



INFORMATION RESOURCES AND SERVICES IN THE FIELD OF MINING AND MINERALS: A CASE STUDY RELATED TO THE ISSUES OF LIBRARY AND INFORMATION CENTRE (L&IC), INDIAN BUREAU OF MINES (IBM), MINISTRY OF MINES, NAGPUR, INDIA



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ABSTRACT

Information resources are required in every field for day to day work as they create base for the further research in the field. Information resources in the field of mining technology, mineral processing and mineral economics are preserved in the Library and Information Center (L&IC), Indian Bureau of Mines. The study reflects about the nature and types of collection related to the mining field maintained by this L&IC. Mining is a field which requires constant updating to answer the specific queries related to the mineral wealth of the country. The Library helps its clientele to collect material related with their areas of research so that they can collect data for the publications like Indian Mineral Yearbook and other publications by Indian Bureau of Mines. The study gives a panoramic view of the usage of resources of a specific kind i.e. Mining, Mineral and Geology available in L&IC. Information resources which are not only related to the mining field persons but to other inter related fields are also maintained in L&IC, IBM. This study is helpful to the users of L&IC, IBM to know more about resources and services offered here for them. This paper is a showcase of resources and services offered in this library so that its usage and utility can be enhanced.

KEYWORDS :information resources; mining; minerals; metals; mining industry; mining technology; mineral economics; book selection; library and information center; current awareness; automation; databases; library consortia; online resources; digital resources; digitization; reference service;

exchange program; centralized services; human resource development; website development; infrastructure.

INTRODUCTION

Nature has given us many resources for our sustenance. It has provided us a path to explore those resources which are available in abundant form. There is a need for the proper exploration and exploitation of those natural resources. The people who are working in the field of mining and mineral exploration are always in the need of the literature available in the field of mineral and mining technology. Information resources are very important for the exploration in any field. These information resources act as repository to get desired information out of it. Mining field is very important for the country to explore minerals for the benefit of the mankind. The mining field is always expanding and continuously growing.

Without availability of information resources, it is very difficult for a professional to move ahead in his field of operation. One such place which provides an arranged form of information resources is Library and Information Centre (L&IC). An L&IC is a place where systematically arranged resources on the specific topic or subject can be provided to the person who needs the information etc. on the same. Thus the role of L&IC for providing information resources to help the professionals of a field to carry on their work is incomparable. A Library and Information Center is always an authentic place to get the required information with utmost accuracy. The resources which are available in an L&IC may be in print or digital form. Thus an L&IC provides a gateway to both types of resources i.e. printed in the form of books and journals and digital which are accessible via modern means of information and communication technologies. The information sources in an L&IC are selected on the basis of their needs of its users. These resources are then procured and provided to the legitimate users. Digital resources are in trend today and the rising cost of printed resources give way for them to flourish. It is the demand of time that the libraries should procure and maintain printed informational resources as well as digital information resources because of their easy dissemination and utility. Online databases can be searched from anywhere if they are available as open access but the paid databases can only be accessed from a place such as L&IC because here the resources are made available with a minimum expenditure.

The L&IC, IBM maintains books, journals and other technical reference materials in the areas of Geology, Mining, Minerals, Scientific and Engineering, GSI and IBM Unpublished Reports, Records, Bulletin, Maps, Atlases, Abstracting Journals, National and International Conference Proceedings, Symposium Volumes and Annual Reports from various ministries, organizations and institutions. Every year new books, journals and relevant materials are added in the collection of L&IC through Library Committee headed by responsible senior officers of IBM. The L&IC facilities are also being utilized by personnel of other Scientific and Technical Organizations in Nagpur due to its exclusive collection. It not only caters to the needs of Indian Bureau of Mines but also the Mining Industry of Central India through its systematic collection of valuable publications on Mining, Metals and Minerals both national and international.

NEED OF THE STUDY

This study analyzes and assesses the expansion of information resources and services available in L&IC, IBM. The paper helps the users to know about L&IC, its collection and services. This study is also important for the staff to assess their strength and weaknesses towards services and collection. The L&IC will get attention of the users for its maximum utilization.

REVIEW OF LITERATURE

Related literature is reviewed to know about literature available in this field.

Stoker and Cooke (1994) suggested that there must be some evaluation to be applied while using online resources. Online resources are available in various subject fields and are used easily by the users. The paper discusses about the techniques for the evaluation of information resources.

Majid and Abazova (1999) in their study investigated the relationship between computer literacy of academic staff and their use of electronic information sources. The impact of male/female electronic resources usage has also been assessed. A statistical data is collected in terms of computer literacy of the users and the use of electronic resources by them. The study reveals that computer friendly academicians use electronic information sources and services more frequently. Younger generation of users refer electronic resources more frequently than older generation.

Popoola (2008) in his study investigated about the effect and use of information sources and services on the research output of social scientist of Nigerian University. The paper concludes that the Social Scientists occasionally use electronic information services for their research. The study reveals that the institutional libraries should acquire current information material in support of research and teaching. Library's information and service should be utilized for research and teaching purpose. The mean number of journals read on a regular basis by the users is seven. More number of information resources should be introduced so that maximum number avail the facilities provided by libraries.

INDIAN BUREAU OF MINES

The Indian Bureau of Mines was established in 1948. It is a scientific and technical organization under the Ministry of Mines, Government of India. It performs the task of promotion of scientific and sustainable development of all mineral resources of the country. It performs regulatory function through the enforcement of mineral conservation and development Rules, 1988; relevant provisions of the Mines and Minerals (Development and Regulation) Act, 1957, the Minerals Concession Rules, 1960 and Environmental (Protection) Act, 1986. It also acts according to the other rules which are made to assist in the promotion of scientific development of mineral resources of the country; conservation of minerals, Protection of environment in Mines other than Coal, Petroleum and Natural Gas, atomic minerals and minor minerals. Indian Bureau of Mines also acts as facilitation to the Mining Industry by providing consultancy services in Mining, Geology, Protection of Mine Environment and Mineral Beneficiation. It also works as a databank on Mines and Minerals. It advises the central and State governments on all aspects of Mineral Industry, trade and legislation. (Annual Report, IBM, 2011-12)

The various divisions of Indian Bureau of Mines are given as under:

1. Minerals Development and Regulation Division
2. Mineral Processing Division
3. Mineral Economics Division
4. Mining and Mineral Statistics Division
5. Planning and Co-ordination Division
6. Technical Consultancy, Mining Research and Publication Division
7. Administration Division

L&IC, IBM

Introduction

A library is not just a building or a room stacked with journal, books, magazines and news papers

but it is a repository, a knowledge bank and a continuous source of information and ideas, it is the most recognized place for learning and enhancing the knowledge so that new thoughts are generated and expertise can be developed. L&IC, IBM was established to develop information on mineral resources in a planned way. Primarily the library was started with books and publications in mining and metals. The publications of USGS and USBM along with unpublished reports (Indian Bureau of Mines and Geological Survey of India), Annual Reports (related to mining industries and other ministerial reports) Gazette of India, Various Publications of Indian Bureau of Mines and Geological Survey of India, Survey reports, survey maps etc. As the time passed, the organizational structure and functions of Indian Bureau of Mines have been changed. The collection and services of L&IC has also expanded. In this connection various information sources related to the area of Mining, Mineral Economics, Mineral Processing, Mineral Beneficiation, Policies and Laws related to Minerals, Earth Science, Geology, Environmental Science, Administration, Mining Engineering, Computer Science, Mineral Industries, publication of Indian Bureau of Mines, reference sources related other allied subjects in the field of mining and mineral areas have also been procured, processed and maintained to serve the changing needs of IBM. Since its beginning, the L&IC is giving its full output for carrying out the day to day proceedings of IBM. IBM is regarded as a technical organization and for fulfilling its objective; the L&IC needs continuous updating with the latest advancements in the field of Mining and Geology etc further it not only serves to employees of IBM but many times to various other government organizations, research institutes, research scholars and private parties also.

Working of L&IC, IBM

L&IC of Indian Bureau of Mines, Head Quarter (Nagpur) comes under the category of "Special Library" which is dedicated to the subjects Mining and Geology and enriched with valuable publications on the subjects Mineral Economics, Economic Geology, Mineral processing, Mining Research, Environmental Engineering and Mineralogy etc. besides the conventional form of information (books, journals and bound volumes) the collection also includes unpublished reports of IBM and GSI, Annual reports of various ministries, organizations, industrial houses, banking sector, records, memoirs, bulletins, maps, atlases, symposium/seminar proceedings, CD-ROMs and the Gazette notifications etc. It maintains open access system for users so that free mind and unrestricted search is possible. L&IC uses Libsys 4.0 software for automation. The users can search for their queries through OPAC (Online Public Access Catalogue) facility of Libsys 4.0. The L&IC acts as knowledge hub for Regional Offices spread all over the country.

Book Selection Procedure

Book Selection is a procedure of assessing the information needs of the people in a timely and economical manner using information resources both inside and outside the organization. A Book Selection Committee is a standing committee formed by the Head of Division to look after the demands, presented by the users working in various divisions and sections of Indian Bureau of Mines at HQ and Regional offices in India. Suggestions are invited from the users in which they are expected to highlight their needs in the form of new titles. Once the date of Library Committee meeting is decided, the demands are invited, collected, compiled and presented before the committee. All the items are put up in an organized order (different agenda items) in front of the Chairman of the Committee. The members of the committee decide the utility of demands of the users as well as the current demands of the Library. The recommendations of Library Committee are put up for the approval of the Head of the Organization. The Library Committee plays a very important role in monitoring the acquisition process

of the Library.

Information Resources available in the Library

- a) Technical books on Mining, Geology, Chemistry, Mineral Economics, Environmental Engineering etc.
- b) Reference books (dictionaries, encyclopedias, yearbooks, manuals and monograph)
- c) Journals in the field of Mining, Minerals, Ore Dressing, Mineral Economics etc. (subscribed and obtained under complimentary and exchange program from other organizations)
- d) Geological maps
- e) Publications of Indian Bureau of Mines
- f) Publications of other Government Departments
- g) Bound volumes of Journals
- h) Bound Volumes of Gazette of India since 1949
- i) Unpublished Reports and Investigation reports of GSI, IBM and MECL etc.
- j) Online subscription of various journals
- k) Audio Visual Resources

1. Books on Mining, Geology and Mineral Economics

As IBM is a multidisciplinary organization, the L&IC has multidisciplinary collection related to the field of Mining, Mineral Technology, Mineral Economics, Geology and Mineral Industries. Every year new information resources are added to its collection. At present the collection of L&IC is approximately 140,000, including books, bound volumes of journals, Gazette of India and Unpublished reports.

2. Reference books

The L&IC maintains reference sources such as, dictionaries and encyclopedia which are of general and technical nature. Besides these resources, it also maintains Manuals, Handbooks, Gazetteers, Standards, Yearbooks and Monographs which serves the reference needs of the users.

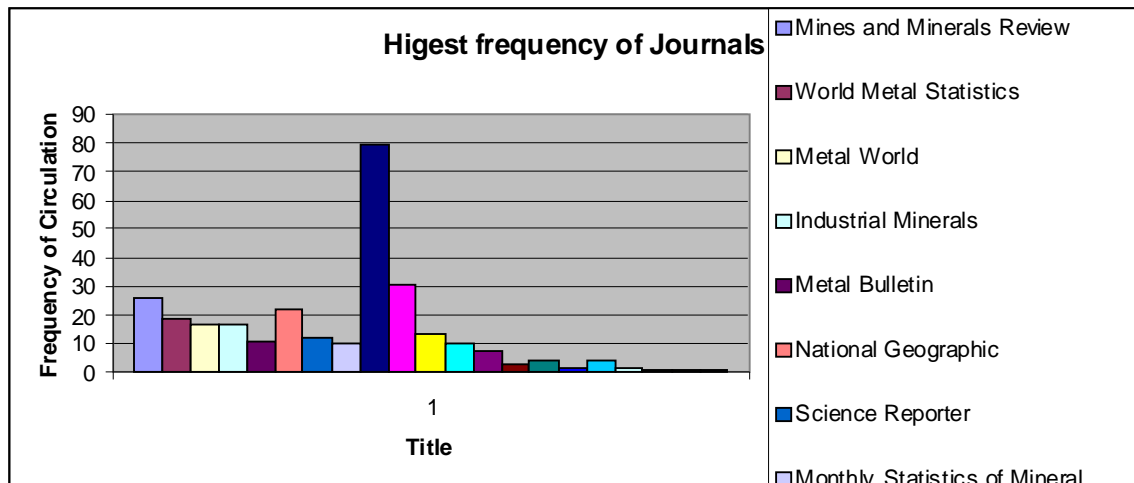
3. Journals

The L&IC subscribes major journals published in India or abroad in the field of Minerals, Mining Technology and Geology. It procures National and International Journals (Technical and Nontechnical) which make the users updated in their respective field. It also receives and maintains journals under complimentary and exchange program. (Annexure- 1 and 2)

Analysis regarding the use of journals subscribed and procured by the L&IC

There are many journals subscribed in the central library in the field of mining and mineral industry. Many journals are also procured as complimentary copy. A data is collected regarding the use of various journals in the library. (Annexure- 4)

Mines and Mineral Review is the highest used journal during the previous financial year. World Metals Statistics is also an important journal which is used and referred by the users of the Library. Bulletin of Mineral Information is also important reference source for the users and used by many library members regularly.



4. Important publications of Indian Bureau of Mines maintained in L&IC

- a) Indian Mineral Yearbook
- b) Bulletin of Mineral Information
- c) Indian Bureau of Mines News
- d) Monthly Statistics of Mineral Production
- e) Statistical Profiles of Minerals
- f) Market Survey of Report
- g) Bulletin of MLPL&RP

5. News Papers subscribed in L&IC

Sr. No.	Title	Edition
1.	The Times of India	Nagpur
2.	The Hindu	Hyderabad
3.	The Telegraph	Kolkata
4.	The Indian Express	Nagpur
5.	The Hitavada	Nagpur
6.	The Economic Times	Nagpur
7.	Business line	Hyderabad
8.	Navbharat (Hindi)	Nagpur
9.	Dainik Bhaskar (Hindi)	Nagpur
10.	Lokmat (Marathi)	Nagpur
11.	Employment News (English and Hindi)	New Delhi

6. Compact Discs: - Compact Discs are available in the field of Mining. The Library maintains a collection of Compact Discs for the ready use of users. The CDs are sent by the different organization worldwide, which are working in the field of Mining and Geology.

7. Microfiche: - A collection of more than 100 microfiches (technical) is available in the library for users.

8. Video Compact Discs: - L&IC is having more than 200 Video Compact Discs relating to Mining and Minerals Field.

9. Maps: - The L&IC has a rich collection of Maps. These Maps are related to the field of Geology, Mining,

Mineral Exploration and availability of Minerals.

10.Hindi Books- Besides the books on Mining, Geology and related subjects there is a collection of Hindi books in the L&IC as per the Government norms to promote Hindi in the Central Government Offices. Hindi books like novels, story books, inspirational, spiritual, biographical; administrative and technical are preserved.

11.Manuscripts: - L&IC has 3792 manuscripts of IBM and 4076 manuscripts of GSI.

BROAD AREAS OF CLASSIFICATION IN L&IC

The L&IC, IBM maintains its collection in an organized order by using Dewey Decimal Classification (DDC). The broad area of classification includes all the related fields of Mining, Minerals, Minerals Economics, Mineral Processing, Ore Dressing, Geology, Mining Technology, Administrative books and technical and nontechnical Hindi books. Major subjects of classification which are available in L&IC are given in Annexure-3.

USERS OF THE LIBRARY

Registered users of L&IC as on date are 350, these include, IBM employees, Geologists, Mineral Economists, Mining Engineers, Technical Assistants and Mineral Officers etc. The other users in the category of visitors also visit here for consultation. This category involves Research Scholars pursuing PhD in various universities in the field of Mining Engineering, Minerals Economics and Geology. Various Mining Engineering Students who are pursuing degrees also find their literature to complete their project reports. Consultants and stake holders working for various mining firms also consult L&IC for collection of information in their field. Officers and Personnel working in other departments, public sector undertakings and mining industries also visit here for collection of required information.

NATURE OF SERVICES

- Lending of publications to the IBM borrowers.
- Providing anticipatory and on demand reference/ information/ documentation service.
- Indexing and abstracting of articles from technical journals.
- National and local dailies procured and provided to the users during the lunch time for the reference of users.
- News papers are also procured and permanently circulated to the divisions/ sections of IBM headquarters.
- Providing Current Awareness Service Classified Mineral News (marking and compilation of news items from news papers)
- Current Content Service GEM (Compilation of front page and content page of Technical Journals)
- Selective Dissemination of Information.
- Permanent Issue Service (L&IC Procures Books and Journals for regional office Libraries, OD Laboratories situated outside Nagpur)
- The Central library is providing facility of consulting publications to non members of IBM and other visitors also, such as academicians, research scholars, students and executives from institutions / organizations.
- It also maintains the publication published by Indian Bureau of Mines and Geological Survey of India.
- Display of New Arrivals.

- Article Indexing of Current Literature using Libsys 4.0
- Bibliographic Services provided on the following subjects such as Iron Ore, Chromites, Offshore mining, Laterite Mining, Lime stone etc.
- Reprographic Service

Important services provided by L&IC: a review

1. Identification and procurement of new publications every year on purchase, presentation and exchange basis and then they are classified and catalogued for the easy use of users.
2. The L&IC's readership is very vast, to cater the needs of increasing demand, anticipatory services are also given like Selective Dissemination of Information.
3. L&IC is extending bibliographical services on several topics related to functions of IBM which depend on user's requirements.
4. Current awareness service is given to its users in the form of Classified Mineral News and Current Content Services.
5. Library is having a good collection of gazettes, unpublished reports, records, bulletins, memoirs, newsletters and annual reports, which are acquired and maintained regularly for effective information retrieval.
6. Library Committee is effectively extending its support for the growth of the Central library and identifying latest development in the Library.
7. Besides the regular services of the Library, there are some other services also, rendered from time to time for the benefit of the users. These services are Indexing service, Abstracting service, Selective Dissemination of Information and Current awareness Service etc.

Special services provided by L&IC to the users of various divisions of IBM

The L&IC serves the users of various divisions in following ways:

1. Providing reference for updating and preparation of National Mineral Inventory
2. Preparation of bibliography on the related subject matters to update the publication like Indian Mineral Yearbook, Market surveys, comparative studies of Mining Laws etc.
3. Providing Technical Journals, Technical books on Geology, Mining and utilization of minerals, Publications of National and International repute to the authors who are assigned the work of preparation of general and mineral commodity reviews of the Indian Mineral Yearbook.
4. Providing inputs and reference for market survey on minerals of contemporary importance
5. Providing reference for answering various queries from ministry, parliamentary questions and R and D institutions
6. Providing information and reference from reputed national and international journals for making international co-operation in mineral sector between India and any other country.
7. Analysis arrived through reference available in the library makes it to focus to mineral sector in both the countries, which may be viable in the co-operation.
8. The L&IC serves its users by providing reviews of specific minerals and metals, trade data and data related to price of metals. It provides data related to annual production of metals and specific minerals from the journals like Iron and Steel Review, Mines and Metals Review, JPC Bulletin and Industrial Minerals.
9. For specific standards and specifications of metals, the L&IC provides its users the publications of Bureau of Indian Standards.

Issues related to the up gradation of Library and Information Center in terms of changing role of Indian Bureau of Mines

1. Library Automation

Library Automation is very important part of today's Library service. The functions of an L&IC such as acquisition, cataloguing, circulation, maintenance and OPAC are performed with the use of renowned library management software. The L&IC, IBM uses 4.0 to manage its day to day in house operation. New version with Web- OPAC facility is required to make the catalogue available at the desktops of users using LAN, WAN and MAN. This will help the users of L&IC, IBM working in various Divisions, Sections at the Headquarter at Nagpur and also at Modern Pilot Plants and regional offices throughout India. Once the users search for their required information through Web-OPAC, their request can be processed and required information can be provided in print as well as in digital form. With the use of Web- OPAC version of Libsys software, the L&IC can extend its services to its clientele outside the library premises.

2. Data Bases in Mining Areas

Mining field databases are to be explored and used. Users are to be trained to use these databases. Paid databases can be purchased so that with the use of a simple login and password the registered users can search for their required information. It would be a great step to purchase online databases to cater the various information needs of IBM. It would also be helpful to serve the purpose in creating National Mineral Repository.

3. Library Consortia

Resources Sharing among Libraries can have different implications for different users, earlier it implied only as Inter Library Loan. The advancement of Information Technology has changed the old concept of resource sharing and covered all the aspects of the information needs of the users either directly through consortia. Consortia means a group of libraries come together with common interest to form consortium. One of the libraries from the group of libraries will work as coordinator for identification of libraries, for each publisher negotiation or on legal matters etc. The aim of consortia is to achieve economy in purchasing resources that is quite difficult of an individual member to achieve due to increasing cost of information resources. Thus a consortium is said to be a cooperative arrangement among group or institutions or an association or society. The L&IC, IBM can also go for a consortium while working as a nodal agency for consortia for a group of libraries come under the Mining and Geology subject fields. To cater the problem of increasing price of reading materials, it is very important that libraries of mining related subject should think for resource sharing by linking themselves with the means of library consortia. It will fulfill the information needs of the users. Resources are used to make policies. Under the economic reform policies of Government of India, Library consortia will help L&IC to get its resources with minimum cost. Thus the following objectives can be achieved through library consortia by the L&IC.

- a) Increasing the cost benefit per subscription
- b) Promotion of the rational use of funds
- c) It will ensure the continuous subscription to the periodicals subscribed
- d) It will guarantee the local storage of the information acquired for continuous use by present and future users.

e)It will also develop technical capabilities of the staff in operating and using electronic publication databases.

4. Online Resources

The resources which are available in print form earlier and now they are available in digital form; may be subscribed for the easy access of the users. There are many online resources available on the web which may be linked with the main website of L&IC. Some existing resources may also be prepared in digital for by the means of digitization or printed materials may also be developed in digital form. In today's online environment an exchange of information in the form of publications between two or more organizations can be possible.

5. Internet based reference service

Reference queries are received in the L&IC through telephone, email or at reference librarian link in main website of L&IC. These reference queries are then analyzed and necessary data collection to done by the Librarian to answer those queries in an online medium from the website of L&IC. There may also have an interactive session between the users and Librarian for getting the required information with utmost accuracy. This will saves the time of the users after getting personally connected over the website. Maximum queries can be solved online. If the information which is to be disseminated too long to be delivered at the same moment, it may be provided after some time in digital or in print form after a personal visit of the users. This service indeed will save the time of the users. It is the fastest tool, time saving; cater the information needs of the users in online mode.

6. Digitization of fragile, mutilated, rare and out of print reading materials

Digitization is the process of conversion of any fixed or analogue media such as books, journals article, photos, paintings, microform in to electronic form through scanning, sampling or in fact even rekeying. The L&IC has many rare reports, books, out of print books and important journal articles which are in print form. These important resources may be digitized in order to increase their life and usability.

7. Selective Dissemination of Information

A detailed profile of IBM employees to be created, related to their area of interest. Each user may be assigned a code. Document profile is also created in the form of article indexing. These indexes of articles are matched with the profile of users. After matching procedure of the document profile with user profile, an analysis will be made. The matched document may be supplied to the users in print or in digital form. In Indian Bureau of Mines where there are many divisions, sections working in different fields of mining and minerals, this service proved to be very helpful for their regular work.

8. Exchange Programme

An efficient exchange programme of Mineral and Mining literature may be developed with other organization of National and International repute. The publications of Indian Bureau of Mines are to be exchanged with them under some conditions. It is a challengeable task. Earlier this sort of programme was going on but now it should be strengthened with new technologies and terms and conditions. Today's internet technology has given way to exchange digital resources within no time. We have to develop that our publications under exchange program will be delivered within the specified time limit. It will be useful to maintain an updated form of materials and the target of parent

organization can be achieved. Earlier many publications of USGS, Geological Society of Japan, British Geological society and other national and international organizations were involved in this programme.

9. Centralized Services along with Centralized Purchasing

The L&IC purchases information sources centrally for providing services to its users at the headquarters and the Ore Dressing Laboratories and zonal offices situated throughout India. It also provides services on demand. These services may be delivered centrally. The use of modern Internet Technologies can be used to disseminate this service in an effective way. Using ICT, the execution of task of providing services may be fast and uniformly delivered efficiently.

10. Human resource Development

Due to the changing environment of library services and to make it effective, trained and computer friendly man power is the need of the hour. The manpower should work in an effective way in digital environment. For that purpose short term refresher courses to be organized from time to time, workshops related to latest technologies related to Library services may also be organized. One such organization which organizes workshop and training programmes for library professional is NISCAIR (National Institute of Science Communication and Information Resources, New Delhi). This organization conducts short term training courses regularly. These courses are very useful for the existing library professionals. Efficient man power is very important to carry out day to day activity while thinking about the organization's goals.

11. Infrastructure

The infrastructure set up is quite necessary when there is a need for updating the library. The L&IC, IBM is onset of e- Library. The necessary infrastructure required is given below:-

- a) Fastest Internet connection
- b) Full text search engines for indexing and providing access to resources
- c) Management of e-resources
- d) Digitization of books and other reading materials
- e) Acquisition of born digital material
- f) Retrospective conversion of available collection
- g) Skilled manpower
- h) High capacity storage devices

12. Identification of new information resources

The nature of resources that L&IC makes available to its users is fully dependent on the activities undertaken by IBM. The L&IC should find new and important resources in digital as well as print form to be preserved for the benefit of users.

13. Preparation of Institutional Repository of Indian Bureau of Mines

Institutional Repository (IR) may be referred as a storage bucket of all intellectual output of any of Research and Development (R&D) institution. It helps the users to get all the research output of an institution at a place in the form of Institutional Repository. IR is a sort of database of digital information resources accessible through internet. This sort of Institutional Repository can be prepared and maintained by L&IC for the users who want to have some important old publications with the research output along with rare and unpublished documents in digital form. This is done for an easy access by the users of L&IC. This type of repository will help the users in their day to day work as well as on

demand by the users.

14. Developing website of Central Library, IBM

The L&IC, IBM serves the informational needs of its parent organization in Nagpur, Maharashtra with expanding its Zonal and Regional Offices and Mineral Processing Laboratories at and outside Nagpur. This website can be hosted under parent organizations by giving link as Library and Information Center. This website may be useful for the expansion of Library services to all the users. This will enhance the service of L&IC to provide information and services for the sake of all regional, sub-regional, allied departments and industry in general. The website of L&IC may have inputs like, information regarding nature and work of L&IC and its parent organization, map and location of L&IC along with contact details, rules and regulations of the L&IC, administration of L&IC, user orientation, information of collection and service, reference librarian facility, digital reference service, information regarding working hours, assistance and display of current contents and new arrivals. The website of L&IC is to be developed under the website of IBM with a latest Web-OPAC version of Libsys. This Web-OPAC version of Libsys will be very useful for providing services to remote users of L&IC.

15. Users Orientation

With the changing form of resources and services, the users of L&IC may also be informed, trained and made aware about the nature and services and resources provided by the L&IC. The user orientation program must be organized from time to time, where they get acquaint themselves with the latest resources and services available for them. A lecture including demonstration of all the important issues should be prepared and delivered to the users in an open house orientation program. This program can also be organized online.

16. Developing L&IC, IBM according to international standards

The L&IC, IBM is famous as Mineral Library of national importance. It has been recommended as National Mineral Library from Mining Department from time to time. At present rigorous efforts are required to fulfill this dream. It will be beneficial for IBM and various mining organizations of national and international importance to acquire and disseminate information sources and service. Hence it is the need of the hour to build or enhance the L&IO up to the International Standards.

CONCLUSION

1. Many Central Government Libraries are facing a problem of allotment of insufficient funds for purchases and maintenance of library staff and services. It puts the Librarians into most inconvenient situation. So it is the demand of time that the department should increase the budget provision to upgrade this library.
2. Budget constraint also forces untimely discontinuation of many important subscription and services. Readers are deprived of many important information services.
3. Improvement of services and resources are solely dependent on the sufficient budget allotment and the efficiency of the staff, which is a matter of concern to upgrade this library.
4. There is a need for thinking about a National Mineral Library having the entire advanced infrastructure to fulfill the information needs of mining professionals.
5. The L&IC, IBM has the full potential to upgrade itself as National Mineral Library of India.
6. Provision has to be made for separate web link (in IBM's website) for L&IC
7. The L&IC has to be developed at par with international standards as the government of India is

pressing hard for digitization and E- Government; it is the right time to upgrade the Library to required International Standards.

8. Today's changing scenario where there are numerous change have been recorded in the field mining and mineral industries, it is very important for the L&IC to upgrade and make itself compatible with the changing environment so that it can prove much beneficial for the organization and it can deliver its fullest services to the nation building as a whole.

Annexure- 1 (Subscribed Journals)

Sr. No	Title	Frequency
1.	All India Reporter	Monthly
2.	Current Science	Monthly
3.	Competition Success Review	Monthly
4.	DESIDOC Journal of Library and Information Technology	Monthly
5.	Digit	Monthly
6.	Down to Earth	Fortnightly
7.	Economic Geology	Monthly
8.	Engineering and Mining Journal	Monthly
9.	Front Line	Fortnightly
10.	IASLIC Bulletin	Monthly
11.	India Today	Weekly
12.	Indian Journal of Chemical Technology	Monthly
13.	Indian Journal of Engineering and Material Sciences	Monthly
14.	Industrial Minerals	Monthly
15.	Iron and Steel Review	Monthly
16.	JCM Bulletin	Monthly
17.	Journal of Geological Society of India	Monthly
18.	Journal of Mines, Metals and Fuels	Monthly
19.	Metal Bulletin	Bi-monthly
20.	Minerals and Metallurgical Processing	Monthly
21.	Minerals and Metals Review (Monthly)	Monthly
22.	Minerals and Metals Review (Weekly)	Weekly
23.	Mining Engineering	Monthly
24.	Journal of Scientific and Industrial Research	Monthly
25.	Mining Magazine	Monthly
26.	National Geographic	Monthly
27.	Pratiyogita Darpan (Hindi)	Monthly
28.	Resource Policy	Monthly
29.	Sarita	Fortnightly
30.	Science Reporter	Monthly
31.	Services Law Reporter	Fortnightly
32.	Swamy News	Monthly
33.	World Metal Statistics	Monthly
34.	Yojana	Monthly

Annexure- 2 (Complimentary/ Exchange Journals)

Sr. No.	Title	Frequency
1.	Bulk Solids Handling	Monthly
2.	Coal Insights	Monthly
3.	Construction World	Monthly
4.	Copper Topics	Monthly
5.	Dream 2047	Monthly
6.	Geospatial World	Monthly
7.	Green Hope	Monthly
8.	Irma Journal	Monthly
9.	Indian Journal of Geosciences	Quarterly
10.	International Mining	Monthly
11.	Indian Stone	Monthly
12.	Infra Live	Monthly
13.	Indian Trade Journal	Monthly
14.	Insage	Quarterly
15.	Journal of Institution of Engineers India	Monthly
16.	Journal of Environment Science and Engineering	Monthly
17.	Mining Engineers Journal	Monthly
18.	Metal World	Monthly
19.	Minds and Mettle	Quarterly
20.	MGMI News Journal	Quarterly
21.	Parichaya	Quarterly
22.	Pragati	Quarterly
23.	Resource Digest	Bimonthly
24.	Skill India	Monthly
25.	Standards India	Monthly
26.	Steel World	Monthly
27.	The Developing Economics	Monthly
28.	The Indian Mining Engineers Journal	Monthly
29.	Tungsten	Monthly
30.	World Cement Review	Monthly

Annexure- 3 (Broad areas of classification)

Sr. No.	Title	Sr. No.	Title
1.	Mineral Economics	2.	Industrial Law
3.	Environmental Protection	4.	Foreign Trade
5.	Organic/ Inorganic Chemistry	6.	Mineralogy
7.	Geology	8.	Metals and Minerals
9.	Industrial Minerals	10.	Machine Engineering
11.	Mining Legislation	12.	Surface Exploration
13.	Mine Surveys	14.	Mine Environment
15.	Ore Dressing	16.	Mine Health and Safety
17.	Editing	18.	Printing Technology
19.	Metallurgy	20.	Hindi Books

Annexure- 4 (Tabular Representation of Highest Frequency of Journals used (Borrowed) during the Financial Year 2014-15)

Sr. No.	Title	Frequency
1.	Mines and Mineral Review	26
2.	World Metal Statistics	19
3.	Metal World	17
4.	Industrial Minerals	17
5.	Metal Bulletin	11
6.	National Geographic	22
7.	Science Reporter	12
8.	Monthly Statistics of Mineral Production	10
9.	Services Law Reporter	79
10.	Bulletin of Mineral Information	31
11.	All India Reporter	13
12.	FIMI News	10
13.	JPC Bulletin	7
14.	Mining and Metallurgical Processing	3
15.	Mining Engineering Journal	4
16.	Indian Mining and Engineering Journal	2
17.	Down to Earth	4
18.	IRMA Journal	2
19.	Journal of Environmental Science	1
20.	Mining Magazine	1
21.	Engineering and Mining Journal	1

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