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CHAPTER 4
RESEARCH DESIGN

Research design is used to refer to the pragmatic aspects of the way research is conceptualized and conducted. It is concerned with outlining what information is to be gathered on the research topic, identifying the data gathering method(s), selecting the instrument to be used or created to do so, how they would be administered, and how the information will be organized and analyzed. The research design is the plan for collecting and utilizing data on the research topic so that desired information can be obtained. All research problems require the application of appropriate research design which is uniquely suited to the situation being studied.

A combination of quantitative and qualitative methods was identified as the most suitable option to study the present research topic. Several decisions, at different levels and stages together contributed to the research design. The rationale for adopting this design and the details of the design are explained in this chapter.

4.1: Objectives
The objectives of the present research were:
1. To find out the perceptions of librarians about the probability of disasters happening in their libraries.
2. To examine the vulnerability of libraries to disasters
3. To assess the level of disaster preparedness among libraries.
4. To examine the damage caused in disaster affected libraries.
5. To study how the affected libraries coped with disasters.
6. To develop guidelines and a sample disaster management plan for Indian libraries.

4.2: Scope and Limitations
The concept of disaster management included the issues of vulnerability, preparedness and actual experience. The research aimed at covering these issues in different type of libraries— university, college, public and special. Public libraries included government and state supported libraries, as well as private libraries open to the public. School libraries were specifically excluded.

To keep the research within manageable limits, focus was limited to Western India, i.e. the States of Maharashtra, Goa and Gujarat. Further, the region is prone to disasters of various kinds. Maharashtra, Gujarat and Goa, have a long coast line. Together, the three states account for 2740 km (i.e. 38%) of the country’s coastline. Although historically more cyclones and floods have affected the east coast, the west coast has had its share of floods because of the heavy south-west monsoon. A major part of this region is also in the seismic zone 4 and has a fault line running beneath it. Communal and regional tensions have, in recent years, been a fairly regular feature. Thus, it was believed that the likelihood of hazards in the region was fairly high. However, it was also considered important that the study cover libraries of national importance for which disaster management would be a cause of concern.

4.3: Concepts and their Operationalization
The study dealt with the concepts of disasters, hazards, vulnerability, risk, preparedness, rescue, recovery, disaster management and disaster planning. These concepts are abstract and not directly observable. The first step of the design was to operationalize the concepts into concrete and observable indicators.

A disaster is an event which causes heavy damage to life, property and services. The duration of the disaster may vary from a few seconds to several months or even years; the onset of a disaster may be sudden or may be preceded by a warning. Occasionally the disaster may cover a very wide region, or at other times, it may affect only one institution. In the present study, floods, heavy rains, earthquakes, fires, digital disasters and vandalism have been included.

A hazard is the probability of occurrence of a potentially damaging phenomenon within a certain time frame. The topographical features, climatic conditions, socio-political environment and neighbourhood of the library may be regarded as hazards.

Vulnerability refers to how susceptible a place is to a disaster. To operationalize the concept of ‘vulnerability’ the study used indicators relating to the library building; the
Age of the building, the construction materials used, the location of the library within the building, its neighbouring sections, internal lay-out of the library, all of which contribute to the vulnerability.

Risk refers to the damage which a hazard may cause. If the library is also vulnerable, the risk of the quantum of the damage is very high. If, on the other hand, a library takes precautionary measures and is prepared to face disasters, the vulnerability is lower and the consequent damage is also less.

Disaster management refers to the pre-disaster activities of reducing the risks and increasing the preparedness. Preparedness when operationalized by the institution includes certain procedures and practices and the maintenance of certain equipments. These would include fire prevention measures like having a fire detector system and maintaining it annually, maintaining building facilities such as water proofing, humidity control, pest control to avoid moulds and fungus, not allowing smoking and eating in the premises, daily cleaning and removing rubbish, electrical maintenance, security features like CCTV, displaying appropriate notices, emergency connection to the police and the fire brigade and having an emergency supply kit. It also includes regular structural audit, having insurance and a data backup system.

The existence of a disaster management plan and conducting staff training are other important aspects of preparedness. A disaster management plan is based on the risk analysis of the library. It establishes roles and responsibilities, spells out the immediate procedures to be followed, priorities for rescuing and salvaging materials, location and content of the emergency supplies, salvaging methods to be used and external services which may be of help.

Response refers to the steps and actions taken immediately after the disaster strikes to save individuals, resources, furniture and equipment. These steps would differ according to the type of disasters, its magnitude and timings.

Recovery steps include assessing the damage to the collection, infrastructure and furniture, library records and people. It also includes cleaning of the library and salvaging of the materials by sorting, cleaning, drying and repairing of the damaged materials, replacement of the lost items and restoration of the services. Following the experience of a disaster, the institution may take long term mitigation measures to reduce the risk in future and speed up the recovery process.

4.4: Postulates

As described above, the present study is a status report and as such, no hypothesis of causal relationships between two or more variables was involved. Based on professional discussions, literature and experiences, it was believed that there was very little awareness of the risk involved through disasters. This lack of awareness was one factor which had resulted in a very low level of preparedness. On the whole, most libraries had not planned out what was to be done when faced with a disaster. They did not know the methods or procedures to be followed in salvaging. But libraries had, in reality, faced disasters and suffered a financial and material loss. When librarians were in situations where they had to manage, they had coped, perhaps not very scientifically, and had sought to retrieve damaged materials as best as they could.

4.5: Research Methods

4.5.1: Selection of Methods

To meet the first three of the study’s objectives (viz. to find out the perceptions of librarians about probability of disasters happening in their libraries, to examine the vulnerability of libraries to disasters and to assess the level of disaster preparedness among libraries) it was required to approach a large number of libraries of various types. It also required gathering of more quantitative data than qualitative data. The survey method, which has been described as a non-experimental, descriptive research method, in which information is gathered through written questioning was most suitable for this part of the research. (Sarantakos, 2005)

The literature review had also revealed that the survey method is the most popular method of research in library and information science as Wirkus found in 2005. Analysing library science articles in the School Library Media Research Journal and in the ERIC database, the author found 37.8% of the former and 42.1% of the latter had used the survey method. One of the most popular methods identified internationally and nationally in library and information science research is survey.
method at different periods of time. (Rochester & Vakkari, 2003; Hider & Pynn, 2008)

The survey method with a self-completion questionnaire as the major tool for data collection was deemed to be appropriate; it had been successfully used by Matthews (2007) and Ngulube & Magazi (2006) to assess the preservation related needs of libraries and archives.

To meet the next two objectives, namely to analyze the extent of damage caused to libraries due to disasters and the coping measures taken by them, detailed narratives were collected from the librarians and other persons who had managed the disaster situation in the libraries. As it was realized that no proper documentation had been maintained by the libraries regarding the disaster that had happened in the library, interviewing the librarians personally gave detailed information on measures taken by them.

It is necessary that every library is prepared for any type of disaster. Based on the feedback received in the first and second stages, by going through disaster management plans of different libraries on internet, by interviewing key people like experts in library science, fire fighting, insurance and government officials in disaster management, it was decided to prepare guidelines and a sample disaster management plan for libraries in India to meet the final objective.

4.5.2: Quantitative Survey

The major tool used to collect data for the quantitative aspect was a questionnaire.

4.5.2.1: Questionnaire development

A draft questionnaire on disaster awareness, vulnerability, preparedness and experience was prepared. The questionnaire consisted of 46 questions which were a mix of multiple choice and open ended questions. In the preparation of this questionnaire, the following documents were found useful: U.K., The Council for Museums, Libraries and Archives (2002), M. Varlamoff, & M. Plassard (2004); P. Raman, B. Weaver & J. Fraser (2006); G. Matthews, (2007); M. Kahn, (2009) and S. V. Fleischer, & M. J. Heppner (2009). The guidelines given in different leaflets of Conserve O Gram Series on Disaster Response and Recovery published by USA, Department of Interior, National Park Service (2002-2009) helped in compilation of the questionnaire. Disaster management plan of various libraries e.g. Library Disaster Plan of James Madison University in Virginia (2004) available on internet, and guidelines on how to manage disaster described on website of IFLA – PAC, (The International..., n.d.) were referred for preparing the questionnaire.

The questionnaire was tested for relevance, clarity and simplicity by sending it to seven libraries in Mumbai for pilot testing, review and comments. Different types of libraries were covered. Replies were received from these librarians with comments, following which the researcher had a personal discussion with these librarians. The questionnaire was also reviewed by three senior librarians who had seen libraries which had been affected by disasters and had guided them in the recovery process. Based on various feedback received, modifications were made in the questionnaire.

The sequence of some questions were changed e.g. (Old Q. 30 was shifted to Q.47), some questions were merged (e.g. Q. 32 & Q. 33), in other questions more options were given, (e.g. Q. 27) and some new questions were added (e.g. Q. 50). The final questionnaire was divided into the following sections.

Section-1: General information - Q. 1-7 were used to find out basic factual data about the libraries.

Section-2: Disaster Awareness - Q. 8. was used to find out the librarians' perceptions about the probability of different disasters happening to their libraries.

Section-3: Disaster Vulnerability - Q. 9-26 were basically used to find out information on the factors like environment, building conditions, location in the building etc. which may make the library vulnerable.

Section-4: Disaster Preparedness - Q. 27-42 asked about measures and actions taken by the library to be prepared for disasters.

Section-5: Disaster Experience- Q. 43-46 sought to find out if the library had faced a disaster in the past and, if so, what actions had been taken.

The questionnaire concluded (Q. 47-50) with some general questions asking about disaster management activities in the library, ideas and suggestions regarding how
Indian libraries can improve disaster preparedness and if they were aware of any libraries that were affected due to disaster in the past. (Appendix 1)

4.5.2.2: Universe and Sample
There are a large number of libraries in the region, making the universe fairly big. A representative sample was required. However, there is no complete authoritative listing of different types of libraries in this region. Hence the boundaries of the universe were not clear. Different lists were used to identify the universe. Universities Handbook (India), (Universities..., 2010) was used to find out and prepare a list of universities and colleges in the three states covered by the study. A directory of government recognized public libraries in Maharashtra was obtained from the State Central Library, (Maharashtra..., 2009) The websites of Gujarat (http://www.gujaratindia.com/index.htm) and Goa (http://www.artandculture.goa.gov.in) Governments were used to locate the complete list of public libraries in Gujarat and Goa. There is no current standard list or directory available for research, corporate and company libraries. Hence in spite of all efforts, a comprehensive list of libraries which constituted the universe was not possible.

A mix of systematic and purposive methods of sampling was used for different types of libraries and different sizes of samples were taken. The factors that led to this decision included the non-availability of the scope of the universe, the large number of small and medium libraries and the absence of professional librarians in many cases.

In the case of University libraries, the entire universe was selected for the study. As per Universities Handbook - India, 2010 a total 59 universities (regular universities, deemed universities, institutions having university status and private universities having UGC recognition) were found in Maharashtra, Gujarat and Goa. In addition questionnaires were sent to two campus branch libraries of SNDT Women’s University in Mumbai and Pune and one campus library of University of Mumbai at Fort, Mumbai. The questionnaire was thus sent to all 59+3=62 university libraries including campus libraries.

A consolidated alphabetical list of all the colleges under different universities in Maharashtra, Gujarat and Goa was compiled. Using the systematic random sampling method, every 20th college from the list was selected to constitute the college library sample. Additionally during the course of the study, the researcher met a number of college librarians (viz. 12) who showed an interest in the subject and wish to respond. They were also included in the sample.

Table 4.1 shows the total number of colleges in the three states and the number of colleges selected from them. The questionnaire was sent to 227 colleges in Maharashtra, Gujarat and Goa.

<table>
<thead>
<tr>
<th>College Libraries</th>
<th>No.</th>
</tr>
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<tbody>
<tr>
<td>Total Colleges- Maharashtra</td>
<td>2934</td>
</tr>
<tr>
<td>Total Colleges- Goa</td>
<td>52</td>
</tr>
<tr>
<td>Total Colleges- Gujarat</td>
<td>1300</td>
</tr>
<tr>
<td>Total Colleges*</td>
<td>4236</td>
</tr>
<tr>
<td>% of Total Colleges + 12</td>
<td>227</td>
</tr>
</tbody>
</table>

* From Universities Handbook- India 2010

The universe of public libraries was limited to district, divisional and state level libraries. (Table 4.2) In Maharashtra, Gujarat and Goa the questionnaire was sent to all state central libraries and all six divisional libraries in Maharashtra. Of the district level libraries, 20% of the libraries, i.e. every fifth library in the list (31 in the Maharashtra list and 25 in the Gujarat list) were sent the questionnaire. In addition to the state public libraries, there were several libraries open to the public which were run by private organizations or municipal corporations. Since there was no complete list of these libraries, purposive sampling was used and the questionnaire was sent to 12 such libraries in Maharashtra and eight in Gujarat on the basis of the researcher’s personal knowledge. In all, 66 libraries constituted the public library section of the sample.
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Table 4.2: The Universe and Sample of Public Libraries

<table>
<thead>
<tr>
<th>Type of Library</th>
<th>Total</th>
<th>Questionnaires Sent</th>
</tr>
</thead>
<tbody>
<tr>
<td>State central libraries</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Government Divisional Libraries</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Government District Libraries</td>
<td>56</td>
<td>11</td>
</tr>
<tr>
<td>Select Private Public Libraries</td>
<td>--</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
<td>41</td>
</tr>
</tbody>
</table>

For special libraries also there was purposive sampling. Social networking sites were extensively used to locate various types of libraries. The researcher became a member of the Corporate Librarians Group on LinkedIn on internet and tried to locate the corporate librarians. She also had a Facebook account on internet through which many contacts were made. Personal contacts with librarians also helped the researcher to get details of other libraries, as many of the students of the researcher worked in corporate libraries. The researcher belongs to the SHPT School of Library Science and the School has an active alumni association which also helped to get many contact details. In all 100 special libraries were included in the sample.

India has many libraries of national importance. Hoping that these libraries may be prepared for disaster, it was decided to send the questionnaire to a small number of select libraries all over India. The list was compiled using personal knowledge and suggestions from other librarians. The questionnaire was sent to 20 libraries of national importance.

4.5.2.3: Questionnaire Distribution

The first issue to be tackled after the sample selection was to get the complete and correct contact details of each of the selected libraries. Various methods were used to collect these details. These included checking various websites on the internet which was extensively used for searching addresses. Most of the universities had their websites, which helped the researcher to get the addresses as well as names of the university librarians. Many colleges also had their websites which again helped the researcher to locate the complete address, telephone numbers and in some cases name and contact number of the college librarian.

Further the MLOSc (Maharashtra Librarians Online Study Circle) (http://www.mlsc.co.nr) website helped in locating contact details of many libraries. Many conferences conducted in library science in India and several consortia groups have uploaded their list of participants on the internet; these sites also helped to get the data. The researcher also used lists of participants of various conferences, workshops and refresher courses attended by her and other colleagues. These lists were an aid in locating contact details.

A directory compiled by Ahmedabad Libraries Network (ADINET) (Ahmedabad..., 2010) helped to locate complete details of many libraries in Gujarat. Table 4.3 displays the total sample for the study, number of replies received and % of replies received.

Table 4.3: Total Questionnaires Sent

<table>
<thead>
<tr>
<th>Type of Library</th>
<th>Questionnaires sent</th>
<th>Reply to the Questionnaires received</th>
<th>% of Reply</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Libraries</td>
<td>62</td>
<td>53</td>
<td>85.48</td>
</tr>
<tr>
<td>College Libraries</td>
<td>227</td>
<td>134</td>
<td>59.03</td>
</tr>
<tr>
<td>Public Libraries</td>
<td>41</td>
<td>24</td>
<td>63.16</td>
</tr>
<tr>
<td>Special Libraries</td>
<td>100</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Other Libraries</td>
<td>20</td>
<td>15</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>450</td>
<td>291</td>
<td>64.67</td>
</tr>
</tbody>
</table>

Different methods of distributing the questionnaire namely, post, courier and email were used. In most cases the questionnaires were sent by post. However in Mumbai, most questionnaires were sent by Courier. Questionnaires to corporate and company libraries were mainly sent by email. The questionnaire distribution took place between August 2010 and January 2011.
4.5.2.4: Response Received

Initially the response was poor. Follow up was done with the librarians by sending emails wherever available, and also by phone. Various reasons were given for non-response e.g., ‘I don’t have time’, ‘I was on leave for a long time’, ‘as I had not faced disaster so I do not need to fill up the questionnaire’. A few librarians said they had not received the questionnaire; to them the questionnaire was sent again by registered post. In a few cases, the questionnaire had to be sent and resent thrice. A lot of time was spent on follow up but it helped the researcher to get the questionnaires from the libraries. A constant follow up resulted in getting a reasonably good response. Most responses were received till August 2011. In all 291 responses received were used for the analysis. (Appendix 2) In addition, seven questionnaires were returned undelivered, while five libraries did not reply for security reasons. A few librarians said they had sent the replies, but the researcher never received them! On the whole, responses from Maharashtra were better than Gujarat. 192 libraries from Maharashtra replied whereas 79 and 5 replies were received from Gujarat and Goa respectively. Figure 4.1 summarises the universe, sample and response for different types of libraries.
4.5.3: Qualitative Narratives
For the qualitative aspect of the study, it was decided that a few libraries which had faced disasters would be examined in greater detail. These case studies would give a better understanding of the problems faced by the libraries. To capture the knowledge acquired by librarians who had actually faced a disaster, narratives were obtained. For this purpose a broad schedule of areas to be covered was used as a guiding tool.

4.5.3.1: Narrative Analysis: Issues Covered
Since it was planned to collect narratives from librarians whose libraries were affected by disaster, the schedule focused more on how the disaster situation was handled by the librarian. The schedule ensured that the following areas were covered.

- About the library
- About the incident
- Extent of damage
- Rescue and relief work
- Planning the recovery process
- Resumption of services
- Documentation
- Financial aspects
- Emotional response
- Post disaster actions

A narration of the event was collected from one librarian whose library had been damaged because of floods. As an outcome of this narrative, a few additional aspects were included. The details of the areas covered are attached in Appendix 3.

The researcher was aware of some major disasters in the region, e.g. heavy rains and flood in July 2005 in Maharashtra and in Surat in 2006, and a major earthquake in Gujarat in 2001. The researcher tried to identify libraries which were affected during these major disasters. Personal inquiries gave a few names in Mumbai, Surat and Kutch. She also visited the State Central Library, Mumbai and got a list of public libraries that were affected by flood disaster in 2005. With this information as a base, and using newspaper reports, filled in questionnaires (Q.43 and Q 51) and initial interviews, the sample was built up using the snowball technique. It was planned to purposely select the sample which would include different types of disasters. However, this was not possible for various reasons. No library in the region had suffered on account of industrial disaster or war. Termite, mould, fungus attacks and building collapse were reported in a very few cases and were not considered as disasters, since the damage was limited and recovery was not a problem.

The largest number of libraries which had reported disaster had suffered due to floods and heavy rains. This was natural due to the location of the libraries and climatic conditions in the region. After interviewing 23 librarians who had faced floods, it was realized that the information being collected was very repetitive and no new facts were coming to light. Hence it was decided to stop conducting interviews in other libraries which were flood affected. Cases of university, college, public and special libraries were found and examined. Earthquakes had also occurred in the region, both in Maharashtra and Gujarat. Libraries affected by earthquake in Gujarat were identified from the unpublished report of Shah & Surati (n.d.). However many of these libraries were small, and some librarians had changed their jobs. Three libraries affected by the earthquake in Kutch and one library in Maharashtra were contacted. However, a government librarian who was in-charge of District Public Library, Kutch could give a comprehensive narrative about how libraries in Kutch coped with the disaster. Similarly only one library which was affected by vandalism was identified and included. While fire had affected one library in the region, the librarian when interviewed on the phone seemed to be unconcerned about the event and was not willing to spare more time about it. However, two librarians in Maharashtra and one other librarian outside the region did spare some time to respond to a telephonic interview. Two librarians spared time to talk about digital disaster they faced. Thus the ten different disaster incidents were covered through interviews at 33 institutes. (Appendix 4) Twenty three had suffered from floods and heavy rains, four from earthquake, three from fire, two from digital disaster and one from vandalism.

The researcher personally met the librarians included in the sample with the exception of nine librarians who were interviewed on telephone. All interviews took place after
taking an appointment and were conducted in the librarian’s office. The interviews were recorded on a digital voice recorder and were conducted using English, Hindi, Gujarati or Marathi depending on the interviewee’s preference. The actual interviews, excluding preliminary introduction, voice testing etc., lasted from 30 minutes to one hour thirty minutes, the average being one hour. The telephonic interviews took about 20–25 minutes. All these librarians were willing to share the details with the researcher.

4.6: Data Analysis

4.6.1: Questionnaire

As the questionnaires were received, they were numbered, answers coded and data was entered in an MS-Excel worksheet for further analysis. This was found to be convenient as it allowed for sorting and filtering of the data, cumulating it and presenting it in a graphic format. Initially it was decided to segregate the data according to different types of libraries. However, after the preliminary analysis, it was noticed that there was not much difference between the different types of libraries. Further it broke up the data into very small units from which generalisations would have no meaning. Hence the data was presented as a whole. In most cases tables represent numbers and percentages. Three questions had asked respondents for their opinions for which they had to provide a rating score, e.g. Q. 29 had asked their opinion about the importance they gave to different disaster management related activities, e.g. insurance, training etc.; Q. 47 asked them to state their agreement/disagreement to certain statements; while Q. 8 had asked their opinion about the chances of disaster in their library. In analyzing these questions, weightage was given to the different ratings and a final score was prepared for each opinion. These have been presented in the tables. Further details are explained with the appropriate table.

Several factors affect a library’s vulnerability to disasters. While individual questions on location, building etc., were asked, it was thought necessary to create a vulnerability score card taking into account the various risk factors separately identified. Each risk factor present was given a score of 1 and the scores of all 20 risk factors present were totalled for each library. The higher the score, the greater is the vulnerability.

Similarly, a variety of steps need to be taken for disaster preparedness. To assess how prepared a library was to a disaster, each factor present was given a score. 20 factors were considered. Each aspect of preparedness, when present, was given a score of 1 and the score of all factors was totalled for each library to find their preparedness score. The higher the score, the greater is the preparedness.

4.6.2: Narratives

The recorded interviews were transcribed and were translated into English if they were in any other language. Each narrative was heard by the researcher and was written down and then was entered in MS-Word. After the interview was transcribed, it was reorganised into clusters along the lines of the broad areas covered. Once each narrative was organized, they were all consolidated so that an analysis was possible. The narrative description has been organised according to specific disasters like floods in Maharashtra, floods in Surat, earthquake in Gujarat and Maharashtra, vandalism at Pune, Fire at Mussoorie, Panvel and Nashik and digital disaster in Mumbai. Further, the section on floods in Maharashtra was divided as follows: disaster description in general, libraries affected—brief description about the library, preventive measures taken in general, effect on individual libraries—briefly describing the event, damage to these libraries—collection, infrastructure and furniture, library records, people, rescue and recovery process—building, books—sorting, drying and cleaning, and replacing the damaged collection, restoration of services, financial issues, post disaster effects, managing the situation, information and knowledge gained, learning from the disaster—prioritising the collection, training and documentation. Depending on the information available, other sections were arranged in a similar pattern accordingly.

4.7: Disaster Guidelines

The final objective of the study was to develop guidelines and a sample disaster management plan for Indian libraries. A task such as developing a disaster management plan is a difficult one requiring an extensive knowledge base, and the
collaboration of several people. The process also requires a lot of time and effort. The institutional library may be included in the institutional plan in a very general manner and may not focus on the protection and salvaging of materials. Before developing a plan, individual libraries may wish to use a sample plan as an example. International libraries have developed disaster plans which can be used as models by Indian libraries. But plans vary according to local and individual circumstances and needs. The researcher, in her study, did not come across any library specific disaster plan of an Indian library. It is with the intention of helping libraries who wish to develop a disaster management plan that this objective was set.

To achieve this objective, guidelines available in the literature were examined. The contents of disaster management plans of five libraries, available on the net, were analysed. Content analysis is an accepted method for summarizing any form of content by examining the contents of documents. Content analysis, a type of secondary data analysis, is used to analyze text, including, interview transcripts, newspapers, books, manuscripts, and websites to determine the frequency of specific ideas. The results of it allow researchers to identify, specific ideas, concepts, and their associated patterns, and trends of ideas that occur within a specific group.

To understand the Indian situation experts from the field of conservation and salvaging, fire safety and insurance and information technology were consulted. (Appendix 5) Measures suggested by them along with the guidance available in the literature, and content analysis of library disaster plans have been used to develop guidelines and, a sample disaster plan for Indian libraries.

4.8: Strengths and Limitations of the Research Design

The present study was one of the first studies relating to disasters in Indian libraries. Further it is a broad study giving a status report on the region. Disasters vary in type and intensity. An in-depth study of each type of disaster that hits libraries would have made the research unmanageable. Thus a broad overall picture emerges.

Each of the two methods used had their own strengths and weaknesses which are reflected in the study. The use of the questionnaire method enabled the researcher to collect data from a large number of libraries spread throughout the region. But it also resulted in several questions not being answered in the individual questionnaires. Whether this was due to the question not being applicable, or because the respondent did not know the answer, or the question was not understood, or whether the respondent did not want to answer is not clear. The interview, too, had its strengths. It provided a detailed picture of disaster affected libraries. Although most librarians were willing to openly share their experiences; a few were hesitant, particularly if there was some controversy.

Many of the disasters covered by the study had occurred at least five or six years earlier. This time gap may have affected the narratives. All details may not have been correctly remembered, particularly since none of them had documented the event in detail.

The study was able to analyse ten specific disasters, two of which related to floods. A sufficiently large number of flood affected libraries have been covered. For earthquakes, vandalism, fire and digital disaster very few libraries were covered. It was difficult to identify libraries that had been affected by other disasters.

Despite these limitations the study has focused on an important issue. It has brought to light new information. The respondents too have recognised this point, they have become aware of the issue, shown a lot of interest and some have even requested that the researcher share the findings of the study.
References:


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