

CHAPTER III



DATA EXERCISE

Need Assessment and Priority Setting of Accessing Information Services for Students of the College of Public Health, Chulalongkorn University

3.1 Introduction

The College of Public Health was established at Chulalongkorn University in 1991. Public Health issues of local, national and international priority were addressed as the mission of the College. A specific commitment has been made in developing multi-disciplinary knowledge based on decision making, problem – based learning, problem solving, and preparation of public health manpower to cope with their changing environments, strengthening the capacities of health personnel, and provisions of services to the stakeholders (College of Public Health, 1993a). The learning process is primarily based on problem solving where each student focuses on his or her present work in order to undertake a creative problem-solving process. The objective of this type of learning is to provide the students with the ability to predict future trends and develop alternative changes and optimize future health within the resource constraints of the community.

The strength of the College is its flexibility to mobilize resources to meet changing Public Health needs. The College of Public Health can pool existing multi-disciplinary resources from within the university, other institutions within the country and resources outside the country.

The program also emphasizes the development of multi-dimensional competency (i.e. analytical competencies, communication competencies, policy development and program planning competencies, computer competencies etc.) (Benjaporn Rajataramya, 1996) required to meet changes in public health needs and health for all (HFA). The program also includes increasing capacities for the development of the health care delivery system, practical skills, in addition to increasing capacities for strategic planning & management (CPH, 1993b), with the goal of developing student's work and public health organization as a whole.

To achieve the objective of the learning programs of the College, academic resources in the form of information databases, and the College library are key factors for supporting learning and teaching more efficiency. This is extremely important for academic resource development. The information and databases as academic resources include new data from research projects, data from the Ministry of Public Health, other government and private sector institutions and data from other countries. The library collects relevant documents and a computer system linking the College with essential data sources has been developed. Information and knowledge existing in other countries is tapped through the University Internet system.

All these imply that the researchers, educators and students, have their own needs and therefore the librarian should design services to accommodate them and serve their needs. Ludwig (1995) stated that “ we all have information or cultural needs and in most towns the library is the best organization to meet these needs”. This is true for academic libraries of which every student, lecturer and researcher in the organization will have requests to meet requirements and needs that the library can, and should, satisfy. How to determine their need is the question we are trying to answer.

A needs assessment study is the best tool for identifying these needs. A need is the perceived improvement given information about current status (Isaac & Michael, 1982). The ambition of the librarian must be to identify the needs of users in a timely manner in order to ascertain the direction for improving and supporting the program.

Therefore, this needs assessment study was undertaken to identify the information needs and satisfaction level of the students who are the main clients of the library. And the majority of printed material provided concerning with the learning programs. It represents baseline data for program planning. If there seems to be any problem, an appropriate solution is sought. The results will identify the needs of the users and can be establish priorities for improving the service delivery of the Information Center of the College of Public Health, Chulalongkorn University.

3.2 Objective of data exercise

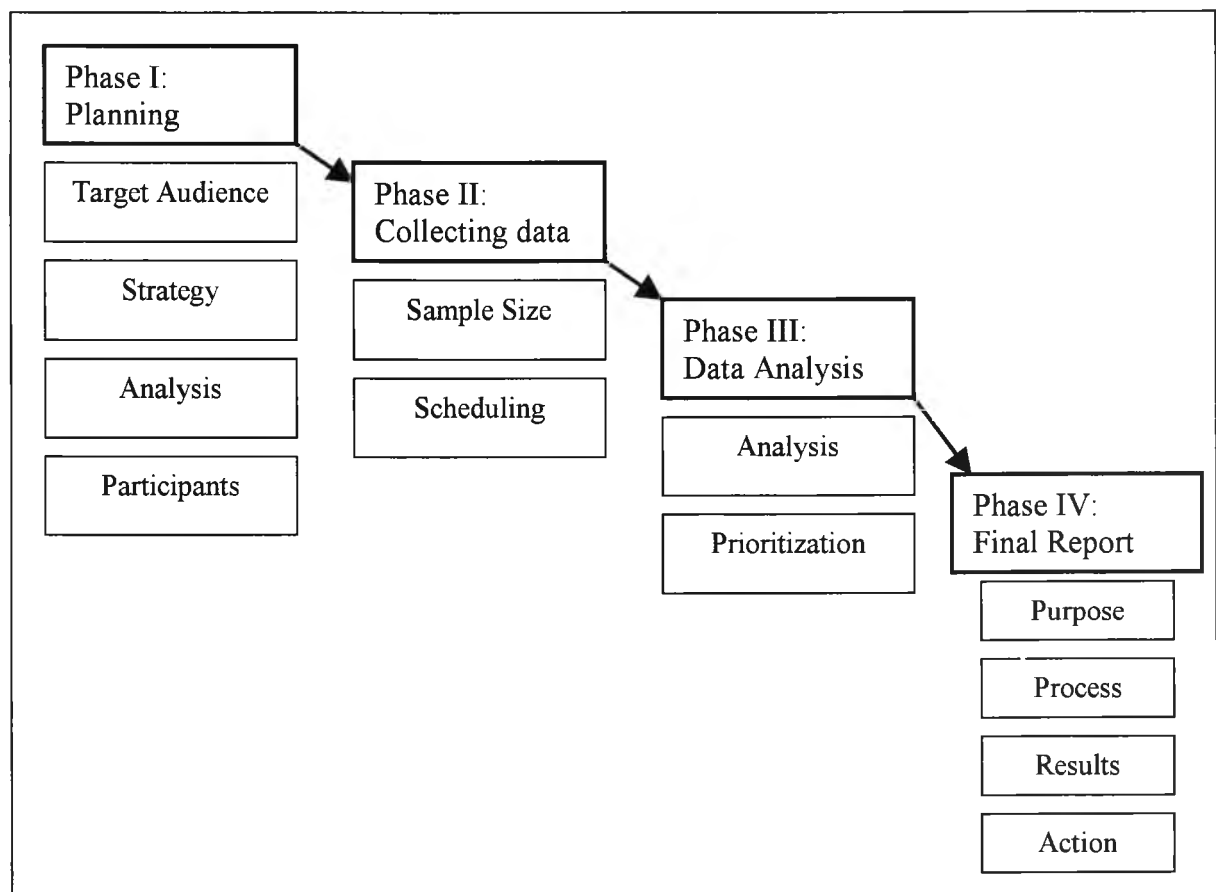
The objectives of this study are the following:

1. To identify the information needs and satisfaction level of students with information services development.
2. To set the priorities of services in the Information Center of the College.

3.3 Methodology

In this data exercise, the researcher applied the needs assessment process from Memp's theory. In this process, there are four phases for conducting a needs assessment.

Figure 3.1 Needs Assessment Process



Source: Memp, Jerrold E, Morrison, Gary R. & Ross, Steven M., 1998

- *Study Population and Sample*

The target population of this study is both in-house & LWP students who enrolled in courses during academic year 1997-1998. There were 66 students. The LWP students are from Chonburi Province, Ayuttaya Province, Khonkaen Province, Roi-et Province, Yasothon Province, Ubonratchathanee Province and Payao Province. Mostly, they are public health personnel; doctors, nurses, pharmacists, dentists, public health educators, etc. The purpose of the selection is that they are directly involved with the learning program and services of the information center of the College, because they have to find information relating to his/her study or thesis. And they can give more ideas, suggestions, and indication of satisfaction level concerning required services for their purpose.

- *Analysis;* SPSS software was used for analyzing. For calculation of the prioritization score for services, the following score system was applied.

Mean score for each service can be calculated as follows;

$$\begin{aligned} \text{Mean score for each service} &= \frac{\text{Total score for the service}}{\text{Total number of respondents}} \\ \bar{X} &= \frac{\sum X}{n} \end{aligned}$$

The mean score range is from 1 to 5. Mean score for important service is greater than 3.5. Mean score for neutral service is between 2.1 and 3.5. Mean score for less important service is given as 2 and lower. (Adapted from Mueller, 1986)

- *Instrument*;
- *Questionnaire*; this included open-ended questions and closed-ended questions. Open-ended questions allowed the respondents to convey the fine shades of their attitudes concerning their satisfaction, e.g. ideas, suggestions. Some parts of questionnaire were modified from a study of the St. John's Medical Library needs assessment survey. (Crabtree, 1997). On the other hand, closed-ended questions presented two or more alternatives and the respondents selected the choice closest to their own view and some questions were set in an ordering scale. This is a simple tool to gather required data on public health information needs. The questionnaire consisted of 6 parts:

Part I: General information about users, e.g. gender, status and general information regarding their utilization of the Information Center of the College, e.g. duration of using the Information Center.

Parts II, III, IV: There are closed-ended questions to identify information needs and satisfaction level of the services provided by the Information Center. The respondents had to mark their choice e.g. satisfaction level; very dissatisfied, dissatisfied, neither dissatisfied nor satisfied, satisfied and very satisfied.

Part V: There are closed-ended questions to find out the priorities for provided services and further services of the Information Center. The choice was set in the ordering scale; 1 = Least

important, 2 = Less important, 3 = Neutral, 4 = Important, and 5 = Most important.

Part VI: There are open-ended questions to find out the suggestions, ideas, and comments e.g. “What are the factors obstructing access to information services?”.

Both qualitative and quantitative approaches were utilized for data collection. A total of 66 questionnaires were distributed to both the In-house students and the LWP students (Chonburi Province, Ayutaya Province, Khonkaen Province, Roi-et Province, Yasothon Province, Ubonratchathanee Province and Payao Province) in November 1998. For LWP students, the questionnaires were distributed in envelopes with a cover letter from the student's advisor. Cover letters explained the reason for the Information Center's needs assessment survey, politely encouraged participation in the survey process and gave a return date of within 4 months after questionnaire delivery, and thanked survey recipients for their cooperation. Self-addressed return envelopes were provided. Most (92.4%) of questionnaires were returned (see table 3.1).

Table 3.1 Response rate from questionnaire

Student Status	No. distributed (OUT)	No. returned (IN)	Percentage (%) of response rate
• In-house	8	8	100
• Learning at the workplace (LWP)	58	53	91.3
Total	66	61	92.4

- *Prioritization*; serious suggestions were the main point for consideration.

3.4 Results of the study

The findings from the questionnaire method used in the study were analyzed and summarized according to the following topics:

- **General information**

There were 61 respondents from 66 students. Most of the respondents were female students 59 % and 41 % were male students (Table 3.2).

Table 3.2 Gender

Student	Frequency	Percentage (%)
Male	25	41
Female	36	59
Total	61	100.00

- **Library uses**

Table 3.3 presents student library uses classified by type of student; In-house students and LWP students. Most (66.00%) of LWP students never used the library facilities. The rest of LWP students used the library only 1-2 times / week, most of them were students from Chonburi. The reason might be this province is closest to Bangkok. They came to meet their advisor and at the time of the assessment were preparing the literature for writing proposals or thesis. In-house students use library 5-6 times/week (50%).

Table 3.3 Frequency of Library Use

Frequency of Library use	In-house student		LWP student	
	Number	%	Number	%
• Never	-	-	35	66.00
• 1 -2 Times/Week	2	25	18	34.00
• 3-4 Times/Week	2	25	-	-
• 5-6 Times/Week	4	50	-	-
Total	8	100.00	53	100.00

- **Satisfaction Level**

This part describes only students who have used library services. Table 3.4 presents the satisfaction level of both student groups with the 7 services provided in the library.

In-house students were satisfied with both CD-ROM Medline (62.5%) and Internet searching or World Wide Web searching (50%). The most useful service and most satisfying for in-house students is book borrowing and second is accessing literature/information from the University Library Network (Chulalinet) 87.5%. Interlibrary loans and asking for full text of document services, were sources of dissatisfaction (100%) because targeted libraries were tardy in document delivery and in some cases the documents were not available in Thailand. They were dissatisfied (100%) with the last service which is gathering bibliographies on a specific subject.

Interlibrary-loan service, asking for full text and gathering bibliographies on specific subjects were services that the In-house students seldom used. However, when they did use these services, they were dissatisfied. The reason for this dissatisfaction is spending too much time waiting for the paper from abroad, in cases where the paper was not available in Thailand. Even for papers available in Bangkok, students do not want to make a photocopy or take some time finding the material themselves. This limits learning to just the Information Center at the College without learning from other library networks with which the College has connections.

The figures for library use (Table 3.3) show that 34% of LWP students came to use service provided but their satisfaction level is quite low particularly with the University Library Network; only 22.2% were satisfied; 66.7% rated the service as fair. Literature search from CD-ROM (Medline) is very useful for them and the satisfaction level is high (54.5%). The reason LWP students have never used Medline is the limitation Internet establishes; high expense, not available, difficult connection, organization policy did not support it and, during that time (the questionnaire was distributed 2 years ago), it was not necessary to use literature on Medline.

Table 3.4 Satisfaction level with library services provided by the Information Center (In-house students, n= 8, for LWP students, n =18)

Services	Degree of Satisfaction for those who used library services (%)					Total
	Very satisfied	Satisfied	Fair	Dissatisfied	Very Dissatisfied	
In-house students						
• Literature search from CD-ROM	1 (12.5%)	5 (62.5%)	2 (25%)	-	-	8
• Literature search from Internet, WWW	3 (37.5%)	4 (50%)	1 (12.5%)	-	-	8
• Literature search from University Library Network	-	7 (87.5%)	1 (12.5%)	-	-	8
• Book borrowing	7 (87.5%)	1 (12.5%)	-	-	-	8
• Interlibrary-loan service	-	-	-	4 (100%)	-	4
• Full text of journal delivery	-	-	-	4 (100%)	-	4
• Gathering bibliography on specific subject	-	-	-	5 (100%)	-	5
LWP students						
• Literature search from CD-ROM	-	6 (54.5%)	4 (36.4%)	-	1 (9.1%)	11
• Literature search from Internet, WWW	1 (7.7%)	4 (30.8%)	6 (46.1%)	1 (7.7%)	1 (7.7%)	13
• Literature search from University Library Network	-	2 (22.2%)	6 (66.7%)	-	1 (11.1%)	9
• Book borrowing	3 (30%)	4 (40%)	2 (20%)	-	1 (10%)	10
• Interlibrary-loan service	-	4 (80%)	1 (20%)	-	-	5
• Full text of journal delivery	1 (50%)	1 (50%)	-	-	-	2
• Gathering bibliography on specific subject	-	1 (50%)	1 (50%)	-	-	2

In the next part of the questionnaire, students were asked to tell which services were adequate or inadequate. In-house students responded that “ the service mind of library staff was adequate (100%), with timely assistant to users of library staff (100%), and helpful preparation of technology for searching (100%). It is interesting to note that every in-house student mentioned library staff was helpful and very friendly. Books are their needs (62.5%) most of the time. Publications that they like to use the most are reference books (62.5%).

LWP students said that the service mind of library staff (55.5%) and speed to serve users are adequate (55.5%). Publications that they would like to use the most are research publications (62.5%).

Table 3.5 Sufficiency of information needs of users (In-house students, n=8, for LWP students, n=18)

Services	In-house students	LWP students
	Adequate (%)	Adequate (%)
• Number of book for lending	7 (87.5%)	8 (44.4%)
• Duration for lending (1wk)	3 (37.5%)	1 (5.5%)
• Service mind of Information center staff	8 (100%)	10 (55.5%)
• Speed to serve users of information center	8 (100%)	10 (55.5%)
• Preparation of technology for searching	8 (100%)	5 (28%)
• Physical environment provided	6 (75%)	6 (33.3%)
• Notification of new books/new information	7 (87.5%)	4 (22.2%)
• Does it meet your needs	5 (62.5%)	10 (55.5%)

Table 3.6 Information needs of users (In-house students, n=8, for LWP students, n=8)

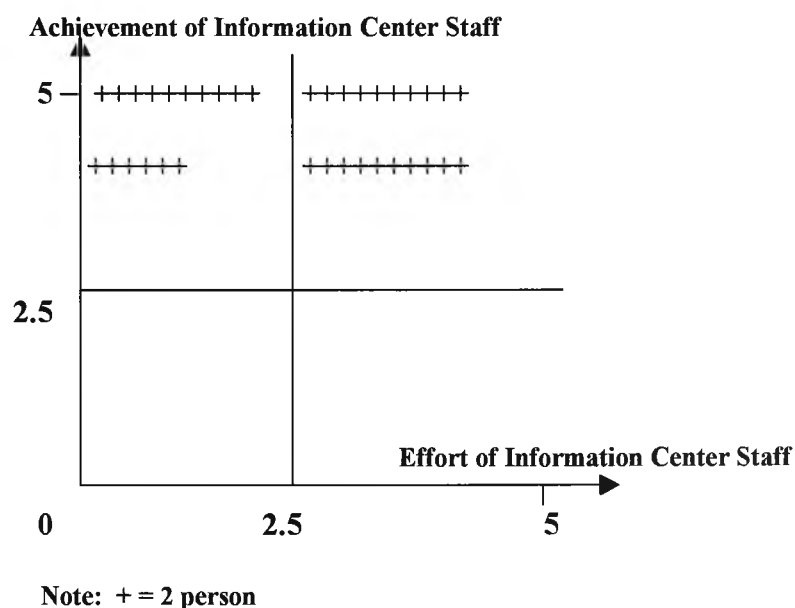
What kind of publications do you want to use the most?	In-house students	LWP students
• Reference books	5 (62.5%)	3 (37.5%)
• Research publications	3 (37.5%)	5 (62.5%)
Total	8	8

The following figure has shown “A degree of achievement versus effort of the Information Center staff”. It was found that the methodology of information dissemination is in the satisfied level in cluster 2 (*high achievement – high effort*) which is an appropriate service and appropriate investment and effort.

A degree of achievement versus effort approach divided in to 4 clusters.

- Cluster 1 (Positive level) = *high achievement – low effort*, in terms of the use of *good methodology* to achieve the objective
- Cluster 2 (Positive level) = *high effort – high achievement*
- Cluster 3 (Negative level) = *low effort – low achievement*
- Cluster 4 (Negative level)= *high effort - low achievement*.

Figure 3.2 A Degree of Achievement versus Effort



The priorities of services

The author found that accessing information or literature from multiple sources in multiple formats; CD-ROM (Medline), Internet, WWW and the University Library Network is the first priority for services provided for both groups students (In-house students $\bar{X} = 4.37$, LWP students $\bar{X} = 3.05$). Sharing & manipulation of information with others is the second priority service for both students (In-house student $\bar{X} = 3.75$, LWP students $\bar{X} = 2.67$). The third priority of services for In-house students is computer-based learning & multimedia ($\bar{X} = 3.25$). Asking for full texts from abroad, is the third priority of services for LWP students ($\bar{X} = 2.66$).

Table 3.7 : Priorities of services (In-house students, n=8, for LWP students, n=53)

Priorities scale 1= Least important, 2 = Less important, 3 = Neutral, 4 = Important, 5 = Most important

Services	Priorities scale (No. of respondents)					Mean
	1	2	3	4	5	
In-house						
• Program for tutoring by using audiovisual materials	1	2	2	2	1	3.00
• Computer-based learning & multimedia	-	3	1	3	1	3.25
• Sharing of information	1	-	1	4	2	3.75
• Accessing information from multiple sources; CD-ROM, Internet, University Library Network	-	-	1	3	4	4.37
• Full text from abroad	2	1	2	1	2	3.00
LWP students						
• Program for tutoring by using audiovisual materials	13	17	4	3	7	2.00
• Computer-based learning & multimedia	9	6	12	12	5	2.45
• Sharing of information	1	12	12	14	5	2.67
• Accessing information from multiple sources; CD-ROM, Internet, University Library Network	8	5	1	9	21	3.05
• Full text from abroad	10	1	14	8	11	2.66

As will be discussed later, responses given to the open-ended questions were reviewed thoroughly by the library staff and many recommendations were implemented or considered for implementation.

3.5 Discussion

Sixty-six questionnaires were distributed in November 1998 to the CPH students who enrolled for courses during the 1997-1998 academic year. The students were classified into two groups; In-house students and LWP students. To identify the information needs and satisfaction level of students for information services development and to set the priorities of services in the Information Center of the College, the questionnaire responses were carefully analyzed. There were 61 respondents from 66 students. Most questionnaires (92.4%) were returned (In-house students 100%, LWP students 91.3%). The majority of the respondents represented LWP students (83.3%); 54.5% were female students.

It was discovered that almost of In-house students (50%) use the library 5-6 times per week. On the other hand, LWP students use the library only 1-2 times per week (34%), because of the distance, time and expense of traveling which is an obstructive factor in their use of the library. The second factor is they did not need to use information at that time. Some students used library facilities nearby their area, especially university libraries. If their area has no university library, they use their office's library or a local bookstore. In this case, the college should have a connection or network with other university libraries to fulfill the students needs and to make access more convenient for them. That is the way to share academic learning resources.

Satisfaction level results describe only students who have used library services (In-house students, n=8, for LWP students, n=18). In general, both student groups

responding indicated that they were satisfied with CD-ROM searching (In-house students 62.5%, LWP students 54.5%). The students indicated Medline database should be a first priority of service (In-house students $\bar{X} = 4.37$, LWP students $\bar{X} = 3.05$ in Table 3.7) because it is a famous medical and public health database. They are familiar with searching. It is also the first priority database for introducing computer & literature searching class. The Information Center must communicate with other useful databases for them or cooperate with teachers who are responsible for teaching preparation.

The last item included on the survey was an open-ended question, which asked for comments. Library staff wanted to receive as much feedback as possible, and hoped that respondents would use the space for comments to address topics that were not assessed in the survey. In most cases, respondents used the comment section to thank library staff, and encourage them to keep up the good work, and to suggest other services to be provided (i.e. Newsletter from the library on new services or leaflet promoting seriously library use). It should be noted the respondents appreciated with the library staff very good manner of service and very helpful attitude. All comments were reviewed by library staff; whenever possible, the ideas presented were taken into consideration during library planning processes.

3.6 Lessons Learned

The researcher analyst has learned from this data exercise the following;

- Some respondents did not understand the meaning of words or vocabulary in this study. It confused them in choices and they gave up responding. Therefore, definition of specific words or vocabulary used in the study is required and should be included in the introduction of the questionnaire.
- The survey process has not been finalized for this study. Responses to the needs assessment survey are the only baseline data regarding the library needs of students. Future studies of known user and presumed non-user groups could provide additional data from the facilitator at the workplace, who is the medical and public health field person, directly or indirectly, involved with the study and who has to take care of and give suggestions to students. They will have more ideas of required services for the users at the workplace etc. Some needs assessment questions used in this study could be modified in future assessments to gather more specific information from respondents.

3.7 Recommendations

The researcher would like to focus only on the priorities of services. It was found that both student groups identified accessing information from multiple sources; CD-ROM, Internet, University Network as a first priority service for the Information Center; see Table 3.7 They think that is very useful for supporting learning. From this

point, the researcher is concerned about how to promote this service to make it more useful and looking for ways to improve the dissemination of information to overcome the distance obstacle. Instruction in how to use and what is the University Library Network service in non-printed format (i.e. CD-ROM, on WEB PAGE) is one possible method to disseminate and promote the service for the students. That would also fulfill needs of instructions to enhance their understanding in Computer & literature searching class.

Therefore, Computer Assisted Instruction (CAI) on how to search and how to access information from Internet, CD-ROM and the University Library Network will be a proposal for consideration.

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