Chapter 5

REVIEW OF LITERATURE

Published literature in any discipline is very important for further study and research but literature review means to make a critical analysis of the published literature in any form. This review helps to understand the background and trends of the subject. It guides the researcher to know what has already been done and what more remains to be done. It provides a model for the further research and surely helps in avoiding duplication in research. It familiarizes with the well known articles, books, researchers and writers in the field.

A review of the literature and earlier studies relating to polytechnic libraries has been provided in the following pages to project the level of attainment and the importance attached to polytechnic libraries.

Some of these studies are general reviews of organizational infrastructure, services and administrative aspects of various polytechnic libraries and their requirements. Others are about the staff and staffing patterns, resources and materials of organisation and these studies cover the different aspects related to various polytechnic libraries such as library collection, staff, finance, different services and their effectiveness, utilization of materials and uses availability, document supply and library cooperation, information technology and its application in polytechnic libraries, networking and resource sharing and user studies.

Henninger and Houghton (1970) report a survey of polytechnics in India made by them as foreign consultants of the Damodaran Committee (Special Committee on Reorganization and Development of Polytechnic Education in India 1970-71) of Govt. of India. The report covers polytechnic libraries in Andhra Pradesh, Gujarat, Maharashtra, Mysore, Rajasthan and Tamil Nadu. It indicated that the students were faced with many problems in respect of free access to books, library timings etc. and that a high percentage of collections were not being used at all. This is a very important study which made many valuable recommendations.

Chandrakant (1971) who was then joint Educational Advisor to the Ministry of Education, Government of India was an expert on the matter of technical education in India. This book divided into nine (9) chapters studies the various aspects of polytechnic institutions in India especially their objectives, types of courses offered by them, curriculum, educational level and performance of polytechnic students in different states of India. Lastly, gives details of the polytechnic faculty programs for improvement of teachers1.

Shah (1974) describes the functions and importance of polytechnic library, its users and services, and discusses the role of the Department of Technical Education, Principal, Library Committee and the Librarian in development of such libraries2.

Hall (1977) reviews the literature regarding the importance and place of Current Awareness Services (CAS) in the information provision and exploitation of academic libraries. She discusses the development of information services in polytechnic libraries and the services produced and or purchased by polytechnic libraries and considers that there is still a place for the polytechnic library to offer additional service. Although computerized services will become more evident, this may not be as quick a conversion as had been imagined. The most likely development in use would seem to be an increase in subscriptions to group profiles3.

Rao (1978) traces the evolution of technical education in India and the importance and place of library in it. He states, the library is not a building stacked with books and journals. It is a repository, dynamic store house, source of information and ideas, a place for learning and enquiry, for the generation of thought and creation of new knowledge. A library in an academic institute is to provide books, journals and other reading material to its clientele for pursuing their curriculum, research, foster scholarship and general reading and continued life-long education. It has to cater to the information, education and recreational needs of different types of communities. Library plays an important role in developing a knowledge society, where everyone is ‘knowledge rich’4.

3 Hall, C.M.(1977). Development of current awareness services in polytechnic libraries with particular reference to science, technology and associated subjects fields. Loughorough, University of Technology.
In another survey by Malhan and Wajir Singh (1980) the development of polytechnic libraries in Haryana has been traced and an evolution of library resources and services has been made. The survey also points out the inadequacy of manpower and documentary collections and suggests remedial measures.

**Marsterson (1980)** describes the results of a survey of all inquiries received at New Castle upon Tyne polytechnic Library during one week. Analysis was designed to show whether enough-and appropriate-staff were available in relation to the population served. The rate of inquiry work was assessed and the type of inquiry was compared for different services points. Subject and general inquiry staff answered a proportion (20%) of general and subject inquiries respectively. Some 10% of inquiries took more than 5 minutes to answer. Comparison was made with a previous survey and showed a growth in volume and some change in the nature of inquiries.

**Ravichandran (1981)** conducts doctorate research with the aim to analyse the effectiveness of libraries and library services of polytechnic colleges in Tamil Nadu. Ninety nine polytechnic institutions were selected out of 196 polytechnics by sampling. Students and teachers of polytechnics were also chosen by sampling. Three separate questionnaires were formulated for study. The findings of this study were insufficient staff, unsatisfactory working hours, limited library services, inadequate furniture and space problem etc. A number of recommendations were also made for enhancing the library services of these libraries.

**Barki and Bhatt (1981)** report on the effective utilization of library resources in polytechnics in Southern India. Under the auspices of UNDP, The TTTI (Technical Teachers Training Institute) Chennai, carried out a major project of polytechnic libraries in Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. One of the main problems which were felt that due to lack of awareness and library education, most students were not able to make proper use of library resources. Library Orientation Courses were introduced into the teaching programme at the polytechnics in these states in 1980 and a second survey in 1981 found that there was considerable change and library education had enabled the students to make better use of library resources.

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use of resources available and also made them to point out inadequacies in the library support system.

**Hendrix and Wilson (1981)** state that Preston polytechnic Library and Learning Resources Service—a member of BLCMP has developed and now uses a PRECIS related subject index produced locally in cooperation with the polytechnic Computer Services Unit. An in-house PRECIS system has the advantages of consistency, UK terminology and frequent up-dating. It facilitates reproduction for multiple services sites. System hardware and software and production routines are discussed. A working party has been set up to review future developments, especially frequency and physical form. The possibility of a local on-line configuration is also discussed.

**Collier (1982)** in a very relevant paper at the COPOL seminar 1982, picks out some of the general trends in development of information technology and identifies their relevance to library and information work in polytechnics. He discusses the technology itself including: (1) Hardware, (2) Software, (3) Telecommunications, (4) Local Area Network, (5) Applications of Information Technology in Polytechnic Libraries, (6) Developments in Library Systems, and (7) Interconnection.

**Aderinto (1983)** gives a brief description of Oyo State in Nigeria and explains the history of Ibadan Polytechnic and its satellite libraries. He describes the management of centralized technical services at Ibadan Polytechnic, acquisitions processing, cataloguing and classification, and characteristics of the centralized processing and recommends changes in the relationship of the centralized technical services and satellite libraries and the introduction of automated processing at the center.

**Venner and Walker (1983)** discuss specific details of the Central London Polytechnic’s investigation into microcomputer networking in libraries. There is a perceived need for low priced On-line Public Access Catalogues (OPAC) for small to medium sized collections. A first object of the project, therefore, will be to construct an OPAC using local microcomputers as stations connections via a local area network.

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to a fairly large central disc store. Five (5) groups of tasks to be carried out in the initial phase of the project are identified: Loading of Machine Readable Data into the System, File Inversion, Search Functions, User Interface and Maintenance.¹

Bluck (1984) describes the adoption of new media cataloguing standards in Birmingham Polytechnic where the collection of audio-visual materials is housed in five (5) site libraries. While much of the material was recorded in local sheaf or card catalogues, very little appeared on the polytechnic’s union catalogues on microfiches despite membership of Birmingham Libraries Cooperative Mechanisation Project (BLCMP) which meant that most media items were thus hidden from potential users unless they explored each collection on site. The problem was highlighted by the unexpected addition of £65,000 worth of audio-visual materials. Bluck also discusses the extension of the BLCMP catalogue and alteration of existing records. It is an attempt to make the scope of the collection more widely known.²

Dayal Dass (1984) was Assistant Educational Advisor of Ministry of Education and Culture as appears from the sub title. This is literature survey and abstract of relevant publication on technical education available in the Central Secretariat Library of the Government of India. The study has been divided into two parts: namely Pre and Post Independence periods. Also explains the role of various Committees and Commissions for development of technical education. There are sixteen (16) appendices attached on various aspects of technical education.³

Adams (1985) describes the design and development of interlibrary loan administration system at Leicester Polytechnic Library using a standard data management software packages to run on stand-alone microcomputer. He discusses a system analysis of some interlending departments and a questionnaire survey which was sent to a sample of British Lending Library Division (BLLD) users and describes the creation of a system specification and the testing of a number of software packages against this and other criteria. The selected package was tested against an experimental database and a demonstration system set up.⁴

Conyers (1985) describes the results of a study carried out at Brighton Polytechnic, U.K. to study the proportion of staffing and materials costs which could be attributed to the fact that it operated nine (9) separate departmental libraries rather than one central library. It was found that 36% of salaries and 14% of materials costs could be attributed to the multi-site situation.¹

Makin (1985) also discussing EN tells us that it is a computer produced current awareness service, appearing fortnightly, for those teaching, administrating or providing library services in the areas of further, higher and adult education. Produced by Trent Polytechnic Library UK, it is intended to keep readers informed of developments, news and rumour in this politically sensitive and fast moving sector of public expenditure. A data base is formed from the material input for the printed editions and this can be searched on behalf of readers by library staff. A photocopy request service is operated. After 18 months a readership survey and evaluation was carried out and a number of changes were made to the printed version. A cooperative arrangement with 2 other academic libraries was begun.²

Taylor (1985) describes the various activities through which the LTC disseminates information: demonstrations; enquiry service and published information sources; and the Information Services Network. The Library Technology Centre (LTC) at the polytechnic of Central London was established in 1982 with the aim of increasing awareness of the application of information technology amongst librarians and information professionals.³

Hall and Hendrix (1985) describe experience at Lancashire Polytechnic in Person in order to demonstrate how it is possible to use records created for one housekeeping activity (cataloguing via Birmingham Libraries Cooperative Mechanisation Project. (BLCMP) to generate records for another housekeeping activity (circulation) using another system (Geac). They also discuss problems presented by the merging of the Lancashire Polytechnic with 2 teacher training colleges at Chorley and Pulton-le-flyde, both of which had considerable collections not held in machine-readable form.⁴

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Payne and Blagden (1985) describes simple methods which can be used to quantify levels of stock discrepancy, and highlights the most serious discrepancies between the library catalogue and the stock so that remedial action can be taken. He outlines procedures for a stock census and comparison with the SWALCAP bibliography file in use at the city of London Polytechnic Library, UK. Using a spread sheet, it identifies low stock discrepancies of between 2 % and 6 % for the library' sites.¹

Kemp (1986) describe a visit by the librarian of a small U.S. Liberal College to the library of the polytechnic of the South Bank, a London Technical School. He compares the U.K. and U.S. position with regard to purpose of the college, funding, the building, staffing, automation and library publications.²

Lein (1986) reports a survey on literature use carried at the Mittwedia Engineering College then in East Germany in 1984 among students at the end of the 1st year. Four main points emerged from the survey, student's ability to use libraries and literature should be analyzed when they commence their studies, the task of user training should be distributed more evenly between university staff and library staff, future user training could be improved by integration into the syllabus, and user training should take into account the future importance of in-service training.³

Edwards (1987) describes the work of the education librarian of Oxford Polytechnic. Work includes liasoning with teaching departments, book selection and stock revision, exploitation of stock, library material, library teaching and reference work, special collections and staff training.⁴

Fletcher and Towler (1987) describe cooperation between Lanchester Polytechnic Library and Coventry City Libraries in the selection and implementation of Computer Library Systems International's LIBS 100 integrated library system.⁵

Cowley (1988) reviews the activities of polytechnics and college libraries during the 1981-85 period and covers resource problems, library materials/services, learning resources, on-line information retrieval, library education, subject librarians,

the Council of Polytechnic Librarians (COPOL), research, cooperation and multi-site operations.¹

Wells (1989) describes the rationale behind the Joint Academic Network (JANET) of UK. Which connected around 40,000 users in 125 higher education sites with no usage charges (the computer board pays a standing charge). This encourages use of a system set up to meet academic's basic needs for better contact with like-minded people.²

Joshi and Panda (1989) evaluate the services of technical libraries and pointed out the need for trained manpower, more efficient management and introduction of computer based library systems and services.³

Nayar (1989) highlights the importance of technical education by stating that now a days, prosperity of every nation and industrial development depends upon the application of new technology. He studies the historical background and development of technical education at higher and lower level in universities, and before and after Independence. This study reports the observation and recommendation of different committees and commissions established for educational development in specific fields named Calcutta University Commission 1917, Abbott and Wood Despatch Report 1936-37, Hartog Committee, Hunter Commission 1980-82, Sarkar Committee and Indian Industrial Commission 1915-17 etc. The present study has highlighted on the constitutional amendments which were required especially for technical education.⁴


Also explains the training of technician and lastly the state of research in engineering and related disciplines.

States that technical education can only improve with the development and modernization of industry; better funding and promotion of research and development.¹

**Nwali (1990)** studies the importance of research in relation to the problems of libraries. This study examines the hypothesis that for the effective library utilization, adequate library resources, facilities and services are the most important requisites. Educational orientation programmes are also essential to make the maximum utilization of libraries. The major objective of this study was to analyze the factors which could make the effective utilization of library resources. The historical background of Ibadan: A poly technical institution in Nigeria and its library system is thoroughly studied. The research methodology used for data collection in this study were personal observations, consultation of library records, interviews and questionnaires. The results were shown in the form of tables which emanated from this research. This study discusses the recommendations of the international working party and conclusions were given for the betterment of Ibadan polytechnic students.²

**Stringer (1992)** states that much research into hypermedia has been limited to linking of documents that are predominantly text based and so most effort has been applied to the search for elegant algorithms that can intelligently interpret the meaning and context of written language and thereby help readers find other materials that can enhance their understanding. Stringer describes the Theseus project under development at Liverpool Polytechnic, UK by which interactive multimedia objective statements can be used as multi-directional bridge between linear subjective discussions and how those bridges can be made to evolve of their own accord through interaction of individuals exploring and manipulating the contents of a hypermedia domain.³

**Stevenson(1992)** reports variations in total expenditure on law materials between universities and polytechnics in the financial year 1990/91 focusing on the

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average expenditure per university on law material and average expenditure per full-time education student. Also discusses fingers for universities in the following groups: small, medium and large law departments. He discusses the receipt of money from outside bodies such as law firms and trust funds and from law department subventions, and examines figures on databases accessed and related expenditure, and researches the question of whether a formula is used for calculating the law budget.¹

**Lacey (1992)** describes the setting up of a video tape library in the Wolverhampton polytechnic Law Library under the following headings, history of the collection, the need to develop the collection, selecting suitable materials, promoting the collection and the printed video catalogue. He discusses increased use of the collection, the possibility of damage to the tapes and marketing the video catalogue.²

**Young (1992)** reports that the Hong Kong polytechnic Library houses the largest slide collection amongst academic libraries in Hong Kong. Its present holding exceeds 160,000 slides and they are intensively used by both staff and students from the Swire School of Design and the institute of Textiles & Clothing, who are vigorously looking for visual information. The development of the slide collection in the Hong Kong polytechnic Library including slide processing and cataloguing with the Library’s main system to provide a better service, a project of transferring 40,000 slide images on to a videodisc has been stated.³

**Macartney (1992)** presents a state of the art review of UK polytechnic libraries during the period 1986-1990 focusing on collections and services, library buildings, library staff and staffing, finance, research, cooperation, audio-visual media and information technology including CD-ROM, and the changing nature of polytechnic libraries.⁴

**Livingstone(1995)** states that there are 49 Government and 16 private polytechnics in Andhra Pradesh. Divided in to five chapters, the study makes a

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A comprehensive survey of the resources, services and technical services of 65 polytechnic libraries of AP and satisfaction of librarians with infrastructure available. The present study finds that 78% have adequate and about 90% have good furniture. About use of computers it is available in 78% libraries. Number of books in different polytechnics varies from 7700 to 20,000 with total number of books in all polytechnics as 1,17,300. It suggests the establishment of polytechnic network for resource sharing. For this, enhancement of fiscal resources is recommended. Statistical tools have been applied to arrive at the suitable results.¹

**Biradar and Sampath (2000)** attempt to evaluate the services and facilities offered by DVS Polytechnic College Library, Shimoga, Karnataka. The results of this study showed that 37.5% students and 46.88% teachers are satisfied with lending service and 48.75% students and 50% of teachers respectively have good opinion about book bank facility of the college library.²

**Rao (2003)** studies the status and use of information technology and automation of 104 polytechnic libraries of Andhra Pradesh. 85 librarians are working in these libraries and 19 seats are vacant. The present study examines the level of librarians regarding IT knowledge, options and attitudes on various aspects of library automation. It suggests the training needs of librarians in the field of IT as 53% of librarians are not using IT. 80% of them have expressed their intentions to get training in IT.³

**Ahmed and Satija (2006)** evaluate the development of technical education in Punjab. They state that technical education system is to produce trained manpower for the economic and technological development of the country and to run its industry. It plays an important role in the economic and industrial growth, national developments and international competitiveness. It imparts technical knowledge, study, research and facilitate technology transfer. They discuss the historical origin of technical educational institutions in Punjab and their impact on technological development of

Punjab State. Objectives of the technical education policy were also mentioned in this study.¹

John & Jeba (2008) state that technical education has a direct impact on the industrial growth, infrastructure development and socio-economic advancement of a country. Suggests that in a rapidly moving phase of societal networking, technical education should follow the general trends of global connectivity and collaborations. Presents an overview of technology education in India with the present scenario of globalization of technical education. Also explores the areas in which India has to focus, to globalize its technical education to achieve a competitive advantage. States the increasing global demand for education in all parts of the world to consider the issue globalization in higher education. Globalization is, undoubtedly, the most revolutionary development in higher education at present. It is fuelled by the processes of internationalization and regionalization of economics, finances and trade, unprecedented advances in communication technologies and the array of factors and features pertaining to “The Information Society”.²

Joshi (2008) states that the various vision documents prepared for future plans, envisage dearth of quality technical manpower on the one hand, on the other hand growing unemployment problem in the country. The study discusses the role of libraries in education, the facilities available for quality technical education in the country. Importance of digital library, institutional repository, Electronic Theses and Dissertation (ETD), and the various such digital resources created in a number of institutions of higher learning are stated. Initiatives at the world’s oldest and largest tea research library in creation of digital aspects are also highlighted.³

Rao (2008) states the six aims of technical education and states the role of All India Council for Technical education (AICTE) in designing courses for engineering. Highlights the various levels of technical education for ITI, polytechnics to engineering colleges and universities. States the chief purpose of technical education to make the industry globally competitive. Suggests the reorganization of technical

education and establishment of close relationship between schools and engineering colleges.¹

Sharma (2008) conducted a study related to academic degree (M.Phil). The study makes a survey of growth, development, resources and services of eight polytechnic libraries of the NCR, namely:-

1. AryaBhatt Polytechnic
2. Ambedkar Polytechnic
4. Govind Ballabh Pant Polytechnic.
5. Guru Nanak Dev polytechnic.
7. Meera Bai Polytechnic Library.
8. PUSA polytechnic.

Methodology followed is of literature survey, interview method coupled with observation. For survey, questionnaire was designed to collect the data. The objectives were to assess the infrastructure available and the problems faced by the students and faculties of these polytechnic institutes. At the end, makes some suggestions for the improvement of library.²

Sedwal (2008) traces the development of technical education- from pre-independence India to the India of today. This is an attempt to map out the development of technical education in India. It is divided into four major sections, namely, pre-independence era, post-independence era, future prospects and conclusion. The sections are further divided into sub sections that describe the growth pattern of technical institutes in India. It also demonstrates the pattern of financing in technical education.³

Singh (2008) focuses on the development of higher education during the 8th (1992-1971), 9th (1997-2002) and 10th (2002-2007) five years plans. States the strategy of the 9th plan to improve the higher education system. The role of UGC and establishment of the IGNOU in 1987 for development of distance education have

been elaborated. States the influence of RA Mashelkar Committee report and the restructuring of community polytechnic Scheme in the 10th plan. Also states the impact of globalization on technical education.¹