philips Atlas of the world	-----	Royal Geographical society	London	Philips, Atlas
46.	The world book Atlas	-----	world book encyclopedia	Chicago	World book, Atlas
47.	An Atlas of India	-----	Oxford university press	-----	Atlas , India
48.	Maharashtra : Redefining Horizons	-----	Government of Maharashtra	-----	Maharashtra , Horizons
49.	Concise Atlas of the world	-----	DK pub	Delhi	Concise, World , Atlas
50.	Globetrotter's world year book 1994	-----	Booxport pub.	New Delhi	Globetrotter's world, year book
51.	Guide to places of the world: A Geographical dictionary	-----	Readers Digest Association	London	Geographical dictionary
52.	The Cambridge factfinder	David Crystel,Ed.	Foundation book	New Delhi	Cambridge factfinder
53.	Gujrat state Gazetteers, Surat, Rajkot	-----	-----	-----	Gazetteers, Surat, Rajkot
54.	Mhaisoor State Gazetteers	-----	-----	-----	Gazetteers
55.	The Encyclopedia of world Geography	Graham Betman,Ed.	Grange books	2007, London	A country by country guide, Environment, culture economy politics
56.	Geology of India	Dey, A. K.	National book trust	1968, New Delhi	Geology, Geology of India
57.	Geography of Maharashtra	Deshpande, C. V.	National book trust pub.	1971, New Delhi	Geography, Maharashtra
58.	Tables of integral transforms, Vol. 1 &	Harry Bateman	McGraw hill book co.	New York	Integral transforms

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	3				
59.	Vedic Maths	Bharati krishna Tirthji Maharaja	Motilal Banarasidas pub.	Delhi	Vedic maths
60.	Dictionary of Technical Terms, 10th ed	Fredrick Swing Crispin	Oxford & Ibh pub	Bombay	Dictionary ,Technical Terms
61.	Barlow's tables of squares cubes square roots cube roots & Reciprocals, 4th ed	Ljcomria,Ed.	E & F. N. Spon ltd	London	Square roots, Cube roots
62.	The treasury of world science	Dagobard Rouns,Ed.	Peter Owen	1962, London	Archimedes, Roger Becon, Albert Einstein
63.	Bhartiy Saritakosh, Vol. 1 to 3 Nakasha pustika	R. M. Bhalerao,Ed.	Dimond pub	2007, Pune	Shasriy, sanskrutik aani aitehasik mahiti.
64.	South East Asia:Social economic & Political Geography	Methun & Co.	-----	1964, London	Social Geography, Economic Geography, Political Geography
65.	Marathi Vishwakosh	Tarkatirth Shri Laxmanshashri Joshi,Ed.	Maharashtra rajya sahitya sanskriti mandal (Paribhasha sangrah)	1973	Marathi vishwakosh, Tarkatirth Shri Laxmanshashri Joshi
66.	The international dictionary of applied Mathematics	Vain Nostrand	Vain Nostrand co.		International , dictionary, Applied Mathematics
67.	Pune shahracha gnankosh (Pune shahracha Etahas va Bhugol, Prekshaniy Sthale) Vol. 1	S. G. Mahajan,, S. G. Mahajan, Ed.	Pune shahracha gnankosh pratishthan	2004	Gnankosh, Pune

5.2.1 Physical Geography Table No. 5.3

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Background of physical Geography	G. P. Kellaway	Macmillan	London, 1955	Physical Geography
2	Background of physical geography	Kellaway George P.	Macmillan & co.	1948	physical geography
3	Biogeographical processes: Processes in physical Geography	Simmons Ian	Harper collins	1982, UK	Biogeography, physical geography
4	Certificate human at physical Geography	Goh Cheng Leong	Oxford univ. Press	1995, New Delhi	Geography, Physical Geography
5	Changing nature of physical geography	Gregory, K. J.	Routledge	2000	Geography, Physical Geography
6	Contemporary physical Geography	Navarra John Gabriel	Saunders college pub.	New York, 1981	Geography, Physical Geography
7	Bhartacha Bhugol	Vitthal Gharpure	Pimpalpure & co.	Nagpur, 2004	Geography, Physical Geography
8	Fundamentals of physical Geography	M. N. Kaul	National council of education research & training	New Delhi	physical Geography

5.2.2 Human Geography Table No. 5.4

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Approaches to Human Geography	Aitken Stuart & Gill, Valentine, Ed.	Sage pub.	London, 2006	Human Geography
2	Dictionary of human Geography	Johnston, R. J., Ed.	Basil, Blackwell	England, 1981	Dictionary, Geography, Anthro geography

5.2.3 Political Geography Table No. 5.5

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Background to Political Geography	G.R.Crone	Meseum	London, 1967	Political Geography
2	Approaches to Political Geography	-----	Open University press		Political Geography

5.2.4 Geography of Population Table No. 5.6

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Bharat ki Janaganna 1991	Sanjay Kumar	ABD pub.	Jaipur, 2014	Geography, Population
2	Cencus of India 2001	Banthia, J. K.	Director of Census Operations	Maharashtra, 1993	Geography, Population
3	Cencus administration under the raj and after	Data pubn wing	New Delhi 2001	New Delhi, 2001	Geography, Population, India, Cencus
4	Cencus of India	Shriram Mahesh wani	Concept pub. Co.	New Delhi, 1996	Geography, population, India
5	Cencus of India 1991	Sameer kumar Biswas	Controller of pub.	Delhi, 2004	India, Geography, Population

5.2.5 Geomorphology Table No. 5.7

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Geomorphology	Dikshit, K.R.	Heritage pub.	New Delhi, 1983	Geomorphology
2	Arid and semi-arid Geomorphology	Andrew S. Goudie	Cambridge univ. press	Cambridge, 2013	Geomorphology
3	Climatic Geomorphology	Julius Budwl. Tr. By Lenore Fisher & Detlef Busche	Princeton univ. press	New Jersey, 1982	Climatiology, Geomorphology, Geography
4	Climatic Geomorphology	Edward, Derbyshire	Macmillan	London, 1973	Climatiology, Geomorphology, Geography
5	Coastal Geomorphology of India	Ahmed, E	Orient Lonman	New Delhi, 1972	Geomorphology
6	Desert	Ron Cooke,	Research	New Delhi,	Geomorphol

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	Geomorphology	Andrew Warren & Andrew Goudie	press	1993	ogy
7	Earth & Surface : Landforms and process in Geomorphology	Kenneth, J, Gregory	Sage pub.	Los Angeles, 2010	Geomorphology, Earth science
8	Encyclopedia of Geomorphology	Fairbridge, Rhodes W.	Faber & Faber	London, 1968	Encyclopedia , Geomorphology
9	Environmental Geomorphology and landscape conservation	Coates, Donald R., Ed.	Dowden, Hutchinson & ross, inc	Pennsylvania, 1974	Geomorphology, Geography
10	Environmental change and Tropical Geomorphology	I, Douglas & Spencer, T., Ed.	George Allen & unwin	London, 1985	Geomorphology, Geography
11	Environmental Geomorphology and watershed management : Study from central Himalaya.	Rawat, M.S.	Concept pub.co. pvt. Ltd	New Delhi, 2011	Geomorphology, Geography
12	Essays in Geomorphology	Dury, G.H.	Heinemann pub.	London, 1966	Geomorphology
13	Encyclopedia of Geomorphology	Fairbridge, R.W.			Geomorphology
14	Fluvial processes in Geomorphology	Leopold, L.B.	Eurasia pub. House	New Delhi, 1964	Geomorphology
15	Fundamentals of Geomorphology	Richard John Huggett	Routledge pub.	London, 2003	Geomorphology
16	Geoinformatics in applied Geomorphology	Siddan Anbazhagan & Subramanian, S.K., Xiaojun Yang, Ed.	CRC press	Boca Roton, 2011	Geomorphology , Geoinformatics
17	Geomorphology : an introduction to study of landforms, 7th ed	C.A.Cotton	Whitecomb	London, 1958	Geomorphology , Geography
18	Geomorphology & Climate	Derbyshire, Edward	John, Wiley & sons	London, 1976	Geomorphology , Geography
19	Geomorphology : & global climate change	K.P.Singh	Axis pub.	New Delhi, 2011	Geomorphology , Geography, Climatology

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
20	Geomorphology : & global environmental change	Olav Slaymaker, Thomas Spence and C Embleton Hamann,Ed.	Cambridge univ. press	Cambridge, 2009	Geomorphology
21	Geomorphology and reclamation of distribed lands	Toy, T.J. & Hadley, R.F.	Academic press	Orlando	Geomorphology
22	Geomorphology and Soils	Richards, K.S.[et al], Ed.	George Allen and unwin	London, 1985	Geomorphology , Geography
23	Geomorphology : Critical concepts in Geography : Fluvial Geomorphology Vol. 1 to 7,	Evans, David J.A. & S. Laymaker, Olav, Ed.	Routledge taylor & Francis group	London, 2004	Geomorphology , Geography
24	Antarctic Panorama	Pathak, R.C.	Diamond pub.	Pune, 2011	Geography, Geomorphology
25	Bhugolshashra aani Bhurupshashra	Pandit, Bapat S.	Shree sainath prakashan	Nagpur, 2006	Geomorphology, Geography
26	Bhurupshashra	Major, Jaykumar	Vidya prakashan	Nagpur, 2010	Geomorphology, Geography

5.2.6 Meteorology Table No. 5.8

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Antarctic Meteorology		Pergamon press	London, 1960	Meteorology, Geography
2	Agricultural Meteorology	N. Gopalswamy	Rawat pub.	Jaipur, 1994	Agricultural, Meteorology, Geography
3	Atmosphere : An introduction to Meteorology	Fredrick K. Lutgens & Edward, J. Tarbuck	Prentice hall	London, 1982	Atmosphere , Meteorology, Geography
4	Atmosphere : An introduction to Meteorology	Fredrick K. Lutgens & Edward, J. Tarbuck	Phi learning pvt. Ltd	New Delhi, 2012	Atmosphere , Meteorology, Geography
5	Atmospheric system : an introduction to	Greg, O'Hare & John, Sweeriy	Oliever & Boyd pub	Edinburgh , 1986	Atmosphere , Meteorology,

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	Meteorology and Climatology				Geography, Climatology
6	Coastal Meteorology	Hsu, S. A	Academic Press	San Diego, 1988	Meteorology, Geography
7	Collected reprints of paper in Meteorology	Indian institute of Tropical Meteorology	Indian institute of Tropical Meteorology	Pune, 1978	Meteorology, Geography
8	Course in elementary Meteorology	HER MAJESTYS stationary office		London, 1962	Meteorology, Geography
9	Descriptive Meteorology	Willett, H.C.	Academic Press	New York, 1959	Meteorology, Geography
10	Dictionary of applied physics : Meteorology	Richard, Glazebrook,Ed.	Macmillan	London, 1923	Dictionary , applied physics ,Meteorology , Geography
11	Dynamic Meteorology of the stratosphere and mesosphere	American Meteorological society		Boston, 1975	Meteorology, Geography
12	Dynamic & physical Meteorology	Haltiner, G. J.	McGraw Hill book co. inc	New York, 1957	Meteorology, Geography
13	Engineering Meteorology	Jain, R. K.	Khanna pub.	Delhi, 1979	Engineering Meteorology , Geography
14	Environmental Meteorology	Murty, B. Padmanabha	I. K. International pvt ltd	New Delhi, 2004	Environment al Meteorology, Geography
15	Essentials of Meteorology	Mcintosh, D.H. & Thou, A.S.	Wykeham pub.	London, 1972	Meteorology, Geography
16	Everyday Meteorology	Austin Miller & Parry, M.	Hutchinsons and co. ltd	London, 1975	Meteorology, Geography
17	Introduction to boundary layer Meteorology	Roland, B. Stull	Kluwer Academic pub.	Dordrecht, 1991	Meteorology, Geography
18	Introduction to dynamic Meteorology	James, R. Holton & Gregory J. Hakim	Elsevier	Amsterdam , 2013	Meteorology, Geography

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
19	Introduction to theoretical Meteorology	Hess, S. L.	Henry Holt & co.	New York 1959	Meteorology, Geography
20	Mesoscale Meteorology & Forecasting	Peter, S. Ray, Ed.	American Meteorological society	Boston, 1986	Meteorology, Geography
21	Meteorology and Air pollution in the Delaware valley	Maher, John R.	C.W. Thonthwalt e Ass	New Jersey, 1968	Meteorology, Geography, air pollution.
22	Meteorology & Climatology	Gates Earnest		1965	Meteorology, Climatology, Geography
23	Meteorology today : An introduction to weather, climate and the environment, 10th ed.	C. Donald Ahrens	Books / Cole cengage learning		
24	Meteorology understanding the atmosphere, 3rd ed.	Steven A Ackerman & John A. Knox	Jones & Barlett learning LLC	USA, 2012	Meteorology, Geography
25	Meteorology	David, Wright	Basil, Blackwell	Oxford, 1983	Meteorology, Geography
26	Monsoon Meteorology	C.P.Chang and T.N. Krishnamurti	Clarendon pub.	Oxford, 1987	Meteorology, Geography
27	Physical Meteorology	Johnson, J.C.	John, Wiley & sons	New York, 1954	Meteorology, Geography
28	Pilots Meteorology	Halpine, C.G.	D Van Nostrand co.	New York 1953	Meteorology, Geography
29	Principles of air pollution Meteorology	T.J.Lyons and W.D. Scott	Belhaven press	London, 1990	Air pollution, Meteorology, Geography
30	Radiation in the atmosphere : a course in theoretical Meteorology	Wilford, Zdunkowski & Thomas Trautmann & Andreas Bott	Cambridge university press	Cambridge, 2007	Meteorology, Geography
31	Satellite Meteorology : an	Kidder, Stanley Q.	Academic press	San, Diego, 1995	Meteorology,

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	introduction				Geography
32	Satellite Meteorology	Kelkar, R.R.	BS pub.	Hyderabad, 2007	Meteorology, Geography
33	Scientific proceedings of the international association of Meteorology	-----	Butterworths scientific pub.	London, 1956	Meteorology, Geography
34	Selected papers of....v1 : Scattering of light Meteorology	K.R.Ramanathan	Indian academy of science	Banglore, 1983	Meteorology, Geography
35	Selected plans of Meteorology and Geophysics	-----	United Nations department	1955	Meteorology, Geography
36	Start in Meteorology : an introduction to the science of the weather	Spitz, Amand N.	The norman W, Henley pub co.	New York, 1943	Meteorology
37	Symposium on Meteorology in relation high-level aviation---- areas		Manager of pub.	New Delhi, 1962	Meteorology, Geography
38	Tropical Meteorology, Vol. 1 &2	Asnani, G.C.	G.C. Asnani pub.	Pune, 1993	Tropical Meteorology, Geography
39	Tropical Meteorology (chapter 1 to 16), Vol. 1 to3	Asnani, G.C.	G.C. Asnani pub.	Pune, 2005	Tropical Meteorology, Geography
40	Upper atmosphere: Meteorology and physics	Craig, R.A.	Academic press	New York, 1965	Meteorology, Geography
41	Weather elements : a text in elementary Meteorology	Blair, Thomas A.	Prentice hall, inc	New York, 1948	Meteorology, Geography
42	Advances in tropical Meteorology	Datta, Rattan K.	Concept Publishing co.	New Delhi, 1996	Geography, Meteorology
43	Meteorology at the millennium	Pearce, R. P., Ed.	Academic press	2002 UK	Meteorology, atmospheric science, international geographical

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
					series.
44	Catalogue of Meteorological satellite data- TIROS ix : Television cloud photography part 1 to 4	US dept. of commerce	US dept. of commerce	1966, New York	Meteorological satellite data, cloud photography.
45	South west monsoon: Meteorological monograph	-----	India Meteorological	1976, Pune	South west monsoon
46	Possible relationships between solar activity & Meteorological phenomena: Symp. Held at Godard space flight centre, Maryland	Bandeem, W. R. & Maran S. P., Ed.	NASA,	1973, USA	Meteorology, solar activity.
47	Whirling psychrometer	India Meteorological Department	India Meteorological Department	1959, Pune	Meteorology, 700 mb pressure tables.
48	Admiralty manual of navigation	-----	Her Majesty's stationary office	1959, London	
49	The Encyclopedia of Spectroscopy	Jorg L.Clerk, Ed.	Reinhold pub. Corporation	New York	Encyclopedia , Spectroscopy
50	Tables of the incomplete Beta function	Karl pearson, Ed.	Cambridge University press		Beta function
51	Quaternary Glaciations Extent and Chronology Part I - Europe II - North America III - South America	J. Ehlers & P. L. Gibbard, Ed.	ELSEVIER pub	2004, New York	Quaternary Glaciations Extent and Chronology , Europe, North America, South America
52	Manual of	Prepared by Indian	Indian Airh	1974, New	Manual,

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	Meteorology for Aircrew	airforce	head quarter	Delhi	Meteorology
53	Compendium of Meteorology	Thomas F. Malone, Ed.	American Meteorological	1951, Boston	Compendium, Meteorology
54	Proceedings of the symposium on Meteorological & Hydrological aspects of floods & droughts in India	Prepared & Pub. By India	Meteorological department	1958, New Delhi	Proceedings, symposium, Meteorological & Hydrological aspects of floods & droughts, India
55	Symposium on monsoons of the world	-----	Meteorological Office	1958, New Delhi	Symposium, monsoons, world
56	A report on scientific aspects of the failure of summer monsoon rains over India in 1987	-----	India & Meteorological Department	1988	Scientific aspects, summer monsoon rain, India
57	Dynamic Meteorology & weather forecasting	C. L. Godske & T. Bergeron	American Meteorological society Boston & Carnegie institution of Washington	1957	Dynamic Meteorology, weather forecasting
58	Flood studies report, 1975... Vol 1 - Hydrological studies. Vol.2 - Meteorological studies. Vol. 3 - Flood routing studies. Vol. 4 - Hydrological Depth Vol. 5 -Maps	-----	Natural environment research council	London	Flood studies report, Hydrological studies., Meteorological studies., Flood routing studies., Hydrological Depth, Maps
59	Divine wind : History & science	Emanuel, E.	Oxford University	2005, USA	Hurricanes, Cyclone,

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	of hurricanes		press		Rain, wind
60	Ocean circulation & climate	Siedler, G. & Church, J.	Academic press	2001, USA	Ocean circulation, Oceanography ocean transport
61	Numerical models of ocean and oceanic processes	Kantha L. H. & Claysons C. A.	Academic press	2000, USA	Ocean dynamics, Coastal dynamics, ocean atmosphere.
62	the sea	Shepard, F.	John hopkins press	1967, New York	Ocean currents, Ocean waves, coral reefs
63	Standard encyclopedia of the worlds mountains	Anthony Huxley, Ed.	WEIDENFELD & Nicolson	London	Encyclopedia
64	Encyclopedia of Ocean sciences, Vol. 1 to 6	John H. Steele, Ed.	Academic press	2001, New York	Encyclopedia, Ocean science
65	International Encyclopedia of Statistics	William H. Kruskal & Judith M. Tanur, Ed.	The free press	New York	International Encyclopedia, Statistics
66	Geoinformatics for Environmental Management	Reddy, A. M.	B. S. Pub.	2004, Hyderabad	Cartography, Geographical information system, Environment
67	Geological structures & Maps : Course in interpretation with applications for civil & mining engineers	Robert, A.	Cleyver Home pub.	1961, London	Geological survey, Maps
68	Smithsonian meteorological tables	List R. J.	Smithsonian pub.	1963, New York	Meteorological tables, Atmospheric table, wind dynamical tables
69	Polar atmosphere symposium Part 1	Sutcliffe R. C. , Ed.	Pergamon press	1958, London	Meteorology

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	& 2 : Meteorology section held at Oslo in July 1956				
70	Statistics applications & New directions : Proceedings of Indian statistical institute golden jubilee international conference	J. K. Ghosh & Roy, J., Ed.	Indian statistical institute ,	1984, Kalkatta	Probability, statistics, Regrasion Analysis
71	Industrial location & air quality control: planning approach	Guldmall J. M.	John willey & sons	1980, New York	Air quality control, meteorology
72	Economics of India's space programme : An exploratory analysis	sankar U.	Oxford University press	2007, New Delhi	Indian space programme, INSAT, Economics
73	Network product interactive facility version 1 : Reference manual	Tata Institute of fundamental research	Tata Institute of fundamental research	1980, Bombay	Computer, Networking

5.2.7 Climatology Table No. 5.9

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Spatial interpolation for climate data : the use of GIS in Climatology	Hartwig Dobesch and others ISTE ltd., Ed.		Great Britan , 2007	Climatology, Geography
2	Bioclimatology & Plant Geography of Peninsular India	V.M.Meher-Homji	Scientific pub.	Jodhpur 2001	Bioclimatology , Plant Geography
3	Agro Climate Regional planning in India, Vol. 1 & 2	Basu, D. N.	Concept pub. Co.	1996	Agro Climate , India
4	Applied Climatology: An Introduction	John F. Griffiths	Oxford univ. Press	1976	Applied Climatology
5	Arid Lands: Their use & Abuse	Heathcote, R. L.	Longman	1983, London	Geography, lands &

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
					Climatology
6	Atmosphere Weather & Climate	Siddharth K.	Kisalaya pub	2002, New Delhi	Weather, climate, atmosphere, Geography
7	Atmosphere	Hood Peter	Oxford univ. Press	1952, Oxford	Atmosphere, Geography
8	Atmosphere: An introduction to Meteorology	Lutgens, F. K.	Pretice hall	2012, New Delhi	Atmosphere, Geography, Meteorology
9	Atmosphere: An introduction to Meteorology	Barry R. G.	Routledge	2009	Atmosphere, Environmental science, Geography
10	Atmosphere Weather & Climate	Barry R. G.	Routledge	2009	Weather, climate, atmosphere, Geography
11	Atmosphere structure & Copsition	Jaychandran K.R.	Rajat pub	2013,	Atmosphere, climatology, Geography
12	Causes of Climate	Lockwood John G.	Willey	1979	Geography, climatology
13	Classification of world climates	Jaychandran K.R.	Rajat pub	2013	Climatology, world climatology
14	Climate & weather	Flohn, H.	McGraw Hill	1974	Climatology, Geography
15	Climate: soil & vegetation	Money, D. C.	University Tutorial press	1972	Climatology, Soil science, Geography
16	Climatic characteristics & water balance : A study of uttar prdesh	Devi, Lalita	Concept pub. Co.	New Delhi, 1992	Climatology, Soil science, Geography
17	Climate, Data for representative stations of the world	Nelson, H. L.	University of Nebraska press	Nebraska, 1968	Climatology, world climatology, Geography
18	Climatology	Miller, Austin	Methuen, Young books	London, 1961	Geography, climatology
19	Climatology	Lal, D. S.	Chaitanya pub. House	1986,	Geography, climatology
20	Climate change 2001:mitigation	Metz Bert	Cambridge university press	Cambridge, 2001	Geography, climatology

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
21	Dynamic Climatology	Rayner, Johe, N	Blackwell scientific pub.	Oxford, 2001	Climatology, Geography
22	Climate and Geology of Kashmir & Central Asia	Agrawal, D. P. & Kusumgar, Sheela, Ed.	Today & tomorrow's printer and pub.	New Delhi, 1985	Climatology, Geology, Geography
23	Climate change policy	Japma, Catrinus	Cambridge university press	London, 1998	Climatology, Geography
24	Climatology	Lal, D. S.	Sharda prakashan	Allahabad, 2009	Climatology, Geography
25	Atmosphere, Weather and Climate	Null	Routledge	New York, 1998	Geography, Climatology
26	Encyclopedia of climate and weather, Vol.1 & 2	stephen H. Schneider, Ed.	Oxford university press	Bombay	Encyclopedia ,climate , weather
27	Encyclopedia of Climatology, Vol. 1&2	Seema Sharma	Anmol pub.	New Delhi	Encyclopedia , Climatology
28	The Encyclopedia of Climatology	John E. Oliver & Rhodes W. Fairbridge, Ed.	Van Nostrand Reinhold	1987 New York	Encyclopedia, Climatology
29	Monsoon & civilization	Yasuda, Yoshinori & Vasant shinde	Roli books	2004, New Delhi	Palaeoclimatology, Civilizations.
30	Soil science & Climatology	Pugh, B. M.	Kitabistan	1963, New Delhi	Climatology, soil science, agricultures
31	Global physical climatology	Hartmull, D. L.	Academic press	1994, USA	Global energy, Balance, atmosphere radiation, global climate model
32	Carbon sequestration & it's role in the global carbon cycle	Mcperson, B. J. & Sundquist, E. T.	American geophysical union	2009, USA	Global carbon cycle, sequestration
33	Humidity & Moisture vol. 1 to 3	Wexler A., Ed.	Reinhold pub	1965, New York	Meteorology, Meteorological Instruments, Humidity
34	Cry sphere	Marshall J.	Princeton univ. press	2012, USA	Snow, Climate change, sea Ice

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
35	Micro climate : Biological environment , 2nd ed.	Rosenberg N. J. et all	John willey & sons	1983, New York	Climate, Meteorology
36	Dictionary of global climate change	Maunder, W. J.	UCL press	1992, London	Climate change, Meteorology
37	Pollution : Causes effects & contorl	Harrison, R. M.,Ed.	Royal society of chemistry	2001, UK	Pollution, Biology, Solid, Waste management
38	Encyclopedia of Environmental control Technology, Vol 2	Paul N. Cheremisinoff, Ed.	Gulf pub. Co.	London	Encyclopedia, Environmenta l control technology
39	Handbook of Air pollution analysis	Roger Perry & Robert J. Young, Ed.	Champman & Hall	New York	Handbook, Air pollution
40	Air : Facts and feats	John W. R. Taylor & Michael, J. H. Taylor	Bantam books	1979, New York	Air, Facts & Feats
41	The Encyclopedia of atmosphere : Science and Astrogeology	Rhodes W. Fairbridge, Ed.	Reinhold pub.	1967, New York	Encyclopedia, Atmosphere, Science, Astrogeology
42	Encyclopedia of weather & climate, Vol. I & II	Michael Allaby	Viva books	2005, Mumbai	Encyclopedia, weather, climate
43	Encyclopedia of world Environmental History, Vol. 1 to 3 Nakasha pustika	Shepard Krch & J. R. McNeill, Ed.	Routledge	2004, New York	Encyclopedia, Environmenta l history
44	Encyclopaedia of Atmospheric science, Vol. 1 to 6	James R. Holton,Ed.	Academic press	2003, New York	Encyclopedia , Atmospheric science
45	Encyclopedia of Global change, Vol. 1 & 2	Andrew S. Goudie, Ed.	Oxford University press	2002	Encyclopedia, Global Change
46	Encyclopedic Dictionary of Environment, Vol. 1 to 4	G. R. Chhatwal & D. K. Pandey, Ed.	Anmol pub.	New Delhi	Encyclopedia, Dictionary
47	Handbook of Atmospheric science : Principles and applications	Hewitt, C. N. & Andrew V. Jackson,Ed.	Blackwell pub	2003, UK	Handbook, Atmospheric science

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
48	Handbook of weather, climate and water	Thomas D. Potter & Bradley R. Colman, Ed.	Wiley interscience	2003, New Jersey	Dynamics, Climate, physical meteorology, weather system
49	Encyclopedia of world Climatology	John E. Oliver	Springer	2005, Netherland	Encyclopedia , Climatology
50	World weather records 1951 to 1960, Vol. 1 to 4	Prepared by weather burew		Washington	World, World weather
51	Handbook of weather forecasting		Air ministry meteorological office	1961	handbook, weather forecasting
52	Handbook of weather messages , Part II, Vol. III 7th ed	Prepared by Meteorological office	Hermajesty's stationary office	1979, London	Handbook, weather messages
53	watershed Hydrology : Proceedings of the international conference environment, vol. 7	V. P. Singh & R. A. Yadav,Ed.	Allied pub. Private ltd.	2003, Mumbai	Water, environment, Erosion, flood
54	Economics of climate change: stern Review	Stern, N.	Cambridge University press	2007, UK	Economics of stabilization, Mitigation

5.2.8 Earth Science Table No. 5.10

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	About this Earth : An introduction to the science of Geography	Ward Kingdom	Janathan cape thirty Bedford square	London, 1946	Geography, Earth science
2	1001 Questions answers about Earth Science	Pearl Richard M.	dodd, Mead & co.	New York, 1962	Geography, Earth science
3	Applied Geography: Practice, Probles & Prospects	Morgan Sant	Longman	1982	Science, Earth science ,Applied Geography
4	The Mitchell	Gilliland Pat	Beazlely	1979,	Atlas, Earth

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	Beazlely at last of the earth resources	editor	pub.	London	resources, earth science
5	Bhuvidnan	Bhagwat A. V.	-----	-----	Earth sciences
6	Coastal processed & landforms	Karlekar, Shashikanth	Dimond pub.	Pune, 2010	Geography, Earth science
7	Chemical & biological methods for water pollution studies	Trivedi, R. K.	Environmental publications	1984	Water pollution, earth sciences, Geography
8	The illustrated reference book of the earth	James Mitchll,Ed.	Windward pub.	-----	Earth
9	Climata:present, past & future	Lamb, H.H.	Methuen, Young books	London, 1969	Water pollution, earth sciences, Geography
10	Introduction to earth science heritage sites	Prasad, K. N.	APH pub. Corporation	New Delhi, 2006	Geography
11	Wretched of the earth	Fanon, Frantz	Penguin books	Middlex, 1961	Geography
12	Earth	Beiser	Time life books	Hongcong , 1985	Natural science, Geography
13	Dynamic Earth	Skinner, Brian J.	John Wiley & sons	New York, 1989	Geography, Environment
14	Dictionary of earth sciences, 2nd ed.	Ailsa Allaby, Ed.	Oxford University press	New York	Dictionary , earth sciences
15	Macmillan Encyclopedic of earth science, Vol. 1 &2	E. Julius Dasch, Ed.	Macmillan reference	New Delhi	Earth science
16	Earth & Astronomical sciences: Research centers - A world dictionary of organizations ?& program's	Jennifer M. Fitch, Ed.	Longman pub.	Britain	Earth ,Astronomical sciences:, Research centers, dictionary
17	Earth Science	Novarra, J et all, Ed.	John willey & sons	1971, New York	Geology, Space, Hydrosphere
18	Earth system, 3rd ed	Kumar, L. R.	Pearson education	2010, UK	Earth science
19	Earth: Tropical Geography, 2nd ed.		John willey &	1980, New York	Geography, Human

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
			sons		Geography, Lands
20	Edd and Flow: Tides of earth, Air & water	Defant, A.	Ann Arbor pub.	USA	Tides, ocean tides, waves
21	An Introduction to Ocean remote sensing	Seelye Martin	Cambridge	2014	Ocean remote sensing

5.2.9 Soil science Table No. 5.11

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Basic concepts of soil science	Kolay, A. K.	New age international	2008, New Delhi	Soil Science
2	Coast : form, process & evolution	Woodrofe, Colin, D	Cambridge university press	Cambridge, 2002	Soil Science , Geography
3	Coastal Geomorphology : aspects of Geography	Clayton, Keith	Nelson Thornes ltd	1979,	Soil Science , Geography, Geomorphology
4	Soil series of Maharashtra	Challa O.	National bureau of soil survey & land use planning	1999, Nagpur	Soil, Maharashtra
5	Soil physics, 3rd ed	Marshall, T. J.	Cambridge University press	1996, UK	Soil, physics
6	Soil resource maps : Gujrat	National Bureau of soil survey	National Bureau of soil survey	1998, Nagpur	Maps, Geology
7	Maps: * Soil survey of Great Britain classification by D. Mackney Feb. 1978 * Coefficient of variation of annual flood greater London council . * Winter rain acceptance potential D. Mackney Feb. 1978 * percentage of the 1941 to 1970				

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
	average annual rain fall Feb. 1973				
8	Geomorphology from the earth	Butzer K. W.	Harper & Row	1976, New York	Soil, Mantle, stream valleys, desert, Landforms

5.2.10 Table No. 5.12 Cartographic

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Cartographic methods	Lawrence G. R. P.	Methuen, Young books	1979	Cartographic methods, Geography
2	Cartography visualization of Geospatial data	M. J. Kraak	Pearson education	2003, New Delhi	Cartography, geography
3	Analytical and Computer Cartography : Pretice hall series in Geographic Information Science	Keith C. Clarke	Prentice hall	1990	Computer Cartography, Geographic Information Science

5.2.11 Environmental Geography Table No. 5.13

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	Environmental Geography	Marsh, William M.	John Wiley & sons	New York , 2002	Geography, Environment
2	Environmental Geography : Science, land use and earth systems	Marsh, William M.	John Wiley & sons	New York, 1996	Geography, Environmental Geography
3	Bhugol Paryavaraanshashraa kosh	Borjas Johnson	Diamond pub.	Pune, 2008	Encyclopedia, Environment, Geography
4	Encyclopaedic Dictionary of Environment, Vol. 1 to 4	G. R. Chhatwal & D. K. Pandey, Ed.	Anmol pub.	New Delhi	Encyclopaedia, Dictionary, Environment

5.2.12 Geophysics Table No.5.14

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
1	International Dictionary of Geophysics. (With Maps), Vol. 1 & 2	S. K. Runcorn F. R. S., Ed.	Pergamon press	Oxford	Dictionary, Geophysics
2	Hand book of Geophysics	United States airforce	Macmillan	1960 , New York	Model Atmospheres, Temperature, wind, clouds the sun
3	Small scale process in Geophysical fluid flows	Kantha L. H. & Claysons C. A.	Academic press	2000, USA	Geophysics, surface Exchange, Wave motion.
4	Monsoon Dynamics : Contributions to current research in Geophysics	-- Krishnamurti, T. N. , Ed.	Birkha user Verlag pub.	Berlin 1978	Meteorology , Geophysics
5	Geophysical data analysis	Menkey W.	Academic press	1989, New York	Geophysics, Geophysical data.
6	Earth and it's Gravity field	Heiskanen W. A & Vening F. A.	McGraw hill books	1958 , New york	Earth Gravity, Geophysics, Earth crust
7	Handbook of Geophysics & space environment	Sheal L. Valley, Ed.	Mcgraw hill	New York	Handbook ,Geophysics , space environment
8	Handbook of physics	Translated from the Rassian. //// By Nicholas Weinstein	MIR pub	Mosco	Handbook, Physics
9	Dictionary of Scientists	David Ian John & Margarate Millar	Cambridge University press		Dictionary , Scientists
10	Astronomers Handbook	J. C. Pecker, Ed.	Academic press	London	Astronomers Handbook
11	Encyclopedia of Physics	Rita G. Learner & George N. Trigg, Ed.	Addison wesley pub.	London	Encyclopedia , Physics
12	Dictionary of Physics	Valerie H. Pitt, Ed.	Penguin books	New York	Dictionary, Physics
13	Illustrated glossary for solar & solar-terrestrial physics	A. Bruzek & C. Jdurrant, Ed.	D. Reidel pub.	USA	solar-terrestrial physics
14	American Institute of physics Handbook, 2nd ed.	Dwight E. Gray,Ed.	Mcgraw hill pub.	New York	American Institute ,physics

Sr. No.	Title	Author / Editor	Publisher	Pub. Place & year	Keywords
					Handbook
15	Science survey	A. W. Haslett & John, Ed.	Vista books	London	Science survey
16	Dictionary of scientific & technical terms	Daniel N. Lapedes, Ed.	Mcgraw hill	1976, New York	Dictionary, scientific terms, technical terms

5.3 List of Journals Table No. 5.15

Geography

Sr.No.	Title
1	Annals of the National Association of Geographers, India
2	Current Science
3	Deccan Geographer
4	Everyman's Science
5	Geography and You
6	Geospatial Today
7	ICES Journal of Marine Science
8	Indian Journal of Geo-Marine Sciences
9	Journal of Aerosol Science
10	Transactions of Institute of Geographers

Meteorology

Sr.No.	Title
1	Agricultural and Forest Meteorology
2	Annals of Arid Zone
3	Australian Meteorological and Oceanographic Journal
4	Boundary Layer Meteorology
5	Bulletin of A.M.S.
6	Bhemosphere
7	Deep Sea Research Part I: Oceanographic Research Papers
8	Deep Sea Research Part II: Topical Studies in Oceanography
9	Dendrochronologia
10	Dynamics of Atmosphere and Ocean
11	Global Biogeochemical Cycles
12	Holocene
13	International Journal of Meteorology
14	Journal of Agrometeorology
15	Journal of Applied Meteorology and Climatology
16	Journal of Hydrometeorology

Sr.No.	Title
17	Journal of Meteorological Society of Japan
18	Meteorological Applications
19	Meteorological and Geostrophysical Abstracts
20	Meteorology and Atmospheric Physics
21	Meteorological Magazine
22	Meteorologische Zeitschrift
23	Quarterly Journal of Royal Meteorological Society
24	Quaternary International
25	Quaternary Research
26	Quaternary Science Reviews
27	Radiocarbon
28	Radio Science
29	Resonance
30	WMO Bulletin

Climatology

Sr.No.	Title
1	Advances in Atmospheric Sciences
2	Advances in Environmental Research
3	Atmosfera
4	Atmosphere Ocean
5	Climate Control
6	Climate Diagnostic Bulletin
7	Climate Dynamics
8	Climate Monitor
9	Climate Monitoring Bulletin
10	Climate Research
11	Climatic Change
12	International Journal of Climatology
13	Journal of Climate
14	Monthly Climatic Data for the World
15	Monthly Weather Review
16	Natural Hazards
17	Nature (Archive)
18	Nature
19	Nature Climate Change
20	Nature Communications %
21	Nature Geoscience
22	Theoretical & Applied Climatology
23	WRIEs Climate Change

Earth science

Sr.No.	Title
1	Annual Review of Earth and Planetary Sciences
2	Down to Earth
3	Earth and Planetary Science Letters

Sr.No.	Title
4	Earth Interactions
5	Earth Science Reviews
6	Ecology Environment and Conservation
7	Hydrological Sciences Journal
8	Hydrology and Earth System Sciences
9	Hydrology Journal
10	Indian Journal of Power and River Valley Development
11	Journal of Applied Hydrology
12	Journal of Earth Systems Science
13	Journal of Hydrology
14	Journal of Spatial Hydrology (JOSH)
15	Physics and Chemistry of the Earth

Environmental Geography

Sr.No.	Title
1	Aerosol and Air Quality Research
2	Aerosol Science and Technology
3	Atmospheric Environment
4	Atmospheric Research
5	Atmospheric Science Letters
6	Chinese Journal of Atmospheric Sciences
7	Environment Science & Engineering
8	Indian Journal of Environmental Protection
9	Indian Journal of Forestry
10	Pollution Research
11	Science of Total Environment
12	Space Weather
13	Vatavaran
14	Vayu Mandal
15	Water Resources Journal
16	Water Resources Research
17	Weather
18	Weather and Forecasting
19	Weatherwise

Geophysics

Sr.No.	Title
1	Advances in Space Research
2	Annales Geophysicae
3	Applied Optics
4	Computers & Geosciences
5	EOS, Transactions, American Geophysical Union
6	Geochemistry, Geophysics, Geosystems
7	Geophysical Research Letters
8	GIS India
9	Global and Planetary Change

Sr.No.	Title
10	IEEE Geoscience and Remote Sensing Letters
11	Indian Journal of Radio & Space Physics
12	International Journal of Geomagnetism and Aeronomy
13	International Journal of Remote Sensing
14	Journal of Atmospheric and Oceanic Technology
15	Journal of Atmospheric and Solar -Terrestrial Physics
16	Journal of Atmospheric Sciences
17	(Journal of Geophysical Research) Terrestrial Magnetism
18	Journal of Geophysical Research
19	(Terrestrial Magnetism and Atmospheric Electricity)
20	Journal of Geophysical Research
21	Journal of Geophysical Research – Atmospheres
22	Journal of Geophysical Research - Oceans
23	Journal of Geophysical Research - Planets
24	Journal of Geophysical Research - Earth Surface
25	Journal of Geophysical Research - Biogeosciences
26	Journal of Geophysical Research - Solid Earth
27	Journal of Geophysical Research - Space Physics
28	Journal of Indian Geophysical Union
29	Journal of Indian Ocean Studies
30	Journal of Marine Research
31	Journal of Marine Science and Technology
32	Journal of Oceanography
33	Journal of Optical Society of America
34	Journal of Physical Oceanography
35	Nonlinear Processes in Geophysics
36	Ocean Dynamics
37	Ocean Modelling
38	Planetary & Space Science
39	Progress in Oceanography
40	Pure and Applied Geophysics
41	Reviews of Geophysics
42	Solar Geophysical Data
43	Surveys in Geophysics

5.4 Geography E-Journals Table No. 5.16

Sr. No.	Title	Descriptions
1.	Acme: An International E-Journal for Critical Geographies	Provides a forum for critical work about space in the social sciences, including anarchist, anti-racist, environmentalist, feminist, Marxist, non-representational, postcolonial, poststructuralist, queer, situations and socialist perspectives
2.	African Geographical Review	Covers African regional geography and current African scholarship

Sr. No.	Title	Descriptions
3.	Agriculture & Human Values	Discusses the values that shape and the structures that underlie current and alternative visions of food and agricultural systems
4.	American Geographical Society's Focus on Geography	Covers a variety of topics in language suitable for diverse readership
5.	Annals of the Association of American Geographers	Interdisciplinary journal covering four major areas — Environmental Sciences; Methods, Models, and Geographic Information Science; Nature and Society; and People, Place, and Region
6.	The Annals of Regional Science	Explores the interdisciplinary field of regional and urban studies
7.	Antipode	Recommended e-journal for radical Geography research & international topics
8.	ARC News_	Freely accessible publication for those interested in mapping and GIS technology
9.	Area	Recommended e-journal for current Geography research & international topics
10.	Australian Geographer	Journal of the Geographical Society of New South Wales
11.	Cartographic Journal	Covers all aspects of cartography, the science of presenting, communicating and analyzing spatial relationships by means of maps and other geographical representations of the Earth's surface
12.	Cartographic Perspectives	Scholarly journal of the North American Cartographic Information Society. Features unique cover art, featured research & techniques articles, software & book reviews, a map gallery, & more
13.	Cartographical	Scholarly journal on cartographic theory, history, and societal implications
14.	Cartography and Geographic Information Science	The official publication of the Cartography and Geographic Information Society (CaGIS)
15.	Children's Geographies	_ Focused on issues that impact upon the geographical worlds of children and young people under the age of 25 and of their families
16.	City	Analysis of Urban Trends, Culture, Theory, Policy, Action
17.	Development and Change	Covers the field of development studies and social change
18.	Disasters	Peer reviewed coverage of disaster studies, policy and management
19.	Environment & Planning A	An interdisciplinary journal of urban and regional research
20.	Environment & Planning B:	Covers the built environment and the spatial

Sr. No.	Title	Descriptions
	Planning & Design	structure of cities and regions
21.	Environment & Planning C: Government & Policy	Covers contemporary policy issues which sit at the interface between the economy, society, and the environment
22.	<u>Environment & Planning D: Society & Space</u>	Recommended interdisciplinary journal examining the relation between the social and the spatial
23.	Environment & Urbanization	Covers the fields of human settlements and environment among researchers, activists and non-governmental organizations (NGOs) in low- and middle-income nations
24.	Environmental History	Interdisciplinary journal addressing issues relating to human interactions with the natural world over time
25.	Ethics, Place & Environment: A Journal of Philosophy & Geography	Covers all aspects of environmental ethics, environmental philosophy, and the normative dimensions of environmental policy
26.	Eurasian Geography and Economics	Focused on geographic and economic issues in China, Russia, India, European Union, and other regions within the Eurasian realm
27.	European Journal of Migration and Law	Covers migration law and policy with specific emphasis on the European Union, the Council of Europe and migration activities within the Organization for Security and Cooperation in Europe.
28.	Fennia - International Journal of Geography	<u>Open Access international peer-review journal dedicated to all fields of geography.</u>
29.	Food, Culture & Society	Explores the complex relationships among food, culture, and society from numerous disciplines, as well as in the world of food beyond the academy
30.	Gastronomica: The Journal of Critical Food Studies	Covers food as an important source of knowledge about different cultures and societies, and discusses the history, literature, representation, and cultural impact of food
31.	Gender, Place & Culture: A Journal of Feminist Geography	Covers feminist Geography, development studies, gender studies and human Geography
32.	<u>Geoforum</u>	Focuses on the organization of economic, political, social and environmental systems through space and over time
33.	Geographica Helvetica	A multilingual journal of geography publishing articles on current and theoretical developments from any aspect of human, physical and methodical geography and related disciplines
34.	Geographical Analysis	Publishes geographical theory, model building, and quantitative methods to

Sr. No.	Title	Descriptions
		geographers and scholars in a wide spectrum of related fields
35.	Geography	Journal of the Geographical Association furthering the study, learning and teaching of Geography
36.	Geography Teacher	Focused on teaching strategies for K-12 geography, AP Human Geography, and introductory college geography
37.	<u>GeoInformatica</u>	An International Journal on Advances of Computer Science for Geographic Information Systems
38.	Geopolitics	Explores the theoretical implications of contemporary geopolitics and geopolitical change with particular reference to territorial problems and issues of state sovereignty
39.	Global Networks : A Journal of Transnational Affairs	Focused on global networks, transnational affairs and practices, and their relation to wider theories of globalization
40.	Habitat international	Main focus is on urbanization in its broadest sense in the developing world
41.	Health & Place	An interdisciplinary journal dedicated to the study of all aspects of health and health care in which place or location matters
42.	Historical Geography	An annual journal of research, commentary, and reviews concerning geographic perspectives on the past
43.	Human Geography	Covers topics ranging from geopolitics, through cultural and economic issues, to political ecology
44.	International Journal of Health Geographics	An open access, peer-reviewed, online journal fully dedicated to publishing quality manuscripts on all aspects of geospatial information systems and science applications in health and healthcare
45.	International Journal of Population Geography	Covers wide variety of research topics related to population, space and place
46.	International Journal of Spatial Data Infrastructures Research	Focused on development, implementation and use of Spatial Data Infrastructures (SDIs)
47.	International Journal of Tourism Research	Focused on tourism and hospitality research developments
48.	International Journal of Urban and Regional Research	Covers urban and regional research from a range of critical, comparative and geographic perspectives
49.	International Regional Science Review	International forum for economists, geographers, planners, and other social scientists; focuses on issues of theory, method, and public policy where the spatial or

Sr. No.	Title	Descriptions
		regional dimension is central
50.	International Migration	Covers policy relevance in international migration and provides coverage of all regions of the world and to comparative policy
51.	International Research in Geographical and Environmental Education	Publishes research studies within the context of geographical and environmental education
52.	Journal of Agrarian Change	Covers agrarian political economy and investigates the social relations and dynamics of production, property and power in agrarian formations and their processes of change, both historical and contemporary
53.	Journal of Applied Remote Sensing	Covers the concepts, information, and progress of the remote sensing community
54.	Journal of Biogeography	Papers dealing with all aspects of spatial, ecological and historical biogeography
55.	Journal of Development Studies	Interdisciplinary journal covering all areas of development studies
56.	Journal of Economic Geography	Focused on the geographic nature of economic systems and global economic change
57.	Journal of Epidemiology and Community Health	Covers all aspects of epidemiology and public health and is concerned with the study and improvement of communities worldwide
58.	<u>Journal of Ethnic & Migration Studies</u>	Covers migration and its consequences, as well as articles on ethnic conflict, discrimination, racism, nationalism, citizenship and policies of integration
59.	<u>Journal of Geographical Sciences</u>	Covers physical process and spatial patterns at the earth's surface, physio-geographical elements and their interaction, global change and its regional response, and more
60.	Journal of Geographical Systems	Covers theoretical & practical issues in regional science, geography, the environmental sciences & planning
61.	Journal of Geography in Higher Education	Focused on geography learning and teaching in all institutions of higher education throughout the world
62.	Journal of Historical Geography	Publishes articles on all aspects of historical geography and cognate fields, including environmental history
63.	Journal of Rural Studies	Covers rural issues like society, demography, housing, employment, transport, services, land-use, recreation, agriculture and

Sr. No.	Title	Descriptions
		conservation
64.	Journal of Urban Affairs	Focused on urban research and policy analysis
65.	Landscape History : Journal of the Society for Landscape Studies	Focused on landscape evolution and history
66.	Migration and Development	Focused on implications of migration on boarder less migration, refugees, labor laws, and policy changes
67.	<u>Mobilities</u>	Examines the large-scale movements of people, objects, capital, and information across the world, and processes of daily transportation, movement through public and private spaces, and the travel of material things in everyday life
68.	Polar Geography	Avenue for scholarly research on the physical and human aspects of the Polar Regions
69.	Political Geography	Covers critical, feminist, and popular geopolitics, Electoral geography and policy analysis, Identity, landscapes, and representation, and Peace and conflict studies
70.	Population, Space and Place	Focused on geographical population studies
71.	The Professional Geographer	Journal of the Association of American Geographers, emphasizing empirical studies and methodologies, as well as book reviews
72.	Progress in Human Geography	Covers all areas of human geography research - philosophical, theoretical, thematic, methodological or empirical
73.	Progress in Physical Geography	Covers Physical Geography and interrelated fields across the Earth, Biological and Ecological System Sciences
74.	Quaestiones Geographicae	Journal focuses on research in the fields of physical geography, economic and human geography, spatial management and planning, sustainable development and GIS
75.	Regional Studies	Covers economic, environmental, political, and social change aspects of regional (subnational) development and policy-making
76.	The Royal Geographical Society Magazine	Articles, expedition reports, cultural geography, and news and views on research, expeditions and events on all aspects of geography published by the Royal Geographical Society, London.
77.	Singapore Journal of Tropical Geography	Focused on the physical and human environments of the tropics and development issues from geographical as well as

Sr. No.	Title	Descriptions
		interrelated disciplinary viewpoints
78.	Social & Cultural Geography	Focused on on the spatialities of society and culture
79.	Social Geography	Focuses on the interrelation of society, practice and space and its implications for every day-life, social and environmental policy or economic practice
80.	Tourismos : An International Multidisciplinary Journal of Tourism	Focused on all fields of tourism, including travel, hospitality and leisure
81.	Southeastern Geographer	Publishes research papers on all geographical topics
82.	Space & Polity	Focuses on the changing relationships between the state, and regional and local forms of governance, including decentralization, regionalism and nationalism
83.	Tourist Studies	Provides a platform for the development of critical perspectives on the nature of tourism as a social phenomenon
84.	Transactions in GIS	Focused on on the latest advances and best practices in the spatial sciences
85.	Transactions of the Institute of British Geographers	Interdisciplinary, international journal covers human and physical geography
86.	Urban Affairs Review	Scholarly journal on urban issues and themes
87.	Urban Geography	Covers urban policy; race, poverty, and ethnicity in the city; international differences in urban form and function; historical preservation; the urban housing market; and provision of services and urban economic activity.
88.	Urban Studies	Interdisciplinary journal covering critical urban research and issues
89.	Western Geography	Focus on geographical themes or topics that emphasize western Canada and adjacent areas, or that are written by geographers from this region
90.	World Development	Journal covers research that examines potential solutions to problems such as: poverty, unemployment, malnutrition, disease, lack of shelter, environmental degradation, international debt, gender and ethnic discrimination, and more

5.5 Databases in Geography: Table No. 5.17

Sr. No.	Title	Descriptions
1	ABI/INFORM Global	Articles in business, finance, management, accounting, advertising, banking, insurance, marketing, public administration, real estate, and telecommunications. 1991-current (full text); 1971-current (index & abstracts).
2	Academic Search Premier	Scholarly journal articles and popular magazines covering all topics. A great database for beginning searches. 1980s-present (dates may vary).
3	EconLit through EbscoHOST	Indexes the international literature on economics. Topics include economic development, forecasting, and history; fiscal and monetary theory; business and public finance; international, health care, regional and urban economics, and more. 1969-current.
4	Environment Abstracts	Scholarly articles on all aspects of the environment. 1975-1999.
5	Georef	International geosciences literature, covering engineering and environmental geology, hydrology, and paleontology. North American geology: 1785-current; international geology: 1933-current..
6	GeoScienceWorld	Geosciences, geological, and earth sciences. Scholarly articles. Links to GeoRef database. Early 2000s-present; some much earlier..
7	MAGIC (Map and Geographic Information Center)	Collection of maps, atlases, gazetteers, aerial photographs, and digital geospatial data, as well as resources on the history and current state of cartography. From the University of Connecticut's Map Library
8	Science Direct	Scholarly journal articles in scientific and engineering disciplines primarily. Also includes over 400 ebooks. 1995-current
9	Social Explorer	Data and interactive thematic maps from the U.S. Census from 1790-present
10	_Water Resources Abstracts	Technical and scientific literature on water-related topics covering the characteristics, conservation, control, pollution, treatment, use and management of water resources. 1967-current.
11	CAB Abstracts	Covers the significant research and development literature in the fields of agriculture, forestry, human health and nutrition, animal health, and the management and conservation of natural resources. Over three million records have been added to the database since its computerization in 1973.
12	Global Health	Global Health brings together the resources of two internationally renowned databases - the Public Health and Tropical Medicine (PHTM) database, previously

Sr. No.	Title	Descriptions
		produced by the Bureau of Hygiene and Tropical Diseases (BHTD), and the human health and diseases information extracted from CAB abstracts
13	Science and Geography Education (SAGE Online)	SAGE Online provides a comprehensive bibliographic database for school science and geography resources and indexing popular journals across a broad range of subjects. A good place for initial searches on geography-related subjects.
14	Science Direct (Scopus)	This is one of the largest full-text Science Databases which a good deal of content in the area of Earth Sciences. It sits within the Scopus which is the largest abstract and citation database of research literature. Together they provide a powerful tool for identifying research communities.
15	Taylor and Francis Online	This major social sciences and humanities database has a section that focuses on geography, planning, urban and environment. This is sourced from over 1800 journal titles, 30 reference titles and 3 specialist databases.
16	Web of Science	Enables researchers to track where, by whom, and how often an article has been cited. See more information for index coverage.

Chapter 6: Findings, Suggestions and Conclusion

6.1 Findings

6.2 Suggestions

6.3 Scope for future research

6.4 Proposed model for subject guide in Geography

6.5 Conclusion

From the review and analysis of different publications and case studies on Subject Guide the researcher has noticed importance of Subject Guide synonymously known as Library Guide and Web resource Guide and also the need of developing Subject Guides. Researcher has observed many characteristics of Subject Guide and based on that few findings have been listed below:

6.1 Findings

1. Subject Guides were first used during 1970's and the earlier used term was replaced by Pathfinder by MIT Librarians in which they prepared list of resources and references pertaining to Subject and Subject related resources. But in the present times of ICT they are termed as Electronic Subject Guides.
2. Subject Guides are termed differently but often used interchangeably with Pathfinders, research guides, LibGuides, electronic library guides and bibliographies.
3. Subject Guides generally covers broad Subject including related subject and resources available for conducting deep study for users. Subject guides contains resources available in print as well as digital forms and useful for providing resources for conducting interdisciplinary research and study.
4. The main function of the Subject Guide is to support research activity, scholars, learners, teachers and make aware of qualitative resources may be available in local library or somewhere else. The Subject Guides are also required to control the information explosions as it is difficult for users to identify right sources of information for their study purpose.

5. Subject Guides are generally compiled by Subject Librarians, Subject experts, Bibliographers, Computer experts and thus it is a collaborative work. Every expertise has a role in preparing Subject Guide. In this process the librarians collect standard resources, evaluate them and include them in Subject Guide. The Subject experts evaluate content of the resources judge for its quality for uses and Computer experts suggest in developing Web based Subject Resource Guide by providing different links to Subject Resources available in different forms which includes print and digital resources .

6. Library Guides are used but it is only compilation of resources in a library available for users without any annotations.

7. Subject Guides are generally available in developed and advanced countries like USA, UK and are very rare in developing countries. Subject guides are useful to reference librarian for meeting the needs of additional reading on subject to students and faculty.

8. Subject Guides differ from Institute to Institute and subject groups as well as library to library. However the main purpose of Subject Guide is to provide starting point for researcher using qualitative Subject Guide as well as advancing towards higher research concepts.

9. Subject Guides in traditional scenario covered printed resources which contained reference sources such as demographic data, different specialised literature in the subject area or libraries in particular.

10. Subject Guides in advance era are called as electronic Subject Guides, Electronic resource guide, and webliographies. They contain links to online resources, Internet resources as well as print resources and helps user in getting research tips citation style guides and other relevant information on subject and related subject area.

11. Yang (2009) pointed out and explained that Subject Guides popularly known as web links highlighted subject based library resources but now it is observed that it provides all resources including print and digital resources.

12. Subject Guides generally lists out resources or bibliographies and a well developed guide includes information about type of sources such as Subject thesaurus.

13. The Subject Guide is treated as best tool for getting resources to researchers and Subject for conducting standard research and updating the knowledge.

14. There is no set guidelines, rules, standards for creating Subject Guides, but only covers some common characterise about contents.

15. From the feedback of experts during their interviews it is also concluded that they need information sources on subjects using some Subject Guides which are simple to consult, clarity and depending source for information. Renowned Scholar in Geography Dr.Shrikant Karlekar (Tilak Maharashtra Vidyapeeth) in his interview has mentioned that mostly researchers depend on search engines for information. But it is a time consuming task. Subject guides prove helpful as they contain all related links of websites and reference materials.

6.2 Suggestions

1. There is a need to develop a Subject Guide which is informative to all by providing annotations and relevance to subject and ranking of resources used.

2. The developer as well as Librarian have to get feedback from the users regarding the utility of Subject Guide, its contents and invite suggestions to improve the quality of resources, structure if required.

3. Involve all users, subject experts, computer experts and Library staff while developing Subject Guide which can prove as a standard source for guiding the users to appropriate sources.

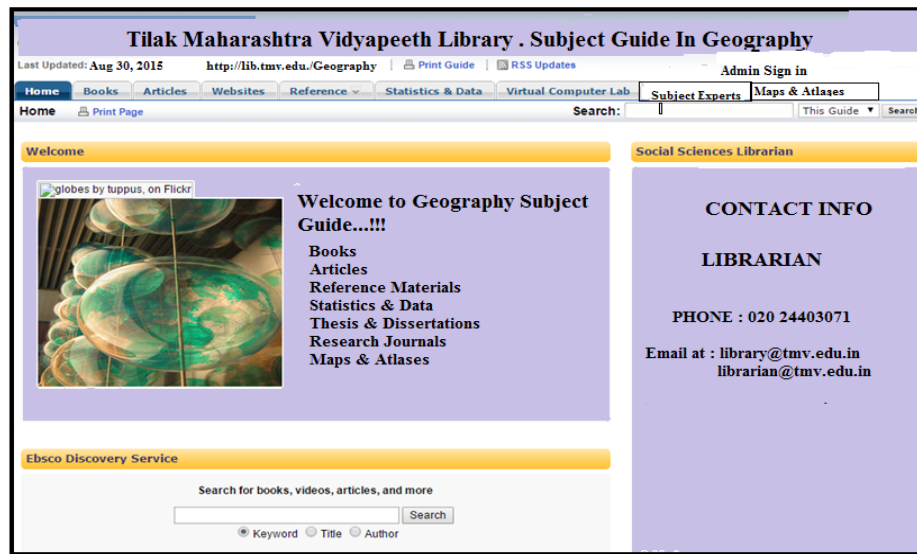
4. Subject Guide developers now make use of ICT for developing Web portal, Library Portal and link different literature sources to share resources among all users.

5. Contents of Subject Guide have to be rigorously checked and evaluated to make the subject guide qualitative as well as quantitative. Subject Guide must cover maximum information sources in all forms and formats including print and digital including primary to tertiary information resources along with internet resources available either free or charged.

6. While developing Subject Guides involvement of subject experts to add annotations for each resource increases the use and accessibility of resources.

7. Subject Guides developed by each institute for every subject is to be loaded on intranet as well as the users must be provided web access to get more information resources.
8. While developing Subject guide the use of ICT techniques must be made to add quality and value addition provide URL links in Subject Guides with annotations.
9. Design of Subject Guide must be simple and clear. The design must provide access to all types of literature with citations to different similar sites.
10. To avoid confusion while consulting Subject Guides the developer or creator has to define exact scope of the subject generally from broad to narrow and related subjects.
11. Subject Guides once developed is not the end point but developer or creator has to regularly update it to cover new resources for currency.
12. Librarians have to arrange orientation courses or programmes for the users and highlight the importance of Subject Guides for its effective use. This enhances promoting use of literature either available in the Library or in the subject available at various places.
13. Subject Guides are most useful for reference librarians and the responsibility of developing, creating and evaluating resources before adding to Subject Guide of prime importance.
14. Subject Guide developer must analyse different Subject Guides available for different subjects on the net and review them for developing good Subject Guide using framework for Subject Guide and add contents to it.
15. New tools like wiki's, databases, open source Subject Guide softwares to be used for modernisation and universal use of data covered in it.

6.3 Image No. 6.1 Subject Guide model in Geography



The model given above can be briefly described as:

- This subject guide covers the alphabetical list of all the holdings of the library in subject Geography.
- There is also an Ebsco Discovery Service facility to trace any e book, article or other useful and related links.
- A separate window has been created which includes the names and contact details of few experts in the field of Geography.

List of Expertise in the Field of Geography:

- The list of subject experts can be given in the proposed subject guide as mentioned below whom the users can contact in case of any expert advice required.

Table No. 6.1 Human Resources in Geography

Sr.No.	Name	Contact Info.
1	Dr.Shrikant Karlekar	Tilak Maharashtra Vidyapeeth, Pune. 020 24403018
2	Dr. Madhavan Nair Rajeevan	Indian Institute Of Tropical Meterology, Pune. 020 25865143 rajeevan@tropmet.res.in
3	Dr. Vasant Shinde	Deccan College post graduate and research Institute, Pune. 020 26513284

Sr.No.	Name	Contact Info.
4	Dr. Dipti Govil	International Institute for population sciences, Mumbai. 022 25563254
5	Prof. Mumtaz Khan	Jamia Millia Islamia University, New Delhi. 011 26981717
6	Prof.Andrew S.Goudie	University Of Oxford. andrew.goudie@geog.ox.ac.uk
7	Prof.Doreen Massey	University Of Oxford

6.4 Scope for Future Research

There have been very few research studies and user-centred research studies conducted in the field of subject guides. The research study conducted on subject guides in developing countries has been conducted but there is a need to conduct more similar studies in the developing countries. Similar studies of preparing a subject guide can be carried out in other subjects who will prove as an important source for the researchers.

6.5 Conclusion

The researcher has systematically studied the different facets of subject guides and the objectives selected for the study have been justified in different chapters covered in this dissertation. The hypothesis selected is also proved true. Most academic librarians in developed countries have created subject guides in one form or another, whether they were printed "pathfinders" created years ago or web-based subject guides that are more popular today. They synthesize vast amounts of information about databases, websites, journals and other sources and list only the most relevant sources for a particular subject.

In an age of information overload, students and researchers prefer to have millions of potential sources at their finger-tips. Certainly, a new student is not expected to read through an A-to-Z list of all the databases available and then decide which the best for a particular research problem is. Thus, it seems almost essential for providing a short list of links to the most relevant data divided by subject which would be an important tool for students, new researchers or researchers conducting some research into the literature of an unfamiliar discipline.

However, in spite of the necessity and prevalence of subject guides, there is surprisingly little research on subject guides, particularly user-centred research. Furthermore, little research that has been done suggests that students are not using subject guides. This study benefits both LIS scholarship and users by helping practitioners to create subject guides that better meet the needs of students. The advent of Web 2.0 has spawned a wide variety of tools and services that allow nonprogrammers to create and update Web content on their own. These tools include content management systems, blogs, wikis, and social bookmarking. Although many of these resources were not designed specifically for libraries, they can be used to develop and maintain subject guides. Some tools must be installed and run from a local server. This requires technical support from within the institution. Other tools are Web-based, using the software as a service (SaaS) model. Instead of buying software and paying for future upgrades, SaaS is subscription-based and all upgrades are provided during the term of the subscription.

Summary: The chapter summarizes the findings, suggestions and conclusion of the research study. The objectives set have been explained in the mentions chapters and the hypothesis set has been proved true. There is a need for creating good subject guides in developing countries in which not much work has been done in this direction as compound in the developed countries.

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