

## **CHAPTER THREE**

### **METHODOLOGY**

This study was designed to examine the information needs, use and expectations of academic staff at University of Malaya in an increasingly digital environment. The aims of the study were:

- a. To determine the current information seeking behaviour of academic staff at the University of Malaya;
- b. To determine the role of the university library in meeting their information needs;
- c. To assess the information needs and expectations of these academic staff in a digital environment;
- d. To obtain input on the facilitators and obstacles to the use of information resources and services, as well as to identify other factors that may encourage the use of such resources.

This chapter describes the methodology used to conduct the study. The chapter is divided into the following sections:

- Research Design
- Instrument
- Population and sample
- Data Collection, and
- Procedure for Data Analysis

## Research Design

The study began with a review of the literature from the 1980's to the currently available resources. The nature of the problem suggested the survey approach as a practical method to conduct the study and to produce the desired results. Busha and Harter (1980), as quoted by Salem (1989), pointed out that survey research "can save time and money, without sacrificing efficiency, accuracy, and information adequacy in the process". They further noted that through the survey research, generalisations could be made about characteristics, opinions, beliefs, and attitudes of the entire population being studied.

Generally, survey research is conducted by interviews or questionnaires. In order to collect data from the large number of academic staff members from all the faculties at UM, the questionnaire was chosen as the data collection method. The questionnaire is considered to be the best means of collecting data from a large group of respondents (Claris Works, 1999). Besides, this method is useful in getting truthful answers as respondent's identities can be kept anonymous and they can answer the questions with confidence. Salkind (1997), who indicated "people may be more willing to be truthful because their anonymity is all but guaranteed" supports this approach. The questionnaire method also provides meaningful and manageable data. Studies by Allen and Gertsberger (1973) and by Rosenberg (1966) have found that asking individuals about their opinion on information seeking through questionnaires could provide data as meaningful as data collected through other methods such as interviews and diaries. This method is also cheaper than one-on-one interviews especially if the sample population is large. It is also an efficient means of collecting information from

the point of view of the respondents and saves time. The nature of this study too did not require qualitative methods, which involve situational, historical or contextual factor data. Based on the literature review, most of the previous research on information needs was also conducted through survey research, and questionnaires were chosen as the tool to collect data. On the basis of the above-mentioned reasons and studies, it is reasonable to assume that the questionnaire is a justified means of effective data collection for the purpose of the present study.

After deciding the research method, the survey instrument was developed, based on the research questions, and guided by findings from literature review. The following section describes the development of the instrument.

### **Instrument**

With the research questions as a basis, various samples of questionnaires were reviewed from other information use studies to facilitate the design the survey instrument. These included Koss's (1996) Kent State University Libraries user survey, the Association of Research Libraries user surveys (Brekke, 1994), Massachusetts Institute of Technology's information acquisition and usage survey (MIT Libraries, 1992), Schwartz's (1989) MIT Library services survey, and Hartmann's (1993) study of anthropologists information needs. Questions related to this study were listed from the samples of questionnaires found through the literature search. The questions were evaluated and modified according to the aims of this study, and an eight-page questionnaire was designed to meet the purpose of this study. The questionnaire included open-ended, close-ended, ratings and multiple-choice questions. Most of the

questions used check boxes for easy responses.

The questions were grouped to gather data in five major areas:

- Section A : Current Information Seeking Patterns
- Section B : Perceptions on Role, Resources and Services Provided by UM Library
- Section C : Information Technology Availability and Usage
- Section D : Information Needs in a Digital Environment
- Section E : Demographic Information

Section A focused on the current information seeking patterns of the academic staff. Three inter-related questions were developed, aimed at identifying the professional work-related activities which required the most information seeking, sources of information used to meet their information needs, and the most important source used to meet their information needs. Two other questions focused on the published information resources used by the respondents in meeting their information needs.

Section B sought to obtain information about current library usage and the perceptions on the available resources and services. Respondents were asked to rate the collection and services provided by the library, and the role of the library in meeting their information needs, opinions on the resources and services that need to be improved, reduced and introduced were also asked.

Section C focused on the availability and usage of information technology among the academic staff. Respondents were asked if they had access to a computer with Internet facilities, and if so, to mark the activities which they used the computer. Another question dealt with the barriers experienced by the respondents when finding

information through the computer.

Section D aimed at highlighting the academic staff information needs in a digital environment. Questions were posed on the awareness and use of digital resources in the respondent's area of specialisation, types of digital resources consulted, barriers in accessing the digital resources and their perceptions towards the use of digital resources if made available by the UM Library. Respondents were also asked if they had created any digital resources, home pages, or placed teaching materials on the Internet. The final question in this section sought information pertaining to the respondent's hopes, expectations and concerns related to their information needs in a digital environment, which the university needed to keep in mind when planning for the future.

Section E dealt with the demography of respondents, seeking information pertaining to their academies/centers/faculties/institutes, current academic rank, and years of teaching experience at the University of Malaya.

A pre-test of the survey instrument was carried out to enhance the validity, clarity and reliability. The questionnaire was sent to a small group of academic staff from various faculties. The returned questionnaires were reviewed, and the final questionnaire was corrected and revised based on the comments of the respondents.

A copy of the final questionnaire is appended as Appendix B.

### **Population and Sample**

To select the population for the study, the *Kalendar Universiti Malaya 1998/1999* was referred to, as it provided a complete list of academic staff from all 17

faculties, academies, institutes and centers at UM. This list was found to contain a total of 1325 academic staff, comprising professors, associate professors, lecturers and language teachers. However as this number was very large, a sample of 328 staff were selected through stratified random sampling. The sample chosen from each faculty reflected the various levels (professors, associate professor, lecturers and language teachers) from each faculty, academy, institute and center. The sample represents 24.75% of the population. Table 1 shows the distribution of the sample by academy/center/faculty/institute.

**Table 1**

**Proportion of Sample Respondents by Academy/Center/Faculty/Institute**

Academy/Center/Faculty/Institute	No in Population	No. in Sample
Academy of Islamic Studies	55	16
Academy of Malay Studies	30	8
Center for Foundation Studies in Science	31	7
Cultural Center	5	1
Faculty of Arts and Social Science	114	26
Faculty of Business and Accounting	38	10
Faculty of Computer Science & Information Technology	33	7
Faculty of Dentistry	67	18
Faculty of Economics & Administration	65	16
Faculty of Education	89	22
Faculty of Engineering	112	28
Faculty of Language & Linguistics	114	37
Faculty of Law	32	7
Faculty of Medicine	279	71
Faculty of Science	211	48
Institute of Postgraduate Studies and Research	9	3
Sports Center	11	1
Total	1325	328

## **Data Collection**

A total of 328 printed questionnaires were sent by campus mail to the selected academic staff from the 17 faculties at University of Malaya, together with a cover letter (Appendix A) and a self-addressed return envelope. The cover letter described the purpose of the study, stressed the importance of completing the questionnaire and assured respondents that their identity and answers would be kept anonymous. To keep track of the returns, the questionnaires were given identification numbers so that a reminder could be sent if the questionnaire was not returned promptly. These identification numbers were known only to the researcher, and were not disclosed to anyone. After an initial mailing and one follow-up mailing, 113 responses were received, representing a 34.45% rate of return. Five subjects could not participate as they had either retired or were on study leave and returned the questionnaires unanswered. Academic staffs from two centers, the Cultural Center and Sports Center, did not respond to the questionnaires.

## **Procedure for Data Analysis**

The returned questionnaires were collected, and the data was entered and analysed using the *Statistical Package for Social Sciences (SPSS) Version 9 for Windows*. As this was an exploratory study, descriptive statistics and cross-tabulations were used to report the findings. The detailed results and discussion of the major findings are presented in Chapter 4 that follows.