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REVIEW

OF

LITERATURE

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The review of user studies show a strong interest in analyzing the information needs and channels of information flow. According to Wilson [1] apart from information retrieval there is virtually no other area of information science that has occasioned as much research effort and writing as 'User studies'. The field of user study has recently experienced a shift in both conceptualization and research design with the adoption of a more holistic perspective to the study of information user. Within the field of user studies, the investigation of 'information needs' has presented seemingly intractable problems [2].

The information use and user needs both are directly concerned with users. The users are the ultimate recipients on information in communication cycle. A user may belong to user group with identifiable interests and environment. The individual as a user may differ with regard to:

(i)   Attitudes, believes, values;

(ii)   Goals;

(iii)   Capabilities;

(iv)   Communication attitudes;

(v)   Experience and habit; and

(vi)   Cultural background.

The viewpoint of users towards information varies according to the intended use. Although the users in a particular working environment may have common viewpoints and often share the same priorities in the value of information. The dimension/extent of use of information is subject to

priorities and intended use of the user group. There may be differences in the attitude towards the use of information. The information priorities of a user is the function on intended use at a given time and not dependent on the users discipline.

The origin of user studies can be traced back to the Royal Society's conference on scientific information in 1948 in London and the Washington conference of 1958. The investigations of scholarly communication are relatively recent. A study entitled "pilot study on the use of scientific literature by scientists" conducted by Ralph R Shaw [3] is considered another pioneer study in this direction. Attention has also been paid to the definitional problem of information need and the difficulty of separating the concept from wants, 'expressed demand', satisfied demand' and so on.

Menzel [4] was the first to produce research report pertaining to scholarly communication; he is given credit for his pioneer intellectual work in this area. It is worth observing that the first period of scholarly communication studies was largely concerned with the user of scientific and technical information. According to Martyn [5] this situation was inherent in the fact that the use of scientific and technical information has traditionally been the area in which information problems were most generally felt and in which information workers were most active. In a second stage, a part of the attention was paid to social sciences.

In 1959-60, Voigt [6] did a study to determine scientists' approach to the information and to relate these approaches to purpose for which information was sought. He pointed that a scientists' use of information arises from three fundamental needs: (i) the need to know what other scientists have recently done in both specific and broader fields, called the current approach; (ii) the need for specific piece of information necessary in his experimental work or to an understanding of his work, called the every approach; and (iii)

the need to find our and look through all relevant information existing on a given subject, called exhaustive approach.

Dervin and Nilan [7] in a review of research into information needs and uses found that most studies remain constrained by the system's definition of needs with the menu of responses coming from the systems' view of the world and not of users. They called for research within a new paradigm of the users' conceptual framework for both practice and research is needed which goes beyond the study of seeking and gathering of information to solve the problem which initiated the information need.

Wilson [8] says that the study of information seeking behaviour can stand on its own as an area of applied research where the motive for the investigation is pragmatically related to system design and development. A different motivation is involved if we wish to understand why the information seeker behaves as he does. This is an area of basic research and, although the resulting knowledge may have practical applications, there is no necessity that it should. However, many 'information scientists' are practitioners in information work or information systems management, and they look to studies of information needs for guidance on aspects of systems design, development and operation.

Situations in which information is sought and used are social situations. Information may also satisfy affective needs, such as the need for security, for achievement, or for dominance. If the full range of human, personal needs is at the root of motivation towards information seeking behaviour, it must also be recognised that these needs arise out of the roles an individual plays in social life. So far as specialised systems are concerned the most relevant of these roles is work role, that is, the set of activities, responsibilities etc of an individual, usually in some organisational setting, in pursuit of earnings and other satisfactions.

Numerous studies were undertaken which addressed the information needs of the general public as well as that of certain professionals such as social scientists, physicians and engineers.

In 1973, Warner et al [9)] examined information needs, information seeking strategies, search outcomes of urban residents in Baltimore. It was found that an individual's awareness of a problem and his ability to explain the nature his problem to others, related directly to his socio-economic status.

Chen and Hernon [10] undertook a study to find out whether there was low use of libraries by the citizens in general.

Ching-Chih Chen [11] conducted a study to find the information needs of physicists. He concluded that they used a small number of journals. Time and location played an important role in their information seeking and gathering behaviour.

Dervin [12] conducted a study to find the everyday information needs of average citizens and apply the findings to modify and improve public library service.

Streatfield [13] tracked 22 respondents through 6000 communication events occurring in work situations in a social resource department to examine their information seeking and use behaviour.

Hardegg et al [14] conducted a study to determine from a list of 890 medical and scientific periodicals which were considered the most important by the members of the medical teaching staff at Heidelberg University. The results confirmed the findings of prior studies.

Menzel [15] with teammates at Columbia University conducted a study survey to analyse the relative importance and the interplay of formal and informal channels of communication in the fulfillment of a number of scientific communication functions. The result showed the often observed conclusion that the scientists and engineers follow those paths in seeking and

obtaining information that place the smallest amount of strain and effort on them. Thus information related to material, apparatus procedure is generally obtained by information means such as querying colleagues. While less available information is obtained by formal means such as published literature. The study also highlighted the information that scientists sought deliberately and on information, which they acquired accidentally.

Another study conducted by Grant [16] the intent of which was to determine information-gathering requirements among the industrial personnel in South Africa. The study highlighted the way in which the information moved or was transmitted within the organization.

Raiseg et al [17] conducted a study that dealt with the use of monographic or non-serial works borrowed by biomedical researchers from Yale medical library. The intention of study was to find how the users learnt about the books which they borrowed from the library and whether the books contained the information needed by the users. 21.5% of respondents said that they came to know of the books by chance, 20% had consulted the catalogs etc.

Ellis [18] employed Glaser and Strauss's [19] grounded theory approach, and derived six characterstics of the information seeking patterns of social scientists : (i) stating; (ii) chaining (iii) browsing (iv) differentiating; (v) monitoring, and (vi) extracting. This work was extended to physicists and chemists in studies which found that the original model fits behavioural approach in these fields with very little modification, the principal being the addition of the (vii) categories and (viii) ending.

Uytterschaut [20] conducted a study at the University of Ghent. The purpose of the study was to determine the chronology by which the research workers (in the social sciences) proceeded during the literature search,

whether the assistance of a reference librarian was taken in to consideration and the methods they used to keep abreast of the pertinent current literature.

The study confirmed the findings of the earlier of the studies that social scientists generally don't delegate literature search. The more experienced literature users generally use more informal techniques for gathering current and retrospective information than the less experienced users.

Ellis [21] in his study explored the role of information and information seeking in the research and development department of an international oil and gas company. It was found that, although there were differences in the features of the information seeking patterns of the research scientists and engineers, the behavioural characteristics were similar; and the study observed identical or very similar categories of information seeking behaviour to those of previous studies of academic researchers.

2.1 Information Needs and Seeking Behaviour Studies in India

A review of body of literature produced in India dealing with information needs and information seeking behaviour reveal that the studies are mostly in the field of social sciences which focused mainly on information seeking behaviour and information needs of subjects engaged in scholarly pursuits in different disciplines with an exception of the study made by Khan [22].

In study of the information needs and information seeking behaviour by decision makers in business, Parthsarathy [23] has found that the effectiveness of decision makers is dependent not only upon his innate professional skills, judgement etc., but also upon the completeness, quality, accuracy and timeliness of the information needed for an ideal solution of a problem within the available time.

P. Pratap Lingam [24] with reference to the exploration of decision making process from information implication has stressed on the awareness of the factors affecting the problem formulation processes as well as decision making process by the managers and the information personnel which is defacto essential for providing information for effective decision making. The conclusions drawn from the authors' study reveal that:

(a)   Unless the nature of work and responsibilities relating to each position of the managers is linked to the information needs, the quality of the decisions taken by them will not be improved.

(b)   Managers at different levels not only have to take different types of decisions but have consequent different information needs; and

(c)   Three types of information for three basic activities of task, team and motivation maintenance should be intermixed according to the human need levels of the managers so that the information is accepted and absorbed.

Information and library use behaviour of 436 managers from 20 industrial organization in Andhra Pradesh of India was studied by C. Shashikala [25]. The managers were grouped in 3 levels : Senior (30), Middle (138) and Junior (268). The survey showed that the managers only occasionally visit libraries, they try to satisfy their information needs from other sources as also from libraries. Managers mostly use data type information than descriptive information on specific topics.

Krishan Kumar [26] in his paper quoting the work done by Naga Jyotsna on information seeking behaviour of sociologists summarized that sociologists did not seem to be using indexing and abstracting services, reviewing journals as much as one would expect. The reason for this low use of the secondary sources was attributed to the lack of training/framing in

methodology for doing search of information. Researchers consult the informal channel source such as consulting peers, and supervisor or colleagues for seeking information.

Girja Kumar and Jayasawal [27] in their study of nine research scholars enrolled for their Ph.D. degree with the Centre for the study of Social System, Jawahar Lal Nehru University, concluded that due to the lack of knowledge about the use of different formal channels of information, researchers reliance on library use was relatively low. Kapoor [28] reported that researchers in Geography hardly had adequate knowledge of the availability of secondary sources of information because of lack of training in the library use. Sethi and Sharma [29] indicated that frequency of use of formal channels of information historians depended on the ease of accessibility.

A number of citation studies in social sciences were made to measure the users' information needs in India. Mention might be made of studies made by Rana [30] in Anthropology; Sahai [31] in Sociology; Kaula and Singh [32] in Social Science; and Hadagli [33] in Agricultural Economics. However among such type of studies, two studies done by Harsha Parekh and Tara Seth [34] and by Singh [35] deserve special mention because of their wide coverage of material as well as the application of sound techniques.

Gautam [36] in his study, investigated the information needs and information seeking behaviour of physics and chemistry teachers of university of and colleges of Gwalior as well as Chambal division and reported that to a large extent they were dependent on information sources provided by libraries for the fulfillment of their own information needs. The works of Guha [37] and Satyanarayana [38] on user studies in INSDOC course material were also found to be pertinent to the present study from a theoretical point of view.

Khan [39] has mentioned in his study that entrepreneurs of small industries were not aware of the source of information and thought, they might be aware of their own problems but they did not know how to solve and where to get the proper information for use in finding solution to their problems. He further indicated that small entrepreneurs in pursuit of information contacted different organizations for obtaining small items of information and information required by them was not vast, but at the same time information might be problem oriented, and here again the problems also were not very complex. They require information about scope and prospects for industries, location, land and building, machinery and equipment, raw materials, utilities, transportation, staff and labour, finance and market strategy.

The studies reviewed so far were those concerned with the information needs and information seeking behaviour of users. The review of the literature indicates that in India only a few large-scale studies have been undertaken concerning the information needs.

Keeping in view the fact that information is key resource for overall development of society, there is need to conduct more studies on information needs and information seeking behaviour.

2.2 Researchers Related Studies in Different Disciplines

For the researchers of all disciplines information occupies a special place in their daily life. It has been indicated through several studies that the information need of researchers can be simply and easily listed and their behaviour quite safely predicted. Many of these studies have assumed that information is a discrete, even concrete reality. It is a commodity to be acquired and can be contained in discrete visible packages of equal value. It has also been assumed that use of this commodity can be counted or

measured to represent the totality of information behaviour. Information system in science are often designed on the basis of such studies, because as Wilson has pointed out the study of information seeking behaviour can be said to be the study of scientists' information seeking behaviour. Belkin has developed the concept of an Anomalous State of Knowledge (ASK), which assumes that information need arises from the recognised anomaly in the user state of knowledge concerning some topic or situation and that, in general, the user is unable to specify precisely what is needed to resolve that anomaly.

Since 1940, a large number of studies have been carried out on various aspects on information seeking pattern of researchers and this literature has been extensively reviewed. There is also a considerable literature on the information seeking behaviour of social scientists, which also has been reviewed.

Slater [40] stated that the literature of science user studies is composed of a large body of data that cannot be co-related, due to differing objectives, methodologies, samples, scales and definitions used by studies. Each study stands in isolation, with no obvious links that enable it to be completed with either study.

Social science researchers related study (INFROSS) was carried out by Maurice Line [41] at Bath University, England to investigate into their information requirements. This project was initiated in 1967. In this project the primary technique used was a questionnaire circulated to a national sample drawn from a population of all the identified social science researchers in England. The sample of study included researchers from universities and other research institutions. The INFROSS project focused almost exclusively on the information needs and uses of references, indexes, abstracts, library catalogues, and bibliographies and on the use of books and references. The study did not lead to any general conclusion about the information needs of social scientist or their information-seeking pattern.

Although it is considered to be a milestone in the direction of exploring the nature and extent of information use by researchers of social science.

Maurice Line [42] identified methodological information as prime need of social scientists in the UK during the INFROSS studies. According to respondents, the need remains acute, and will persist as long as social research and development continue. Evening meetings of the Social Research Association are also popular events. A consultative resource centre to supplement the educative activity and direct information dissemination by the Survey Methods Centre and the Social Research Association, would be appreciated. They felt necessary to maintain the research register in order to avoid replication of works, to coordinate related work and to benefit from others' experience in economically stringent, and cost-effective times. It was also concluded that a comprehension gulf or communication gap still exists between researchers and those who might in theory benefit from research results. Communication difficulties of this kind have implications for the kind of entry in research registers.

To study the social science researcher's need, British Library carried out a study in 1988. The more specific aim of the study was to provide information input and direction to the British Library's own services. A parallel altruistic aim existed of broad examination of the current needs, information problems and practices of social scientists. This particular interview study was small scale in numerical or sampling terms. Forty two people participated: 18 social scientists and 24 information suppliers including 8 members of British Library staff in later category. Interviews were long, conducted in free mode, producing a wealth of spontaneous and revealing material. Problems were in some detail and depth. At the same time, interviews were quite wide ranging in scope. They did not just focus narrowly on documents and information supply and usage, but explored the

nature and aims of the respondents' work and problems, of all kinds, experienced within it.

A researcher's need and behavioural study was carried out by Girja Kumar and Jayasawal [43]. In this study researchers enrolled for Ph. D. degree with the Centre for the study of Social System, Jawahar Lal Nehru University, were included. In another study related with researchers, Kapoor [44] reported that researchers in Geography hardly had adequate knowledge of the availability of secondary sources of information because of lack of training in the library use.

Mole commented in his review of Slaters [45] study of the information needs of social scientists: Which is worth producing as "The study lacks any explicit theoretical framework which might guide the research or enable one to interpret the findings in a meaningful fashion. More useful would be detailed case studies; of information use in specific organisations or specific professions, especially if it showed awareness not only of social science methods, but of social science theories".

David Ellis etc [46] in his study concluded that the comparison of the information seeking patters of the physicists and the social scientists shows no overriding differences between two groups. The groups undertake similar activities and the sources employed are also similar. Although the extent of usage of a source and the stage at which a particular characteristic may be employed may differ, the characteristics of the information seeking patterns of the physicists and the social scientists are fundamentally the same. The main difference between the models of the information seeking patterns of the chemists and social scientist is the existence of two extra categories of behaviour verifying and ending – which were not identified as discrete categories for the social scientists, although some social scientists did report similar activities which were subsumed under the categories of starting and chaining. Overall difference between the information seeking activities of the

chemists and social scientists seemed more a difference of emphasis than of a fundamental difference in behaviour.

The studies reveal a remarkable degree of homogeneity between the information seeking patterns of the physicists, chemists and the social scientists, both in terms of information seeking activities reported and the researchers' perceptions of those activities. The findings confirm the broad conclusions of previous studies by Garvey et al and Skelton [47] that there are not major differences in the information seeking activities of social scientists and scientists although there are major differences of emphasis.

It is also interesting to note that relatively minor impact which developments in information technology have had on the information seeking and communication activities of the three groups. While some researchers have employed electronic means of identifying references, this has usually only constituted a small part of their information seeking activities.

Researchers transmit and acquire information all the time, informally, without an intermediary, as they go from place to place and meetings and committees. Another emergent provision need was the concept of the multi-coverage, national social science library. The social science field in totality is vast, sprawling and multi-faceted. The different manifestations of the central aim, or different ways of studying or dealing with, the structure, causation and interaction of human groups. Social science itself is subject to constant change in its concerns, and the very terminology used to describe them inconsistent.

Added to that, social scientists are prolific producers of literature, both published and grey. In spite of shifting terms and interests, this literature tends to a have a long half life. The obsolescence rate, as Brittain [48] also pointed out, is slower than that of the natural sciences. The literature of economics, for example, have a short life span of about five years. Whereas

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human geography, according to Stephen Roberts [49], has a very long life span. The travelers 'tales of early explorers may be of considerable interest to geographers and anthropologists, even centuries later. Classic texts on interviewing practice may still be valuable, particularly in updated editions. After twenty years' service to the field, Line found an approximate 50/50 split between what he called consecutive and conjunctive use. Consecutive users read one book or document after another, in orderly sequential fashion. Conjunctive users need to have a spread of several items on their desk, or the library table. Study reveals that conjunctive use may be on the increase.

Krishan Kumar[50] has concluded that Researchers consult the informal channel source such as consulting peers, and supervisor or colleagues for seeking information. He in his paper quoting the work done by Naga Jyotsna on information seeking behaviour of sociologists summarized that sociologists did not seem to be using indexing and abstracting services, reviewing journals as much as one would expect. The reason for this low use of the secondary sources was attributed to the lack of training/framing in methodology for doing search of information.

Line [51] discussing the use of libraries by researchers in the field of social science, identified differences among researchers inherent in their age and their adherence to disciplines. According to Line, older, and more experienced researchers tended to use fewer libraries than others. He suggested that this might be an indication of mobility decreasing with age. On the other hand, statisticians and psychologists tended to use very few libraries. Among the heaviest users were historians, political scientists and geographers. In reference to age variable, Steig [52] found that younger historians tended to be more active library users than older ones. He explained the differences between older and younger historians to make their way in the scholarly world through publications.

Another interesting specific finding concerned the foreign language barrier as a problem. This has evident pertinence to international cooperation and information exchange in the social science. Twenty years ago, a linguistic problem certainly existed in the United Kingdom. Its form then was limitation of access to relevant foreign literature. Social scientists in the UK compared poorly as linguists with other colleagues in the other sciences and the humanities. Now this kind of problem seems to have been cured. Encouragingly, this development appears to reflect the impact of research identification of the problem and response by suppliers in terms of translations and English language abstracts.

Skelton [53] complaining about bibliographical tools such as reviews, observed that social scientists as well as physical scientists frequently located information accidentally. Line [54] mentioned that the most popular method of keeping up among social scientists was abstracting and indexing periodicals, followed by browsing in bookshops, and consulting book reviews. Line also indicated a very limited use of review articles and printed bibliographies. Researchers in geography, psychology and education made the greatest use of abstracting and indexing periodical for this purpose.

Social scientists have limited time, not only to seek, but also to absorb information. Connected to problems of traditional information and document supply, was the whole wider and delicate question of corporate intelligence and internal communication within the organisation. Directives emanated from the top of the hierarchy. Reciprocal feedback from the 'grass root level', aimed up at the top was too busy to stop and absorb its impact. Grey literature problem of social scientists and intermediaries were painfully realised. Social scientists however tended to seem it as an internal and local problem of sorting out their own organisation's grey literature. Whereas information providers had a wider perceiving need for central bibliographical control of grey literature. One is ideological and moral in nature, social scientists

showed above average sensitivity to and resentment of the idea of paying for information.

In a study Herner [55] found that researchers in the field of pure science depended on literature, while applied scientist were colleague dependent in seeking information. Herner findings were confirmed by other studies on the flow of technical information in specific organizational environment.

Investing channels of communication used by bioscientists, Bernard and associates [56] came to similar conclusion. Skimming and reading were considered the most valuable among the channels that brought special information and influenced a research project.

2.3 Tibetan Studies Related Works

In the modern times, devoted Hungarian scholar, Csoma de Koros. [57] continued the ancient tradition of Indo-Tibetan studies and brought them out of the speculation specialized learning into the open field of world scholarship. Contributions of Csosma could pave the path of further studies of Tibetan in the world. His activities form the first real landmark of Indo-Tibetan studies in the modern sense. Another grammar of Tibetan language was attempted by Issac Jacob [58] in Russian with German translation. Jaschke [59] and Franke also worked hard in this field, particularly Jaschke's Tibetan – English dictionary may be regarded as the first on scientific lines. In Bengal, S C Das's [60] Dictionary may still found indispensable to scholars of Tibetology. The Sanskrit – Tibetan Studies were also given a big hand by Pandit Rahul Sankrtyayana [61] in the thirties of this era. He discovered about five hundred Sanskrit Buddhist texts translated in various Tibetan Buddhist texts.

Eight volumes work of Winternitz [62] is sufficient to realize the enormous amount of work done in the field of Tibetan/ Buddhist Studies. The

works of E. Burnouf, Fausboil [63], Princep, Kern, Kosma de Koras [64], Oldenberg [65], Poussin, livi, Stcherbatsky [66] and the illustrious couple, Mr.and Mrs. Rhy Davids [67], stand out in Glory in the west and one remembers with reverence such veterans in the east as S.C.Das [68], G. Tucci, [69], J. Takakusu and B.M. Barua [70]. There are also innumerable other scholars in their times who have kept the torch burning and deserve mention for their important contributions.

The discovery of Pali literature, with which Asoka is closely associated, is an interesting story. In the first quarter of last century, archaeologists like James Prinsep and others were engaged in deciphering Asokan edicts. It was the occurrence of word Piyadassi [71] in the Mahavamsa, a pali Chronicle of Ceylon, that helped them to identify King Piyadassi of the edicts with King Asoka. The credit for this discovery goes to George Turnour who realized the value of hidden treasures in Pali Literature and published a critical edition and translation of the Mahavamsa in 1837.

These developments were received with great interest by western indologists, an eminent scholar, Prof. Vincent Fausboil [72] of Copenhegen, came forward with an edition and a Latin translation of the Dhammapada in 1855. Scholars like E. Burnouf, B. Clough, and J. Lewis had already published works on the Pali languages based on the few texts that were available. New branches in Tibetan/ Buddhist Studies were opened.

Hodgson's [73] distinct service in procuring Nepalese manuscripts and the subsequent discoveries of Tibetan and Pali literature helped Eugene Burnouf [74] to write the first history of Buddhism. His famous work, "Introduction a l'Historie du Buddhisme Indien", contained a excellent survey of Buddhist literature and threw light on the relations between the Pali and Sanskrit traditions. He translated long passages of Divyavadana, the Karandavyuha, the Vajrasuci and wrote the first notes on the Prajnaparmita, the Lankavatasutra and other extant literature.

Much amount of researches relating to Tibetan Buddhism have been carried out in Japan and China. The publication by Yamaguchi Zuiho [75] of his study of the history of ancient Tibet was an epoch-making event for Tibetan studies. His studies were related to various aspects of Tibetan studies. First of all he rectified the fabrications of later times and confusion in traditions found in such documents the 'Geneological Chart of the T'u-fan Kings from Tuu-hang. Yamaguchi also established the precise chronology of the history of Tibetan Buddhism in the years during and after the reign of king Khri-sroh-lde-brtsan. Hoshi Michiyo [76] has published research on Tibetan folktales and Mitsushima Tadasu and Kalsang Namgyal [77] on the Bon religion.

Research on the influence exerted by Chinese Ch'an Buddhism on the Buddhism of the former diffusion was undertaken by many scholars, motivated by a desire to elucidate both historically and philosophically, the Sino-Indian debate on Buddhist doctrine. Attention of academic circles had been drawn by P. Demieville[78] and G. Tucci [79].

Tibetan medicine has a history of nearly one thousand and three hundred years old. In the early seventh century in Tibet it appeared under the great influence of Buddhism. After the marriage with Chinese princess many medical doctors arrived in Tibet. They brought a large number of medical treatises, which afterwards were translated into Tibetan language.

Studies, related to Tibetan medicine carried out by Natalia D. Bolsokhoyeva [80] is an important work which is result of many years of studies on scientific researches of the Tibetan written sources, relating to the genre of the Tibetan medical literature. This work has been compiled from original Tibetan sources.

In a study Dr. Lobsang Rapgay [81] concluded that Western scientist have been documenting the physiological changes caused by the practice of

yoga and meditation. These researches have disclosed that those who use such techniques effectively can reduce headaches, angina pectoris pains, reduce blood pressure, overcome insomnia, prevent hyperventilation and reduce overall stress and achieve greater emotional balance.

In 1981 a group of scientists led by Dr Herbert Benson [82], conducted experiments on Tibetan Buddhist monks practicing a special kind of yoga known as "Fierce woman" by which means body temperature could be raised at will. All the monks exhibited a capacity to warm their skin that far exceeded only previously reported experiments in the west using hypnosis and biofeedback techniques. The fact that Tibetan monks could scientifically demonstrate what was up to then considered a supernatural feat by mentally dilating the blood vessels is highly significant in understanding the ability of the body to alter involuntary bodily functions. Such claims for control of physiological functions by using yoga and other Buddhist techniques have been substituted by other research.

Dr. A. Kasamtsue and T. Kirai [83] discovered that Zen Buddhist monks who mediated with their eyes half open developed a predominance of alpha waves, brain wave usually associated with feelings of well being. Further more the alpha waves increase in amplitude and regularity during meditation. Dr. B.K Anand, New Delhi and other investigators in India reported the same heightening of alpha activity during the meditation of yoga.

In field of Tibetan medicine, another important study was carried out by Kelsang Rapten [84], which showed the utility of Tibetan Medicinal plants for modern medicine. Breathing exercise in Tibetan medicine by Dr. Lobsang Dolma Khangkar [85] is also an important study, it also includes the diagnosis and cure of jaundice.

In a study by Dunkar Rinpoche [86], it was established that the spread of Tibetan sciences took place several centuries before the Christian era. Not

only those, some of the sciences were quite advanced and very near to those of modern sciences.

In a major study of the imagery and practices associated with the Dakini in Tibetan Buddhism Simmer-Brown [87] breaks new ground in its concern to represent with both accuracy and empathy the tradition's and contemporary lamas – own understandings of the symbolism involved, while relating the materials to a discussion of feminist approaches to female religions imagery. Its presentation is readily accessible, at least to educated western Buddhists and scholars of Buddhism.

In a recent study, Erberto Lo Bue [88] has concluded that Buddhist Newar artists continue to hold the virtual monopoly in the manufacturer of metal, wood, stone and ivory images as well as ritual objects in the Nepal valley. It also reveals a considerable increase in the artistic production for both local and foreign Buddhists; the latter are above all Tibetans, Bhutanese, Japanese and Chinese. On the whole the iconographic sources, materials and techniques used by Newar sculptors, chasers, and gilders have undergone few changes in last 30 years of the 20th century.

The review of Tibetan related studies reveals that most of the studies relate to philosophy, medicine, religion, culture etc. The information related studies are negligible in the field of Tibetan studies.

2.4 Justification with Reference to Research Topic

In India, a number of organizations and institutions are engaged in study and research in the field of Tibetan/Buddhist studies. The researchers are actively engaged in organized research work in these organizations. But so far no serious study has been made to investigate their information-seeking behaviour. Now days with the changes in information environment alternative and supplementary information sources have emerged such as INTERNET service, through which a researcher can access information.

Libraries are in the process of competing with such emerging services and systems to satisfy their clienteles and prove their existence. No authentic information exists as to how the Tibetan researcher seek for and obtain relevant information from different sources. How the information sources are utilized. An inquiry has to be made to establish the reasons for seeking information.

A large number of studies have been carried out on various aspects of the information seeking behaviour of researchers in different disciplines and this literature has been extensively reviewed. There is also a considerable literature on the information seeking behaviour of social scientist and researchers of the Humanities, which also has been comprehensively reviewed. There have been very few studies in the field of humanities related to information needs and seeking behaviour of researchers.

Moreover no such study in India has dealt with the information seeking behaviour of researchers of Tibetan/Buddhistic studies. The main objective of research is to fill the void. Such a study would help policy makers in designing appropriate information system. The existing library and information service can be improved and modified in light of the findings of this study. It would reveal the nature of information need of the scholars of Tibetan Studies.

The study would focus on the ways in which information was sought, gathered and once found, organised and used. Attention would also be given towards their attitude to information, whether it was perceived as a problem and if so how the problem was resolved and how far the chosen solutions were influenced by different factors.

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