CHAPTER THREE

ROLE OF LIBRARIES AND INFORMATION SERVICES IN PROMOTING NATIONAL DEVELOPMENT
Once man learnt to record, libraries were the logical development. The library in the true sense is a product of our cultural maturation. It came into being when societies ceased to be nomadic and starting becoming urbanized and when graphic records became important to the effective operation of organized human relationships. There is no record of when, or how, libraries began, but one can assume, from the scattered and fragmentary evidence that has survived, that early libraries were essentially archival storage places for the preservation of records pertaining to temple, church or state from destruction. It was also in part, a museum of bookish treasures, a storehouse of artifacts, and thus it became a symbol of social opulence.

The library was also a manifestation of scholarship and during the centuries when learning was highly individualistic it was almost the only laboratory, the sole resource of the philosophers, the literate, the probers of the unknown. These scholars, savants, wisemen who were devoting themselves to the discovery of new knowledge, sought it through re-examination of that which had been accumulated in the past, found the library as a place exclusively for the dissemination of learning, a dwelling place of ideas and idealism.
The invention of printing paved the way for great proliferation of recorded information. In fact the dawn of printing technology has revolutionised the scholarship and facilitated the development of storehouses of knowledge i.e., libraries.

By and large, it was only with the evolution and widespread of the concept of democracy, recognition of the rights of man, the emergence of middle class as strong force in politics, development of industrialization, development in the socio-political thought, creation and production of books in abundance, tremendous progress in the field of science and technology, that led to the spread of education which in turn, demanded libraries with rich collections. Today, advanced and developing countries like USA, England, Denmark, etc., call upon the library to serve the "common man".

Today, libraries are considered as social institutions, emerged as a by-product of society for its cultural advancement. The traditional function of a culture is to enable a group to survive, and this principle implies the conservation of the past. Library is the only effective repository of the society's cultural heritage. It is a live depository of the cultural past and sustainer of the
intellectual activity that anticipates the future. Its descriptions as "mind of society", the "House of wisdom", the "House of learning", the "Community intellectual centre" and a "Training school for democracy" reflects its influence in moulding the life of the community. The modern library as a social agency is charged with the function of producing diffusion of knowledge by providing and servicing man's graphic records for enlarging the mind and dispelling ignorance and prejudice. This further implies the necessity of making the truth easily and rapidly accessible to those who are seeking it. To serve as a social agency, the library plays a vital role to -

1. Assemble, organize, preserve, socialize and serve all expressed thought embodied in manuscripts, books, periodicals, their constituent documents, however minute, and every other similar document produced as a means for communication;

2. Help in the transmission of the knowledge of the earlier generations to the later ones;

3. Help in the cumulation and further building up of knowledge from generation to generation;

4. Help in the contemporary development of knowledge, by the unintended and purposeless repetition of effort and the consequent wastage in the research potential of humanity; and further
5. Conserve the research time of humanity by the separation of literature search from positive research [5].

The social role of the library is a very complex role and the responsibilities which society has placed upon it are very heavy. In order to perform its role effectively and efficiently different types of libraries came into being. A public library is the nucleus of the community's intellectual life; an academic library is the beating heart of the educational institution; and a business or special library is the life-blood of research being conducted in the government departments, and big business or industrial organizations. But the library took centuries to become the web of social relationships; the hub of research activities; the crossing glory of education and an agency for educating the masses in the values of democracy - justice, liberty, equality and fraternity. Library is increasingly seen today as an involvement for economic growth, as a means to improve human values, and to create integrated, modernized egalitarian society.

The library plays a vital role in the enhancement of research by providing resources pin-pointedly, exhaustively and expeditiously. It, in fact, conserves the research potential of the country. The need for conserving the
research potential flows from the virtual information explosion resulting in astounding, and unprecedented proliferation of literature in science and technology; the dissemination of natural and classical literature; and the flowering literary criticism opening the floodgates of knowledge and making the researcher, the scholar, the scientist and the technologist dependent upon library service.

It is rarely possible for a researcher or a scientist or an academician of today to cope with abundant flow of literature unaided by the library personnel, to keep themselves abreast of the torrential downpour of micro-documents published in any form and in any part of the world by studying the need for their clientele as intimately as possible. The staff act as a catalyst to transmit the ideas, facts and feelings from the mind and soul of the author to the reader who, in turn generate new ideas. The library thus helps in the contemporary development of knowledge and conserve the precious research output of humanity by separation of literature from positive research. The librarian and other library staff have thus become a partner in research work.
Development process

Freedom of information, one of the basic freedoms as mentioned in the UN conference in 1948, also mentioned that free and adequate, information as "the touch-stone of all the freedoms" [10]. It is not generally understood that before there can be free and adequate information in any country, there must be adequate development of mass communication. Therefore, all countries, new or old, industrialized or not, highly developed or underdeveloped, are properly concerned with the development of their communication systems. The contribution of effective communication can help the economic and social development. Free and adequate information is thus not only a goal; it is also a means of bringing about desired social change. With adequate and effective communication, where information is used as one of the components of the system, the pathways to change can be made easier and shorter.

The essence of economic development is a rapid increase in the economic productivity of society. All theories of economic development agree on that. However, a developing country cannot afford to put all its investment income into industry, no matter how productive it is. The goal of planning is a balanced and related growth in all the
sectors of society. A development plan is usually a compromise between essential needs in different sectors. The process of development is really a broad transformation of society. It is not sufficient merely to build factories and turn out machine tools, for industry cannot get far ahead of its support. On these supporting developments - the radical change in agriculture, the creation of social overhead, the mobilizing and upgrading of human resources and like - it is worth noting here that they are all slow developments. They cannot be accomplished quickly. This is not only because they are expensive and difficult, but also because they require a large degree of human change. All the kind of human change required for economic development take long, and are costly and difficult. And yet, as Mallikan and Blackmer argue so persuasively "the paramount requirement of change in any society is that the people themselves must change" [8].

As it is seen, this is the point where modern communication becomes so important to economic development. The mobilizing of human resources requires a great deal of attention to what the population knows and thinks of national development, and especially to the encouragement of attitudes and social customs and the provision of knowledge which will be favourable to development. An adequate flow of
information is, of course, required for knowledge to be shared between those who have more of it and those who have less on any given subject. An adequate flow of information is also needed if the ordinary people of a country are to be brought into the decision process.

An adequate flow of information in a developing country is necessarily more than a flow from the top of the political hierarchy to the bottom. It must carry the information which the people need to play their parts in a modern society. It must also provide channels by which these people may discuss with their fellow citizens and with other people what policies and practices they shall adopt; and it must provide channels by which the needs and wishes of the people may be carried up the hierarchy to form a part of higher level decisions.

The flow of information is of the greatest importance in regulating the level of social tension. To be sure, an effective communication system can be used to "manipulate" people if the system is under the control of people who wish to use it that way. It can also - and should - be used for a quite different purpose: to bring the people of the developing countries into the decision of development, to give them a basis for participating effectively, to spend and
smooth the changes decided upon. The point is that national development is people changing themselves. It is not entirely an impersonal, inflexible process.

Information in a developing nation

A new nation, at the time it decides for development, begins with a communication system which is somewhere between that of the tribe and that of modern civilization. As national development gets under way, it is not the functions of communication that change, but rather the amounts of communication.

A developing country finds that it must spread its essential decision making more widely. For one thing, it wants the active participation of its people. Beyond that, it is asking its people to make individual decisions that are of the greatest difficulty and importance. In fact, they are being asked to decide for modernity; and to change their lives and beliefs accordingly. They are being asked to accept new goals, new attitudes, new customs, new responsibilities. They will require both information and persuasion. Furthermore, the information must flow and the changes must be discussed, not only through a downward channel from the leaders to the laymen, but also upward to
the leaders, and laterally so that people can talk things over and arrive at group decisions. More people need to talk to one another. Local needs and local voices have more need to be heard. In other words, the base of important policy making has to be broadened.

When development is going well, almost everybody in a country is learning. Almost every developing country is trying to accomplish a rapid increase in the school population; the education and extension services and the information media. Every sector of society has new skills to learn - agricultural, mechanical and electronic, health, literacy. The country uses information to raise the thirst for more information, to encourage people to seek advice from a village worker or a technical specialist, to encourage them to send their children to school or to learn to read. In most developing countries, literacy training is a major battleground. It is sometimes hard to understand what a difference literacy makes the pace and drive of development. The man, who learns to read, acquires for more than the ability to use the printed media. For him, as Daniel Learner says, literacy becomes "a prime mover in the modernization of every aspect of life", the basic personal skill that underlies the whole modernizing sequence [6].
Perhaps the most general way to describe what the enormously increased flow of information does in a developing nation is to say that it provides a climate for national development. It makes the expert knowledge available where it is needed, and provides a forum for discussion, leadership and decision making. It helps to raise the general level of aspiration. The process of modernization begins when something "stimulates the peasant to want to be a free-holding farmer, the farmer's son to want to learn reading so he can work in the town, the farmer's wife to stop bearing children, the farmer's daughter to want to wear a dress and do her hair" [7]. Change will not take place smoothly or very efficiently unless people want to change. It is generally the increasing flow of information that plants the need of change. It is also the widened background of information that furnishes the climate for "nation-ness" itself. By making one part of a country aware of other parts, their people, arts, customs, and politics, by permitting the national leaders to talk to the people, and the people to the leaders and to each other, by making possible a nationwide dialogue on national policy, by keeping the national goals and the national accomplishments always before the public - thus modern communication, wisely, used, can help to weld together isolated communities, disperate sub-cultures, self-centered individuals and
groups, and separate developments into a truly national development.

**Nature of information**

Information is recorded or communicated knowledge gained by man through experience, observations and experiments and it has been growing in ever-increasing volume and rate, particularly since the dawn of the twentieth century. This process will continue in the foreseeable future. Scientific and technological information is a vital part of this resource and has played and continue to play the most crucial role of building up human civilization and society in all its aspects.

Effective utilization of the information gathered in the field of science and technology was recognised as essential to the socio-economic development and scientific and technological progress by that of the countries today at an early stage. Consequently, they have been directing a substantial part of the national GNP of not only research and development in the field of science and technology but also for setting up an infrastructure essential for the effective and efficient harnessing and utilization of the information generated there.
Programmes and activities conducive to the development of national information infrastructure are: Development of information sources; access to information; physical facilities and tools access to information; information dissemination services; professional management development; user education; research and development in information handling activities.

Today most of the developed countries have large libraries, information centres, data banks, information analysis centres, referral centres, clearing houses, abstracting, indexing and reprographic houses and so on which aim at disseminating quickly relevant information to several users such as the research workers, engineers, technologists, entrepreneuring managers, planners, teachers, educational, government officials and so on. These services also aim at avoiding as far as possible, unnecessary duplication of work which invariably results from lack of timely information.

Trends in information service

In order to enhance the efficiency, effectiveness and speed of information services, a number of developed countries have been using the latest advances in computer
technology, communication technology, reprographics and micrographics with the result that a large number of computer-based discipline and mission-oriented information systems and on-line interactive information retrieval systems have come into existence. Following are a few examples:

- MEDLARS/MEDLINE (Medical Literature Analysis and Retrieval System), USA, BA Previews, for Biological Sciences, USA; BTI (British Technology Index);
- INPADOC (International Patent Documentation Centre, jointly sponsored by WIPO and Austrian government); Vienna;
- COMPENDEX (Computerised Engineering Index) USA;
- INSPEC SDI Services, UK covering physics and electrical engineering and electronics, computers and control;
- IFIS (International Food Information Service);
- PESTDOC (Pesticidal Literature Documentation) UK;
- Chemical Abstracts Condensates, USA;
- RECON On-line Retrieval System;
- EURONET, Western Europe.

Advanced countries such as USA, UK, Germany, Australia and Canada are planning integrated national information systems and services for providing quick and more efficient information services. The UK by amalgamating the British Museum, the National Central Library, the National Lending Library for Science and Technology and the British National Bibliography has set up the unique library and information system, namely, the British Library. The Soviet
Union and some of the East European socialist countries already have integrated national information systems and services.

On the other hand, the situation in regard to the scientific and technological information in the developing countries, which constitutes the overwhelming majority among the nations and wherein over two thirds of the human population lives, is unsatisfactory and depressing. With the exception of countries such as India, China, Brazil, Argentina, Egypt, South Korea and a few others, scientific and technological progress in the developing countries has been far from being impressive. Most of the developing countries have been victims of colonial rule and exploitation and had missed the industrial revolution. This is clearly reflected by the fact that of some three million scientific and technological papers, specifications etc., produced annually in the world today, the contribution of the third world countries to this vast mass of information is less than 10 percent [4].

It is, therefore, imperative that the existing as well as the future scientific and technological information should be properly and efficiently utilised for the rapid economic development of the developing countries. It is a
generally accepted notion that of the resources available for development (men, money and materials) much is wasted because of inadequate knowledge about how the resources have been deployed in the past and how they are being deployed in the present. It is noteworthy that lack of organized information is believed to be one of the main reasons behind the failure of the United Nations to meet the objectives of the First Development Decade.

In most of the developing countries, there are several common features as regards information needs and information infrastructure i.e., need for services for quick awareness of and accessibility to information on current developments in science and technology, grossly inadequate information sources, competing priorities for limited national resources, poor reprography and communication facilities, lack of professionally trained information personnel and also training facilities, a high percentage of illiteracy, insufficient reading materials in local languages and inadequate motivation for use of information.

A country's capability to handle information effectively primarily depends on how well and how rapidly it can integrate new techniques and devices into the main stream of its information activities. In the planning of an
information system in a developing country, the following
cordial points should be taken into account: 1) The
state-of-the-art of science and technology in the country,
2) Literacy and the existing technical manpower and 3)
Available financial resources. The system should first of
all, meet fully the minimum requirements of the country in
various fields [1]. It should be simple and understandable
in concept and operation and flexible and adoptable to
provide information at all levels, from answering simple
queries to background information in depth in specific
areas. The available technical manpower should be utilized
to the fullest extent and hence mechanization should be only
in such operations which are fully vital to the efficient
running of the system. These requirements are primarily
dictated by the limited financial resources and insufficient
number of scientifically technically trained people in most
of the developing countries. It is also desirable that the
degree of sophistication to be incorporated the system will
have to take into consideration the state of scientific and
technological advancement of the country.

Information is the most precious heritage of man and
there now an increasing recognition among nations that this
invaluable resource should be universally shared and
utilized for the socio-economic advancement and happiness of
mankind as a whole. The UN and its varying agencies are playing a vital role in this process by establishing international information system, with the voluntary participation of nations. The launching of the UNISIST programme in 1972 by UNESCO constitutes a historical landmark. International Information System such as the following are now either in operation or in the process of being established: International Nuclear Information System (INIS), International Information Systems for Agricultural Sciences and Technology (AGRIS), Aquatic Science and Fisheries Information System (ASFIS), Industrial Information System (INDIS), Population Information System (POPINS), Development Science Information System (DEVSIS), Science Policy Information System (SPINES). The framework for the development of all systems is provided by the UNISIST which developed guidelines and tools for information system, international connection and the national information systems are expected to accept them.

Information by planning its national information systems in a sound and realistic basis and utilizing the available international and regional information services fully, can no doubt accelerate the pace of its socio-economic development and scientific and technological progress, thereby raising the standard of living its people
and making them available to them the fruits of modern science and technology.

Resources and national development

Resources are the major factors which are considered for the prosperity of the country. The richness of the resources speaks of the strength of the country. It is for this reason any country will concentrate all its efforts to conserve these resources, viz., money, manpower, material, energy, and the intellect etc., are to be organized and channelized to proper actions. For the purpose of these resources the country has to develop the system. The main objective of this system is to promote the nation in all spheres of activities, namely; social, economical, scientific, technological, educational, agricultural and cultural etc., spheres. Of all the resources, intellectual resources are highly recognized and emerged as effective resources to harness the other resources. Mainly intellectual resources, consists of intellects and information; i.e., to say intellects make use of information to produce new information and this becomes a never ending cyclic process. Hence most of the developed countries are spending 55-60% of its manpower and as well as the investment for information activities. It is very clearly
stated that the "information rich" nations tend also to be materially rich with potential advantage for becoming richer, the 'information poor' nations tend also to be poor in most other material aspects and have least advantage (Conference Board (USA) Information Technology 1972).

Therefore the present society i.e., the information society requires a strong and effective management of information.

Natural resources of UAE

Taking the case of UAE in this context, it is observed that the basis of its economy is its oil and gas production, with proven reserves of 200 billion barrels of sweet or high quality crude oil and 185 trillion cube feet of natural gas make world's second richest country in hydrocarbon resources and the sixth in natural gas [3]. To exploit this gifted resource, the UAE has developed a heavy industrial sector including downstream projects in the oil industry, such as an oil refinery and fertilizers plant at Jebel Dhanna and Ruwais in Abu Dhabi Emirate and as per the recent announcement, Dubai is coming up with a huge multibillion petroleum refinery corporation in the Dubai Emirate and other related industries like Aluminium smelter,
DUBAL; and the Cable Manufactures, DUCAB and Gas liquefaction, DUGAS in Dubai's industrial zone of Jebel Ali. Also remarkable landmark is that each emirate has got its cement factory. The cumulative production is so much the excess quantity is being exported to the other neighbouring Gulf countries and some of the middle east countries also [2].

Due to the strategic location, the UAE has taken advantage of its sea and developed its port facilities in all the emirates which are now nearly a dozen in number with over two hundred berths, serving the world's shipping lines. Several of them figure prominently in the world's top hundred ports for container shipping e.g., Jebel Ali port of Dubai Emirate features the largest man-made harbour in the world and handle around 300,000 containers every year.

Some parts of the UAE like Ras Al Khaimah, Al Ain, Fujeirah, Dibba and Kalba has got favourable land, water and weather to suit agricultural activities; which is also another way of benefitting natural resources of the country for its national development. Agriculture and food production assumed pride of the place in an attempt to improve self-sufficiency in foodstuffs as part of national food security and strategic requirements. Investments were encouraged and the area under cultivation expanded from
15,300 hectares in 1977 to 38,000 hectares in 1987. National production of vegetable increased from 22,100 tons in 1974 to 232,000 tons by the beginning of 1988 in addition to production of around 85,900 tons of dates and varied fruit [9].

The economic awakening in the UAE is thus a landmark in the human achievement over the span of less than two decades and has earned the respect of the entire international community.

Information generation and utilization

The process of information generation and information utilization can be compared to that of the reaction between the heart and the rest of the body of a living being. In fact one can not survive without the other. The totality of the activities concerned with information includes information generation, information communication and information utilization. This is the age of information explosion and it is aptly described as the accumulation and proliferation of information at a tremendous rate.

In order to cope up with the information explosion and to provide a pertinent information to the pertinent
users community in pertinent time, any country for that matter, tries to establish the national information system. The aims and objectives of the national information system is to establish the knowledge based institutions. These institutions are generally categorised in to three groups i.e., 1) knowledge generation institutions, 2) knowledge communication institutions, 3) knowledge organization, consolidation, processing and dissemination institutions.

These institutions are given the top priority for the fact that the knowledge is power. The harnessing, organizing and channelling the knowledge is a must for any country's development programme. Information is a basic input to knowledge. It is, in other words a product of human brain in action. The knowledge/information based institutions are all the while striving for providing the food for thought, medicine for the mind, stimulation for the innovative activities. The objective of the knowledge/information generation institutions is to promote the generation of new information for further use; understanding, evolution and decision making. The recognised means for generating new information are research, research and development (R & D) activities, literary and artistic activities. For this purpose any country would put all its efforts to establish its research organizations, R & D institutions, higher
educational centres like universities, advanced study centres etc.

The objective of knowledge/information communication institutions is to promote the use of newly generated information through the effective primary communication media. The recognised means for this type of activities are books, journals, reports, standards and specifications, patents, including mass communication media, publishers, S & T Data Centres, government publications' divisions, publication sections attached to universities are some of the examples of knowledge/information communication institutions.

The objective of knowledge/information processing, consolidation dissemination and servicing institutions is to promote the use of new information with a provision of access to the already published sources of information. Libraries, Documentation centres, Information centres, Information analysis centres, Data centres, Data banks etc., are some of the institutions concerned with knowledge/information disseminating activities.

The focus of this chapter is to highlight the role of knowledge/information disseminating institutions. As stated earlier information is a basic ingredient to knowledge and
it is energy source which activates as well stimulates the researcher to develop and generate new information. And therefore the libraries and information centres form an integral part of the national development programme. An attempt is being made to draw the suitable inferences to substantiate the vital role of libraries and information centres in the national development process in the forthcoming chapters.
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