CHAPTER - II

REVIEW OF RELATED LITERATURE
"Accessibility of precise reliable information—scientific, technological, commercial and managerial at the right time to the right personnel in the form most conveniently usable by him, can help to minimize the wastage of resources due to unnecessary and unintended re-invention, re-discovery, re-development and above all the making of unfruitful decisions which resulted in wastage of resources... The availability of the right type of information can trigger new directions in research, development and managerial action."—Paul Atherton

2.0 Introduction

The above remark by Atherton could not have been more appropriate in the context of contemporary global information explosion whereby information as a commodity has assumed a significant role in all spheres of human activity. Indeed, information has become a basic resource required by every member of the society. In this regard, Crickman (1979) argued that there are many reasons to value information, but none is more significant than the fact that access to appropriate and timely information can expand the resources available to the society as a whole and to its members individually.

Beal (1979) pointed out that the value and need of information may differ from person to person depending on the situation and the need of
the users, as the information needs are strappingly influenced and conditioned by the specific circumstances of people and the places in which they live. Humphreys (1984) also stressed that human needs have become more complex with our everyday life getting more sophisticated and at the same time, with more leisure time available, the demands for the means to enjoy fuller lives have broadened and deepened. As a consequence, information has a variety of connotations --- from highly technical and professional to purely recreational aspects, from academic and research purposes to day-to-day practicalities. To enhance the value and utility of information, argued Gopinath (1985), it requires understanding of the needs of the information users and provision of information in the appropriate format and level. In this regard, Barua (1985) emphatically stressed that formulation of any national information policy must identify the needs of the country for catering to the educational, cultural, economical, political and recreational information needs and aspirations of the citizens.

Girja Kumar (1990) also argued that a user, the central figure around whom the whole world of information producers, systems and
services revolves, is bounded within his interactive, cognitive, emotional and social system, apart from the fact that his information seeking may be delimited by his lack of accessibility to information. It is, therefore, important to know and understand the users and their diverse needs of information by identifying their background, interest, specialization, etc., in order to enhance the effectiveness of information flow and access.

In today’s increasingly complex, multicultural and information-intensive society, one cannot think and talk of all-round development without proper information flow and its accessibility, as there exists a close relationship between information flow and access and the development processes. Mchombu (1995), in this regard, argues that access to appropriate information is the key factor in the sustained development of any society because it reduces uncertainty and enhances awareness of possible courses of action for better solutions. Barwise and Seligman (1997) have also reiterated that proper information flow and access is a necessity in life--- it guides every action, moulds every thought, and sustains the many complex interactions that make up any natural system or social organisation. In this context, Mangla (1998)
pointed out that information, like any other resource, needs to be well managed through proper support and coordination in growth and usage, to avoid the problem of being wasted and inefficiently utilised and, thereby, bring out desirable impact on the development processes.

The need and importance of information in every development process and contemporary human conditions have been widely recognized both by those involved in decision making and development processes as well as the potential recipients of such benefits, reiterated Leach (1999; 71). The smooth flow of information and its accessibility from any corner of the world has accelerated the processes of socio-economic progress of the modern societies, which has become a major global feature. In this respect, Dasgupta (2000) was right when he lauded the advancements in information and communication technologies which had transformed the way information is being generated, collected, organized, stored, repackaged, retrieved and disseminated.

In today's information-intensive society, there is an overwhelming proliferation of information flow and access, particularly in the urban
areas. However, most of the rural folks are yet to enjoy the benefits of modern advancements in information communication technologies. The rural people too have information needs like their counterparts in the urban areas. It is, therefore, this uneven geographical spread in information flow and access that has become a major area of concern today. In this regard, several studies conducted both within the country and abroad have been highly illuminating. The reviews have been made chronologically spreading over two decades.

2.1 Studies undertaken abroad:

Allen (1977) maintained that there existed a close relationship between innovation diffusion and information flow. In this context, an attempt was made to assess the effectiveness of the existing formal and informal information systems in spreading change-inducing innovations in the rural areas of Papua New Guinea.

The author argued that the formal information systems and channels such as government agencies and mass media had not been effective in reaching the villages with appropriate information. As for
instance, information usually got lost in the upper levels of the system—-a problem of the top-down hierarchical information filtering process. On the other hand, the author maintained that informal systems such as face-to-face communication between fellow villagers of the same village or a villager to another of a different village were found very effective and efficient at moving information into rural villages. However, the author reiterated that the problem in informal systems of information communication was that of its slowness in movement, inability to cover a wide area, and sometimes got obsolete, as information moved with the movement of the people.

Therefore, the author suggested that these two systems be merged together, i.e., information from formal systems passes to the villages through informal channels. In a word, the dominant nature of information flow into the villages through the informal channels should be taken into consideration to make information flow through formal systems more effective.
In the UNISIST International Conference on Scientific and Technological Information for Development (1979), the importance of information as a critical resource in development was stressed. In this regard, it was argued that transfer and adoption of scientific and technological innovations for development in the rural sector required conditions and mechanisms different from those needed for development in the urban and industrial sectors. Provision of information services in the rural areas should, therefore, take into consideration the following points:

Rural development covers not only adoption of improved farming techniques, but also included a wide range of socio-economical aspects.

(i) An individual either belonging to the community or somebody who was well acquainted with the local environments, can cultivate better response in dealing with the rural population, especially when the contact is to be supported with practical demonstrations and audio-visual presentations in the language of the community. This would not only encourage but also enhance the participation of the rural people in the development programmes.
(ii) A proper communication between the development planners and the grassroots level should be established for better feedbacks. In this context, the indigenous knowledge of the rural people should be taken into consideration in developing appropriate technologies for the rural populace.

(iii) It was also emphasised that public libraries, in coordination with other information agencies, should play an active role in facilitating the effective information flow and access up to the grassroots level.

Drennan and Drennan (1980) also pointed out that most of the rural dwellers in America remain ear-oriented because oral information came from verifiable sources as compared with the unseen sources of information of printed materials and other forms—a culture developed from sparse population distribution and the relatively small clusters of people, which encouraged personalized relationship among the rural dwellers. The organized sources of information, which basically come from outside or urban areas, usually short in supply, were viewed with suspicion. As a result, interpersonal communication among family
members, relatives, neighbours and friends were found having more validity.

Thus, a lot of challenges for imagination and creativity in rural librarianship were implicated. In this regard, importance of analysing and understanding the basic problems and nature of the rural population and their information needs was emphasized to facilitate an even information flow and access in the rural areas.

**Baron and Curran's** (1980) project on 'Community Information Needs/Library Services (CIN/LS)' was an attempt towards identifying the problems related to the public library's role in providing information to the rural citizens. Though the project did not come out with any definite solution to the problem of how public libraries can cater to the information needs of the rural people in America, a CIN/LS Guide was proposed for providing a source of direction for the information professionals in achieving a match between the community needs and the information services. The Guide was put to test on the libraries across
nine south-eastern states of America and some national government agencies involved in rural development.

The project endorsed several suggestions as follows:

(i) It was suggested that information professionals and those involved in decision making should try to understand the specific nature of the problems faced by the rural people including socio-economic and political aspects.

(ii) To do away with the myths of ruralness, particularly the concept that rural agricultural extension services can provide all the survival information that rural dwellers need.

(iii) Understand the rural crisis.

(iv) Penalties of geographical isolation be considered.

(v) Information professionals have been emphatically urged to find ways and means to bring about a befitting match between the community needs and the information services.

(vi) There should be cooperation among the various information agencies to provide coordinated information services to the rural community.
(vii) It was also suggested to publicise the available information services to enhance the information access by the rural people, create public awareness and support for the library, and determination on the part of the funding authorities to support the library to the degree it requires.

DeJohn (1980), in his study, stressed on the need for the rural library planners to have intimate knowledge of community issues, know community planners and decision makers to be able to provide appropriate information to the rural people. He also emphasized that rural library planners must get tuned with the technological advancements in information communication, in order to adapt to changes taking place.

A significant project undertaken by Aboyade (1984) at Badeku village in Ibadan of the Oyo state of Nigeria, as part of a larger study on Rural Development Information System (RUDIS) Research, was an attempt to assess the provision of information services to the rural people, the majority of whom were illiterates largely neglected by the libraries and other information agencies. The realization that all members of a
society have identifiable information needs and the idea of development embracing involvement and participation of every member of a society, which has made it imperative for literates and non-literates to have access to information was duly considered in carrying out this project. Personally administered questionnaires and participant observation methods were applied for data collection. Some of the relevant findings were that:

(i) Apart from the information for the functional purposes such as improve farming, health, increase knowledge of the wider society, etc., villagers were also found equally interested even in information on not-so functional aspects. As for instance, the villagers were found keenly interested in sparing their free times by having somebody read to them.

(ii) The project brought to light that the rural people were able to express their information needs--- the villagers can actually go and seek the information they need, rather than wait for someone to offer it.

(iii) It was also concluded that people could utilize the information of their own seeking much better.
The project suggested the establishment of a rural library in every village, as the focal and coordinating point of all information transfer in the rural areas. This would encourage the rural people to go and seek for information as and when they need and if they found the information satisfactory, they would be motivated in practicing self-help.

Green (1986) pointed out that information deprivation in the rural areas was a major factor in all cases of social deprivation. The author argued that everyone must have access to relevant, accurate and current information if one is to solve or alleviate one’s difficulty satisfactorily and, thereby, exercise one’s rights and duties as an enlightened citizen. This fact cannot be ignored even in the rural areas. The author was also of the view that too often rural issues and problems were seen through urban eyes and the solutions suggested and implemented were often those appropriate only to urban situations. While giving a description on the existing information services in Leicestershire, an attempt was made to outline a strategy for implementation of information services in the rural areas of Leicestershire, with special reference to south-western part of the state.
Green also argued that rural information provision did not lack in direction, but required coordination among the information agencies at all levels. In this regard, he appreciated the coordinated efforts of the libraries, Rural Community Councils and Citizens' Advice Bureaux, at the local level in improving the quality of rural life. Therefore, what was required was to harness a common base information network starting from the grassroots level as facilitated by local initiative to the centrally controlled and funded strategy--- a formal and proper link in the information system between the rural dwellers and the policy-makers at all levels. This will enhance the effectiveness of information flow and access in the rural areas. In this regard, the involvement of the media was also duly stressed.

Durrani (1987) undertook a study on the failure of agricultural information services in the third world with particular reference to Kenya, in providing relevant information in support of food production. He argued that it was not accidental nor the fault of the individual information workers, rather the failure to provide appropriate information service was due to the faults in the whole information system. Kenya, as
any other third world country, has a large peasant population based in the rural areas, who had been the most deprived group from accessing to agricultural information. Therefore, to improve the agricultural system, the rural peasants, who practically involved in the labour of cultivation, should be provided with relevant agricultural information.

In this context, Durrani argued that rural libraries and other information agencies had failed in their agricultural information services, as they remained mere prototypes of the agencies in the urban settings, ignoring the specific problems and information needs of the rural people. Their main role had been that of information transmission rather than information communication——a two way exchange of information. Although, the advanced technologies from outside were not necessarily bad, very often they were found unsuitable for local conditions. It was, therefore, important to rationally examine such technologies in the light of the local situations and needs, local existing technologies and alternatives available. He also pointed out that peasant-based developed technologies were far better in many aspects as they had been developed under local
conditions--- in it, the people had the control over the technologies, not for profit but to improve the production.

Therefore, it was suggested that by taking the local conditions into consideration, the national information system devise a well thought out information organ through which appropriate agricultural information could be disseminated and make it accessible to the rural populace.

In another study, Chijioke (1989) argued that the public libraries in Nigeria had failed to meet the needs of the majority of the population. Public libraries in Nigeria were condemned as elitist institutions, serving only the most educated elements of the population living in major cities, while neglecting the vast majority of the country’s population living in the rural areas. Even in the urban areas, distribution of the services of the public libraries was uneven --- most of the illiterates, semi-literate and those from lower social grades were neglected. While the city dwellers enjoyed the advantage of physical proximity to information services, they suffered the disadvantages of the social atomisation of the cities. The problem with the rural people was that of distance, lack of infrastructure,
non-technological environment and so on. She emphasized, in this regard, that drastic changes had to be introduced in the public library systems and services to ensure proper information flow and access in the rural areas.

The suggestions proposed by her included:

(i) Setting up of community information centres to provide integrated community-based information services at the local level.

(ii) The central public library should serve as the link between the local community information centres and the outside world. The role of the central library should include identification and provision of materials for the community information services not available in the locality, provide reference service both for the community information centres and for other government agencies, and extend infrastructural support including finance, communications facilities, maintenance services for equipment, staffing and training, etc., to the community information centres.

(iii) There should be a national policy formulated for coordinated information network throughout the country.
Need for changes in the existing library school curriculum were also emphasized to tune the community information workers with the required skills and knowledge on community development programmes.

Longo (1990), in her study, maintained that adoption of innovative farming practices was dependent on the prior existence of certain factors and conditions--- apart from the characteristics of the individuals or different ways of information transmission, socio-economic, psychological and cultural factors influence farmers’ attitudes and behaviour towards change. It was also not only the decision-making process that was important, but adoption of innovations also depended on the type of innovations, their characteristics and complexities--- whether the innovations were practically relevant to the local conditions or not. Keeping in view of the above arguments, she carried out a survey to assess the ways in which information transmission affect the adoption of crop and animal breeding innovations in the rural areas of the Federal District in Brazil. The author conducted interviews with 384 farmers within the proposed area of study. In this context, she considered two
communication channels--- mass media that includes radio, television, printed materials, etc. and interpersonal communication channels such as extension workers, credit agents, cooperatives, friends, neighbours, community leaders and so on, through which information is transmitted to the farmers.

She divided the farmers into three categories, viz. crop farmers, animal breeders and farmers engaged in both the activities. Relating to the first and the third category of farmers, her findings revealed that mass media played a significant role in explaining adoption of crop innovations, while interpersonal communication network have been found more effective in the farmers’ adoption to innovative farm practices, particularly in the crop farmers’ first contact with innovations. However, there was no significant difference found in the two means of communication on the animal breeders’ adoption of innovations, except that of printed media through which the first contact with innovations was indicated. Even in the third category, there was no effect on the farmers’ adoption to innovations in animal husbandry. In all the above cases, the extension services were found ineffective in diffusing farm innovations.
Therefore, she had suggested for improvement in the extension services in its range of action in order to reach the farmers with the farm innovations more effectively. In this regard, it was also suggested that policies towards information generated by agricultural and extension services should take into consideration and strengthen the use of appropriate channels in transferring information to the rural farmers--- a prerequisite to effectively adoption of innovations by the farmers.

Alemna (1992) argued that a large number of Africans living in the rural areas were considerably influenced by and dependent on the oral tradition--- a method in which historical information is transmitted orally by processes peculiar to each community. Thus, a lot of information was obtainable through this form of communication. It was noted that oral tradition of communication had its profound place as an integral part of the African’s heritage. However, the author had reiterated that the librarians in Africa had neglected this kind of information sources. Though a few agencies existing in some countries were assigned to preserve and develop the oral tradition of communication, nothing much had been done to where the oral tradition was collected, organized and
disseminated. To ensure the smooth information flow and access through oral communication as an integral part of the whole information system—which would be accessible not only to the rural communities but also to the researchers and others, the author proposed the following measures:

(i) To identify an institution, agency or a group that has an interest in and the capability to organize the oral source material. In this regard, it was suggested that the academic libraries, particularly the university libraries to take the lead, as they were better equipped in terms of resources such as finance, manpower, equipments, and expertise among others.

(ii) To organise training programs, both in theoretical and practical aspects, for people who will do the field interviews and recording on behalf of the libraries. This was to acquaint them with the functioning of the library and make them understand the structure, culture and thought systems of the community from which the oral tradition originated.

(iii) The methods of collection, organisation and dissemination of oral traditions should form an integral part of the courses in library schools of Africa as it was done in the University of Ibadan in
Nigeria. In this respect, each African country should have a law enjoining the researchers, Masters and Ph. D students to deposit copies with translations of their field tape recordings in an academic library.

Mazie and Ghelfi (1995) emphasized that rural people need to have access to appropriate information on various socio-economic issues that is affecting the rural America. They also reiterated that information was an integral ingredient for successful socio-economic development and to achieve global competitiveness. However, the lack of appropriate information, they reiterated, through appropriate media remains a major problem in rural areas. In this regard, it was suggested that rural libraries which existed in nearly all the rural counties should equip themselves with the relevant resources to be able to provide access to appropriate information to the rural population, including access to information through Internet and other electronic media.

Otike (1996) made an attempt to assess the legal information provision in the rural areas of the English speaking states of Africa. It was
pointed out that little had been done by the states to disseminate legal information to the rural public unlike those on agriculture, health, environment and adult literacy. Policy makers have failed to realize that just as agricultural information enables people to improve their farm yields, legal information was equally necessary to enable people to live within the precincts of the law. Experience reveals that in instances where the general public is ignorant of the law, there is a tendency for the law enforcement personnel to take advantage of the situations to exploit the public. Such abuse, however, do not usually occur in the developed states as public there are enlightened. In this context, the author had given certain reasons why the rural public needs to have access to legal information, particularly in the third world countries where access to information is more of a privilege than a right, as follows:

(i) To keep abreast of the current developments in the law.

(ii) The rural folks require legal information to be legally literate so that they know what the law has to say on various issues that touch their lives.
(iii) The rural public also require legal information to remain law-abiding citizens, for law and order in a society is essential for any socio-economic progress.

(iv) Legal information is necessary for the rural populace to enable them to understand and appreciate their rights and duties before the law.

The author, therefore, proposed the following:

(i) The rural public should have access to the nation’s collection of legal statutes to become legally literates.

(ii) There are a number of agencies, which can assist in the provision of legal information in support of legal awareness, however, it was suggested that the public library could play the leading role in this direction.

(iii) The public library should liaise with various legal and government agencies and find out how best legal information could be provided to the rural populace. Apart from the state governments, the International Commission for Jurists and the International Federation of Women Lawyers are some of the organisations,
which the public library can seek assistance for providing legal
information to the rural public.

Agriculture and rural development were among the issues that the
Federal Government of Nigeria had kept on the top priority. Consequently, three Agricultural Universities have been established. In
this regard, Ozoma (1997) made an attempt to find out the relevance of
the agricultural universities in disseminating pertinent information and
relevant expertise to Nigerian small-scale farmers, with particular
reference to the University of Agriculture, Makurdi. It was noted that in
spite of many students got graduated in agriculture, with certain level of
intellectual development to be able to handle various real life situations,
majority among them usually go for jobs in the public sectors rather than
opting for agricultural extension and work among the rural farmers. As a
result, the author reiterated that not much have been able to do to increase
the agricultural productivity and to improve the quality of life for the rural
farmers. One of the major concerns in this respect was lack of proper
agricultural information flow resulting to deprivation of the rural farmers
from accessing to the appropriate farming information.
The suggestions of the author were:

(i) Due emphasis should be given on training and retraining the agricultural workers on appropriate technologies and farm practices suitable for small-scale farmers.

(ii) To expose the students to the real life situations, demonstration farms must be located within the university complex or at least located close to the university. This will acquaint the students with the needs and importance of the field-based activities. Also there should be more experimental pilot projects established in the respective local agro-ecological zones to serve as model farms to farmers and provide researchers with practical farming problems for solutions.

(iii) Students must be encouraged to undertake projects that can produce results relevant to the small-scale rural farmers. More women should be also trained for agricultural extension work, to reach out to the rural women farmers and to make them (rural women) actively involve in the community development and in improving their quality of life.
(iv) To make the above programs effectively put into practice, there should be a proper organ set up in the Agricultural Universities, through which agricultural information is disseminated and made it accessible to the rural farmers.

A survey on rural citizens' information needs of the North Mainland of Shetland, conducted by Beer et al (1998), was an attempt to analyse the operation of the Shetland Islands Citizens Advice Bureau in Lerwick and the use made of it by the clients, and to find out the information and advice requirements of the rural population. In this regard, interviews were held with 50 leaders within the rural community who were likely to be consulted by those needing information and advice. This included, social workers, teachers, doctors, nurses, shopkeepers, youth and community workers, among others. The findings of the survey included the following:

(i) The community leaders were major sources for information and advice in the rural areas.

(ii) People usually preferred contact with these leaders at the workplace.
(iii) Local geography, mobility of the enquirer, personality of the community leader and their effectiveness as information providers in terms of accessibility and availability, etc., were some of the factors considered in choosing whom to approach for information and advice.

(iv) Welfare benefits, signposting, housing, education, legal, health and employment, etc., were the issues most frequently raised in the rural areas.

(v) Using a telephone or writing a letter for the first consultation was found to be the most preferred way, followed by face-to-face communication.

(vi) Desire for having a multi-purpose advice centre located within the community was also indicated.

The team also proposed the following suggestions:

(i) The community leaders should make full use of the Citizen’s advice Bureau in order to enhance their effectiveness and efficiency in providing information and advice to the rural public.
(ii) To enhance its utility and interaction with the rural public, it was suggested that more publicity on the services of Shetland Islands Citizens Advice Bureau should be made, while making them more easily accessible for people in the rural areas.

**Leach** (1999) conducted a study to assess the provision of information to adults in rural KwaZulu-Natal of South Africa by the non-governmental organisations (NGOs). The author reiterated that little information was available in the published literature on how information should be provided to the adults in the rural areas in a developmental context. To gain some understanding, in this respect, a descriptive survey and interviews were conducted with twenty-two representatives of NGOs working in rural areas of KwaZulu-Natal, the most populous province in South Africa with the largest number of people living in the rural areas. The study concluded that:

(i) The NGOs provide information to the rural adults covering a wide range of subjects--- on health, land, housing, water, agriculture, law including issues on human rights, education, environment and employment.
(ii) The rural areas were under-resourced in terms of electrification, water supply, and sanitation with a low rate in literacy and employment, the least access (per capita) to developmental resources including information.

(iii) The NGOs predominantly used oral or verbal means to provide information. Though printed formats, audio-visual and other means of communication were also used, they were supplementary to oral method or were supplemented by oral communication. Though it was time consuming and a strenuous process, one-to-one interaction as a way of providing information was found to be very effective. For instance, when some of the NGOs used farmers to talk to other farmers on one-to-one basis, the information had greater impact as the participants believed in the information and could grasp the message rather quickly. In this regard, it was maintained that building up a relationship of trust was very essential for an effective communication process.

(iv) Indigenous information, or what the people already knew, was to be taken into consideration as integral to the provision of information. Usually, it had to be a two-way interactive process,
rather than one-way process of information transmission, as some information becomes useful even to the NGOs themselves.

Though, this study was not directly targeted at the rural libraries, certain suggestions were given in relation to rural libraries and their role to effectively disseminate relevant information to the rural public in general and the adults in particular:

(i) It was suggested that rural libraries should change their traditional role of providing information services through books, usually the left over taken from the urban public libraries. The rural libraries should redefine their role by providing information services covering a wide range of topics catering to the socio-economic, cultural and political needs of the community.

(ii) It was also suggested that rural libraries must adopt two-way communication process rather than remain only providers of one-way information transmission. Rural librarians should interact more with the community they serve, in order to build up a cordial relationship and cultivate people's participation.
Uddin (2000) argued that the rural development and policy makers in Bangladesh had so far left rural libraries out in their plans and programmes. For an all-round national development, due emphasis needs to be given on rural development---which depends not only on the generation of new scientific and technological innovations, but timely delivery of those information through appropriate media and form to the intended users.

In this regard, the author, while stressing on the crucial role of rural libraries in disseminating appropriate information to the rural people, the following suggestions had been proposed:

(i) A rural library network should be established throughout the country with the branches in all the villages within a five years time. A national policy to this effect should be formulated to facilitate the smooth flow of information and active participation of the people and non-governmental organisations.

(ii) NGOs, in cooperation with the government, should involve in establishing and maintaining rural libraries and information resource centres.
(iii) The course curriculum in library and information science institutions need to redesign by incorporating pertinent aspects on rural development reflecting the actual needs and requirements of the vast majority of people living in rural areas. This will redefine the role and responsibilities of the information professionals in serving the rural populace better.

(iv) Rural libraries should work in coordination with other development agencies to be able to provide concerted information services to the rural people.

2.2 Studies carried out in India:

Inamdar (1978) argued that notwithstanding the efforts made through various community development programmes, the villages in the rural areas, by and large have remained backward and the rural people have been deprived from the benefits of modern socio-economic progresses. He pointed out that one of the major obstacles, in this regard, was the absence of a proper communication channel through which appropriate information flow in the rural areas could be facilitated.
The author had suggested for establishing a concerted and consistent communication channel under a central information system among libraries of all organisations. This was to smoothen the information flow and its accessibility up to the grassroots level to ensure the maximum utilization of the available resources--- an indispensable factor in bringing about all round national development.

In another study, Raju (1985) reiterated that the problem of rural development involves a wide range of fields--- ranging from agriculture, education, animal husbandry, forestry and rural industries, to banking services and cooperative activities, among others, which the world over has been gaining the attention of scientists, researchers, academicians, policy-makers, politicians and others. However, in this regard, he argued that there was no proper information service available in India catering to the information needs of those involved in rural development.

Therefore, he proposed an Indian Rural Development Information System (IRDIS) through which all the relevant information relating to rural development could be collected, organized, consolidated and
disseminated to the end users, and thereby, enhance the utilization of available resources more effectively to improve the quality of rural life.

**Musib** (1989) carried out a survey to assess the information needs of rural agriculturists in Burdwan district of West Bengal. He reiterated that agriculture played a very vital role in the economic development of the nation. In this regard, he also reiterated that increase in agricultural production depended greatly on the availability of appropriate and latest information—on cultivation, marketing, preservation, farming technologies, and financial sources. An attempt was, therefore, made to identify the nature and the sources of information on the above areas. Apart from these, he also tried to identify information sources for solving day-to-day problems relating to health, childcare, education, employment and politics among others. In this connection, all together 258 agriculturists from 42 villages having a library were selected. The data was collected using questionnaire-cum-interview method.

The result of the survey revealed that personal experience, family members, fellow professionals, friends, neighbours, relatives and persons
in agricultural offices were the main sources of agricultural information. For day-to-day problems, the rural agriculturists depended on school teachers, doctors, friends, relatives and personal experience. It was also found that rural agriculturists have expressed their willingness to use the library for fulfilling their information needs.

Gogoi (1990) maintained that interpersonal relationships among members of a social system had a special significance to researchers in rural communication, as it had a profound place of a very important channel of farm information flow.

In another study, Sharma and Khan (1997) argued that understanding the existing communication behaviour was essential before dissemination of new ideas and technologies to the farmers. In this context, they carried out a survey in Chherikheri and Dharampura villages of Dharsivan block of Raipur district in Madhya Pradesh. An attempt was made to identify the information sources utilized by the farmers and to find the constraints responsible for the non-utilization of various
communication sources by them. For the purpose of data collection, 45 farmers each from the villages have been interviewed.

In all, the information sources were grouped under the following broad categories:

(a) Mass media, which includes, radio, television, newspapers, magazines, other printed materials and films.

(b) Personal cosmopolite that includes rural Agricultural Extension Officer, Agricultural Development Officer, Agricultural Scientist and Co-operatives.

(c) Personal localite that includes friends, neighbours, progressive farmers, relatives and NGOs.

The study found that radio and television were the most used mass media, whereas, the Agricultural Extension Officers were the only institutional sources of information who had close contacts with the farmers. Neighbours and friends were the most important information sources while the NGOs were found to have very little interaction with the farmers.
In view of the above findings, the authors proposed that:

(i) There should be more relevant programmes developed and included in the radio broadcasts and transmission of television programmes, to cater to the farm and other socio-economic information needs of the rural farmers.

(ii) To enable the Agricultural Extension Officers to effectively establish contacts and interactions with the farmers, the number of farm families allotted to them should be downsized.

(iii) Agricultural Scientists and senior extension staff should increase their frequency of their visits and contacts with the farmers.

(iv) The NGOs should increase their social contacts and interactions with the farmers particularly in creating awareness on the need for change.

(v) Appropriate information on credit facilities should also be provided to the farmers.

In a similar study, Choudhary et al (1998) made an attempt to assess the effectiveness of the various information sources used by the farmers on adoption of farm innovations in Chittorgarh district of
Rajasthan. In all, 100 farmers engaged in gram cultivation from three villages within the Arnod tehsil were selected and structured interview method was used for collecting the data. It was found that the tribal farmers used more of the personal locale (neighbours, friends, relatives etc.) and personal cosmopolite (Extension workers, demonstrations, farmers fairs, group meetings and discussions etc.), whereas, the non-tribal farmers used more impersonal cosmopolite (Mass media). However, both the tribals as well as the non-tribals equally have utilized the commercial and other private agencies as information sources.

The authors endorsed the following suggestions:

(i) The impersonal cosmopolite (mass media) sources of information should be strengthened by including more local-oriented programmes, and put to serve and educate the rural farmers on various aspects of gram production technology.

(ii) To strengthen the extension services, intensive efforts on the part of the extension workers to educate the farmers have been suggested.
(iii) It was also suggested that there should be coordination among the various information sources to provide concerted information services to the farmers.

Aslam (1998) argued that one of the basic problems of rural development in India had been the lack of effective communication strategy with appropriate media-mix to educate the masses as well as to transfer and transmit relevant innovations. At the same time, lack of infrastructure, lack of power supply, non-availability of audio-video equipments were some of the major constraints faced by the rural areas vis-à-vis technological advancements. Therefore, he suggested that rural libraries should convert themselves into community information centres. It was further suggested that collection of a community information centre should be of media-mix--- print media, charts, graphics, posters, non-print and electronic media, to enhance their effective utilization by the rural people.

Pati and Kumar (1998) undertook a study on the impact of mass communication in rural change. The study was carried out in four villages
of Rania block under the Ranchi district of Bihar. They reiterated that information communication was very important for everyone in a modern society. They also maintained that no communication can fully exist in a cultural vacuity—cultural norms, values and attitudes of the people are to be considered in planning communication strategies. They used structured-interview method for data collection, with which they interviewed 100 persons taken from four villages.

The study came up with certain findings as follows:

(i) It was found that the villages have been deprived from having access to the modern mass media and as such, there was a very little impact of mass media on rural life. Folk institutions and practices like weekly or bi-weekly markets, festivals and folklores as the means of rural communication since centuries have been found effectively used till date.

(ii) It was also found that there was a noticeable relationship between backwardness and deprivation of communication resources. As for instance, there was no subscription to newspapers mainly due
to the prevalent illiteracy of the people; television viewers were very limited as there was no electricity within the block, etc.

(iii) Radio, being the cheapest and most conveniently accessible for the rural people, was found to be the main source of information among the modern electronic media.

In view of the above findings, some of the suggestions of the authors included:

(i) To bridge the gap that exist between the new technology and the farmers and effective dissemination of appropriate socio-economic and cultural information to the rural dwellers, a fusion of technology-based mass media and traditional modes of communication was suggested. This will lead to greater impact of modern mass media on rural change and development.

(ii) Decentralization and democratisation of the radio broadcasts and other mass media both in content and methodology was suggested to be more effective and people-oriented, to facilitate dissemination of latest and relevant information to the rural people, to educate them with new ideas, to entertain them with
constructive programmes and to make them aware of the benefits of modern socio-economic progresses.

(iii) It was also suggested for the involvement of the institutions such as mahila samities, mahila mandals and women associations, functioning at the grassroots level in the whole communication process to yield better response and participation of the rural public.

The National Workshop on Rural Libraries and Information Centres under Panchayati Raj (1998), organized by the National Institute of Rural Development, Hyderabad was held on September 9-11, 1998. Stressing on the need and importance of the proper information flow and access in the rural areas and having analyzed the crucial role of the rural libraries in effective dissemination of appropriate information to the rural populace--- an indispensable factor in all round national development, the workshop had concluded with certain recommendations.

Some of the relevant recommendations, in this regard, were as follows:
(i) The workshop recommended a plan to augment the existing information collection and dissemination mechanisms of the rural libraries, reading rooms or resource centres. In this context, government and non-governmental agencies have been emphatically urged to take initiative towards enacting library legislation in their respective states and the library cess collected under the legislation should be released on time to the local library authorities for the development of the libraries.

(ii) In view of the Gazette notification of the Action Plan of National Task Force on Information Technology, Government of India, where an IT revolution by the turn of 2002 has been targeted, it was recommended to start immediately computerized community information centres at an appropriate level of rural administration, preferably at the Mandal level to begin with. In this regard, and in view of the recommendation of the IT Task Force to allocate 3% of the development budget to IT related activities, a general directive may to this effect be issued by the Planning Commission and specific directives issued by the respective Ministries at the Centre and State level to allocate separate budget head for
maintenance and the smooth functioning of these information centres, for the benefit of the elected representatives and the rural public.

(iii) To make the information centres serve the rural public more effectively, it was also recommended that the personnel to man the information centres should be identified locally, who understands the local environment better, and should be trained in handling the new communication facilities by organisations such as NIC and National Institute for Rural Development (NIRD). A working manual should be prepared by NIC or NIRD for the day-to-day functioning of these information centres and be made available in regional languages for its effective use at the Mandal level.

In another study, Sarma (1999) reiterated that making the agriculture sustainable, the increasing use of modern scientific and technological innovations and their adoption by the farmers up to the grassroots level had become necessary. In this regard, he attempted to find out the relationship between social structure and level of adoption of
agricultural innovations in the Chhatisgarh and the Chhindwara-Betul regions.

It was found that adoption of the agricultural innovations, however, depends on certain socio-economic factors and not only on the spatial factors. Social conditions greatly influence the perception of the farmers as manifested in their decision-making process. As for instance, people belonging to schedule tribes and schedule castes communities were found to have hardly perceived the necessity of adoption to new agricultural practices. In this regard, the author noted that lack of proper information flow was one major barrier, as adoption of innovation was a process of learning.

It was suggested that, while taking into consideration the socio-economic variables of the community, the process of diffusion of innovations should include reaching the people up to the grassroots level in the region and other similar rural areas, with appropriate information, not only to make them aware, but also to educate them on the utility and necessity of adoption to innovations.
In another pertinent study, Misra (1999) maintained that block centres, village-level workers, neighbours, radio programmes, newspapers and public agents were among the important media through which the farmers in the rural areas come to know about the use of new agricultural technology. In this regard, he pointed out that village level workers were found most effective in reaching the villagers with appropriate information relating to agricultural innovations, as per the result of his study carried out under Atara Tehsil of the Banda district in U.P. to assess the effectiveness of the service centres approach in adoption of farm innovations.

He suggested for the establishment of training centres for village-level workers and volunteers with task-based syllabi in the service centres. This should also take the local conditions into consideration to make the village level workers more effectively work among the rural farmers. It was also suggested for the strengthening of the local-based institutions such as village panchayats by giving them required incentives—honorarium, travelling and daily allowances, etc., to enable them establish
close interaction with the farmers and effectively disseminate appropriate information on agricultural innovations to the rural farmers.

Das (1999) summed up rural libraries as the nerve centres in rural areas--- they play a very vital role in education, cultural emancipation, and the overall development of the rural people. While applauding the role of rural libraries in Kerala, specially in accelerating the state’s literacy processes, he, however, argued that, with the advancements in information and communication technologies, rural libraries should function as community information centres--- a shift from the old concept of books to information, catering to the varied information needs of the community being served.

Similarly, rural people were interested in improving farming methods, raise their economic status and enlarge their social and cultural life, reiterated Kaula (1999). They were also interested in community problems and in the larger affairs of the nation. Therefore, for effective information dissemination accessible to the rural people along the line, cooperative extension service should be introduced in the rural areas. In
this regard, he stressed that rural librarians, in coordination with other agencies should direct their efforts towards providing concerted information services to the defined rural communities.

_Tikekar_ (2000) argued that the development processes can come out with concrete results only when there is smooth information flow that is accessible to the intended users. In this context, the author stressed on the crucial role of the rural libraries in facilitating effective dissemination of appropriate information to bring about qualitative change and improvement in the life of the vast majority of India’s population living in the rural areas.

Therefore, while pointing out on the failure of the existing public library system in reaching the rural populace with appropriate information, he put up a proposal for a rural information network in which:

(i) Rural libraries as community information centres must be considered as distinct entities, deserving special attention, and not simply link to the public library system.
(ii) A rural community information centre would function catering to the various information needs of the community of a defined jurisdiction.

(iii) The community information centres would work in coordination with other information agencies in order to provide concerted information services to the rural populace.

(iv) Active involvement of the government and the non-governmental organisations in establishing and maintaining the rural community information centres were emphasised.

In their study, Ramaiah and Ramchander (2000) emphasised on the need for setting up Internet kiosks in Indian villages for bridging the gaps in access to information. They were of the view that the digital revolution had made information flow and access easier cutting across geographical, social and cultural barriers. Citing the example of Andhra Pradesh in championing the cause for electronic governance and the use of information technology for interactive governance through Andhra Pradesh State Wide Area Network (APSWAN), the authors made a
proposal for setting up Internet Kiosks in every Indian village. They sustained their stand with the following arguments:

(i) There being more than 5 lakh Indian villages without a library and information centre, it would not be possible for the state or central governments to establish libraries in all the villages for want of huge funds. Moreover, public libraries, they reiterated, were getting obsolete mainly due to shortage of fund and the decline in collection and service standards.

(ii) The villagers should not be made to remain second-class citizens due to lack of access to appropriate information. In this context, the panchayat institutions at the grassroots level could take the initiative in establishing village-level Internet kiosks, under the provision given in the 73rd Amendment to the Indian Constitution.

(iii) The use of Internet would help rural dwellers access appropriate information and thereby make them conscious about the importance of science and technology in the socio-economic progress.
Thus, smooth and adequate information flow and access could be rendered to the rural people through the Internet Kiosks in the villages. This, in turn, would accelerate the process of improving the living conditions of the vast rural populace and in bringing them to the main stream.

In a similar line, Sarada (2000) emphasized on the need for providing community information services (CIS) by the public libraries up to the grassroots level. In support of this, the author put up the following arguments that:

(i) In response to the changing role of information profession, provision of community information services came into effect as an attempt at providing appropriate information to the poor, deprived, illiterate and the minority groups--- a war on poverty.

(ii) The scope of CIS included assisting the individuals and groups with relevant information for solving the problems in their day-to-day life--- a democratic right.

(iii) The emergence of information as a key resource in all fields of human endeavour and advancements in information and
communication technologies spanning geographical boundaries and time periods, had made it possible and necessary even for rural villagers to have access to appropriate and timely information.

Sustaining the above arguments, the author suggested that every village in India should be provided with personal computers, a good room with functional furniture, power and telephone connections, to facilitate the smooth flow of information which would be easily accessible to the rural population.

The emerging Information and Communication Technologies (ICTs) have a significant role to play in evolving a paradigm to take advantage of knowledge availability to achieve the triple goal of increased income, jobs and food, reiterated Balaji et al (2000). In this connection, they carried out a detailed survey among the poorer households covering 10 percent of the resident families in the proposed area during April to June 1998 to get a clear picture of the existing communication habits and channels in the rural areas of Pondicherry.
The result of the survey indicated that the predominant sources of information were the petty local shopkeepers, the market place and the agri-input suppliers. It was also found that the channels of development information available through the Agricultural Officers and Block Development Officers were not very effective, as information through these channels did not correspond much to the material benefits of the rural people. The reach of electronic media, however, especially television was found very high considering the prevalence of poverty in the villages surveyed.

In this connection, they also made an attempt to assess the effectiveness of the experimental project called 'village knowledge centres,' which had been set up in Kizhur, Embalam and Veerampattinam with Villianur as the operational centre--- a programme launched in 1998 to determine the way in which ICTs make an impact on rural livelihood in Pondicherry. The key element of the project was to create content suitable to the local needs by holding extensive consultations with the participating village communities.
Analysis of the user's registers as maintained in the village knowledge centres revealed that maximum number of people using the services were those of asset less families and the use by illiterates and dalits were low.

The most sought information was on government welfare schemes followed by education, agriculture, fisheries, health and employment among others. It was also found that women in rural families were also interested in obtaining health related information, particularly concerning the disorder in the reproductive tract and child health. In Veerampattinam, a Christian village, information required included safety of fishermen at sea, fish occurrence, post-harvesting techniques and wave height.

Finally, they came up with the conclusion that a rural information network can only be meaningful when there is a considerable local content. Therefore they suggested that:

(i) The volunteers of village information centre should be trained not only in the use of computers and networks, but also needed to be trained in smoothening the flow of information to those
information seekers. For instance, having a basic knowledge on the local language and understanding the socio-economic factors that affects and shapes the life of the community were found very essential for providing effective information services to the rural people.

(ii) Social and gender barriers need to be downsized through proper education and awareness programmes that equal access to appropriate information, irrespective of caste, sex, economic status, etc., can greatly contribute towards the all round development in the life of the rural society.

2.3 Conclusion:

In the light of the related literature reviewed above, several conclusions emerge which reflect the state of affairs in so far as information flow and access in rural areas is concerned. They have been summed up as below:

(i) Information is a key resource in all the development processes equally essential both in the urban as well as the rural settings.
(ii) There is a general consensus that the benefit derived from the adequate information flow and access transcends all geographical and cultural boundaries.

(iii) There exist wide gaps in the information flow and access between the urban and rural areas, which today has become a major area of concern for the information professionals, policy makers, researchers, administrators and others.

(iv) Though the extent and intensity of the information needs and seeking behaviour varies from person to person, in any given socio-economic and political environment, it is generally accepted that the need for information relating to all aspects of life is felt more acutely by the rural dwellers.

(v) Considering the multi-dimensional nature and role of information, institutions and professionals, involved in information services are faced with increasingly demanding roles in providing appropriate and concerted information services to the rural populace.

(vi) A complete understanding of the community in terms of their physical environments, socio-economic and political
circumstances, their beliefs, traditions, values, life-styles, habits and their psychological outlook has been considered as a very crucial factor in providing effective and efficient information services to the rural public.

(vii) The indigenous knowledge base and its applications have to be taken into consideration in attempting to provide effective information services to the rural folks.

(viii) Knowledge of the existing information sources, channels and services in the rural setting has been found very vital for the success of any attempt to provide effective information services.
References


