CHAPTER 7

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7.0 INTRODUCTION

The present era have experienced an enormous production and availability of Library Automation Software. These software are always required to be supported with an Online Catalogue module and the latest trend in this field is that, these artifacts are also supporting the Web-OPAC facility, by which the library catalogue can be browsed over Internet.

Though most of developed countries have automated their libraries well back by early and mid 1980s, libraries in country like India, of course with few exceptions, have just joined in the automation movement. This particular scenario has ignited the software production houses to produce many new library automation software, especially in India. Slim++ (System for Library Information Management, a product of Algorhythms, Pune, India), SOUL (Software for University Libraries, developed by INFLIBNET, Ahmedabad, India), TLSS (Total Library Software Systems, developed by I.T. Solutions Pvt. Ltd., New Delhi, India) and LibSys (a product of LibSys Corporation, New Delhi, India), to name a few. Though LibSys is in the market for last one decade or so, they have recently added the Web-OPAC feature.
Consequently, techniques to investigate how the users of these OPACs search and satisfy themselves must be available to the librarians and information professionals, in order to ensure the implementation of these software, in their libraries. This research, summarized by this dissertation, has begun to address this need by extending the previous work accomplished in a number of disciplines, ranging from Ergonomics to Human Computer Interactions.

7.1 RESEARCH SUMMARY

Specifically, this dissertation has outlined how information collected by the users during the execution of OPAC search, whether they feel satisfied or dissatisfied or become confused.

To fulfill the objectives of the study and to test the hypotheses, two contrasting methods applied in the study are Questionnaire Method, under the quantitative paradigm, and Verbal Protocol Method under the paradigm of qualitative research. The finding of these two methods was analyzed separately and subsequently the findings of the both the methods were compared.

The inter-correlation analysis of quantitative data of the OPAC search satisfaction and the background variables revealed that, with the
improvement of educational qualification, higher professional status, and most importantly, with more experience of the OPAC, the users found the system more satisfactory and user-friendly, as well as, followed the instructions, better; understood the layout, easily; retrieved thorough information, quickly. Users with higher educational qualifications and higher professional status, use more online catalogues and opt for multiple libraries to fulfil their information needs. It was also revealed that the users of the OPAC feel satisfied, not only when the layout is better, but also when it is user-friendly, responsive to their search, suitable for their purpose, quick to retrieve thoroughness and up-to-dated information.

However, while analyzing the qualitative data, it was observed that more detailed information about the searching process could be revealed with the help of Verbal Protocol Method. While comparing the findings of both methods, it was found that the context and user-centred approach of the Verbal Protocol Method, has helped to analyze and interpret the satisfaction, dissatisfaction and confusions of the online catalogue users, more in detail. It was observed from questionnaire data that, experience of OPAC has substantial influence on the users satisfaction, the analysis of verbal protocol data, however, has indicated that, most of users have actually expressed their dissatisfactions while using the OPAC system.
This piece of work has reached to a conclusion that Verbal Protocol Method can be successfully used to assess the users' satisfaction while searching an OPAC system.

The main contribution, of this work, is the implementation of the verbal protocol method for analyzing the OPAC users' satisfaction. While implementing the methodology, this study has developed a scheme of coding (please refer to Table 5.2).

With the help of this scheme the verbal protocol data were analyzed and a generic model of Online Catalogue Searching Process Flow could be developed and presented below as a diagram (Diagram 7.1 Online Catalogue Searching Process Flow).
Diagram 7.1- Online Catalogue Searching Process Flow

This model explains how the online catalogue users conduct their searches. They start with a planning of a step or procedure, then define the type of document they are looking for under which access point, and what document, as well as, action involved in conducting the search. The results of the search then monitored by reading, identifying and examining. After monitoring they may go back to defining process again and conduct further search. However, generally after monitoring they try to evaluate by inferring and may evaluate the results as satisfactory or dissatisfactory.
Preclinical analysis data
how does it affect
in the clinical trials?
It is realistic
to me based on?
After evaluation they may start another planning process or defining the next search. If they feel confused, at the stage of monitoring and evaluating, defining process starts again. This model can be used to analyze the verbal protocols data, to assess the users' satisfaction, while they conduct searches on an electronic information retrieval system to gather information.

7.2 DRAWBACKS

This study, however, has some drawbacks also. Three types of drawbacks were identified: infrastructure related, methodology related and environment related.

7.2.1 INFRASTRUCTURE RELATED DRAWBACKS

During the last one decade few specialized protocol analysis software have come into existence, like PAW (Protocol Analysis Workbench) developed by C. Fisher, and MacSHAPA by P. Sanderson. Both of these software works on Apple Macintosh environment, only. These are not easily available in the market, also. If any of these could be used, the analysis process would have save substantial amount of time. In absence of these, the time consuming manual analysis has been done. Though a special feature of SPSS for Windows ver.10.1.4, called “Read text data” has been used to lessen the burden to draw the bar-diagram.
Hi,

The video should be taken to scale. How about I can return those roughly? 

Best,
Another infrastructure related problem was that, it would have been better if the verbal protocol data could be collected by the video recordings, instead of the audio recordings. However, it was beyond the means of this researcher to get that kind of data. To overcome that, minutes observations were made, while the users are performing the search and a note book, for each step, was maintained.

7.2.2 METHODOLOGY RELATED DRAWBACKS
The main objective of this study was to assess the usability of qualitative research method, to be precise, of Verbal Protocol Method. Therefore, data were collected from 18 participants, which was good enough for this method, however it was felt that, for the statistical analysis of data collected by questionnaire method, the sample size was small.

Another methodology related problem is associated with the verbal protocol method, itself. The major disadvantage of the verbal protocol method is that, it is time-consuming. Another disadvantage is the likelihood that the method of study has some impact on the behaviour under observation.

7.2.3 ENVIRONMENT RELATED DRAWBACKS
It was felt at the research designing stage that the screens capture technique should be used, to see the movements of cursor and the OPAC screen. However, it was not possible to implement the same, as because
all the OPAC terminals of The British Council Library were hosted on dummy terminals. Therefore, screen capture software could not be loaded.

7.3 SUGGESTIONS AND FUTURE DIRECTIONS

The findings of this research have academic and practical values. The verbal protocol method, which is new to Library and Information Science, has been successfully used in the field of Ergonomics, Marine Navigation, Aircraft Traffic Controlling and Human Computer Interactions. This method helps to evaluate and assess the clients or users' need, satisfaction, problems, difficulties, etc. The library professionals are also trying to assess the same for quite a long time, by now. This method will help them to understand the library users, better.

This method offers great potential while designing library web pages, intranets and customized interfaces for various library databases.

This research suggests that further research should be conducted with the help of qualitative methods and especially with verbal protocol method, to find how people find and retrieve information on the Internet and even how do the library users locate a particular piece of information from a book, journal or other library material.

A series of research can also be conducted on different aspects related to electronic information retrieval systems, like Web-OPACs, in-house
databases, library automation software and its interface aspects and a generalized model of information searching process can be developed. It is also suggested to have, at least one, centralized laboratory in India, for this purpose, which shall be well equipped with all necessary software and hardware infrastructure. If such arrangement and series of research can be done, it will not be difficult for the Library and Information Science professional to understand and satisfy their users.