

A KNOWLEDGE COMMUNITY OF INTEREST PORTAL THAT
FACILITATES KNOWLEDGE SHARING INITIATIVES IN PUBLIC
LIBRARIES

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CERTIFICATION OF APPROVAL

**A Knowledge Community of Interest Portal that Facilitates Knowledge Sharing
Initiatives in Public Libraries**

by

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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified on the references, and that the original work contained herein have not been undertaken by unspecified source or persons.



NUR HALIZA BINTI MD. ALI

ABSTRACT

This dissertation report was prepared for final year project Part B. This project mainly focuses on the development of knowledge community of interest portal that facilitates knowledge sharing initiatives in libraries among public libraries' users. Currently, although library is well-known to be the center of knowledge repository, not many libraries has implemented knowledge management concept within the library itself. There is lack of knowledge sharing platform such as virtual community portal for library users that allow knowledge to be shared among patrons as well as patrons and librarians. For FYP Part A, student had distributed survey questionnaires at selected public libraries to gather and collect useful information regarding the current situation in public libraries. Along the way, research on relevant materials relating to the project such as knowledge management concept, architectures, relevant models, technologies and applications has also been done in order to get a clear understanding. At the end of final year project Part B, student is expected to come up with a complete knowledge management application for libraries in a form of knowledge community portal, equipped with necessary functionality that can facilitates knowledge sharing initiatives in public libraries. This knowledge community portal will be developed based on information collected and research done during FYP Part A and FYP Part B.

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CHAPTER 1: INTRODUCTION

1.1. Background of Study

Knowledge management has emerged into becoming a critical tool for businesses nowadays. Knowledge management (KM) is the name of a concept in which an enterprise consciously and comprehensively gathers, organizes, shares, and analyzes its knowledge in terms of resources, documents, and people skills. KM involves data mining and some method of operation to push information to users.

Without realizing it, KM concept has been applied over the years but only in informal manner. Before exploring the power of KM, organization must be able to differentiate “knowledge”, “information” and “data”. This is because, these words has been used interchangeably.

According to Xiaoming Cong and Kaushik V. Pandya (2003),

In general, data are raw facts. For data to be of value, however, they must be processed put in a given context) to obtain information, which decision can be made. Knowledge is perceived as meaningful information.

Although knowledge management concept had been explored and used extensively in many private sectors leading companies, knowledge management in library area is still a new thing that should be taken seriously by library management. Knowledge management is a viable means for library to improve their services in managing and disseminating resources stored in the library. Libraries are like human organizations which subjects to influences that must be dealt with. As a result, the knowledge and expertise of library staffs needs to be seen as the library’s greatest asset (Maponya, 2004). Knowledge management can help to promote knowledge sharing initiatives in library to the next level. In this era of technology advancement, to survive or thrive, library should constantly gauge and cater to users needs (Shixing Wen, 2005).

A community of interest is one of the ways to provide to library users and library staffs as knowledge sharing platform. It can be done by incorporating the concept in a virtual community or knowledge community portal. Community of interest is defined as a group of people connected to each other by a need to solve common problems, develop skills and share common practices. Virtual knowledge community is a community of people sharing common interests, ideas, and feelings over the Internet or other collaborative networks (Creotec, 2006). This project aims to integrate these two concepts to provide a knowledge sharing initiatives in public library which will produce a knowledge community of interest portal.

This knowledge community portal hopefully will be able to provide better library experiences to library users and staffs where not only they can get knowledge but also share and disseminate knowledge or information that they have to other users regardless where they are and who they are. Knowledge community portal will be able to provide strong people-to-people connections between library users and staffs, indirectly improve communication aspects among them. It will provide both group based capabilities without neglecting the personal aspect where as much as possible services will be tailored to the interest and need of the users.

1.2. Problem Statement

Libraries are well-known as a knowledge repository to its users which consists of various types of materials from paper-based (books, journals) to audio and video materials. However, there is lack of knowledge sharing initiatives within the library between library users and staffs. The routine nowadays in the library is that, users come in, find their books and check-out the books. No sharing knowledge initiatives took place and sometimes not even a single communication.

Not many public libraries are equipped with virtual community or knowledge community portal. Even if they have one, it is usually more into searching mechanism not about sharing knowledge initiatives. According to Robertson and Reese, most of digital libraries are nothing but documents and search tool and it should not be just that. They

further added that less attention has been paid to allow library users and library staffs to relate themselves in a more valuable ways.

With that, no suitable ways to do this other than knowledge community of interest portal, which will be equipped with not only search mechanism but other tools that can provide exchanging knowledge and information, and personalized page for all its users.

1.3. Objectives and Scope of Study

1.3.1. Objectives

For FYP Part A, the objectives were:

- To analyze current situation in public libraries to see whether knowledge management concept existed or not as well as to observe flow of knowledge sharing in the libraries.
- To analyze similar knowledge communities portal in libraries if existed or other knowledge communities portal in different domains.
- To propose ways to improve the current situation in a form of necessary system requirements for the portal.
- To design possible system architecture for the portal.

For FYP Part B, the objectives are:

- To design web interface for the knowledge community portal and finalize system architecture for the knowledge community portal.
- To develop the knowledge community portal equipped with necessary functionalities.
- Perform unit testing, integration testing and user testing to ensure knowledge community portal work as intended.

1.3.2. Scope of Study

Mainly, this project focuses on developing a knowledge community of interest portal which enables knowledge sharing and dissemination within the public libraries in Malaysia. The scope of research works will focus on these three main aspects:

- Knowledge sharing
- Knowledge sharing initiatives in library
- Virtual community and Communities of Interest in library

2.0. CHAPTER 2 – LITERATURE REVIEW AND THEORY

2.1. Introduction

According to Davenport and Prusak (1998), knowledge is defined as a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. Usually, data, information and knowledge term are commonly used interchangeably. To clear the air, data is raw facts which if processed by giving context will turn it into information. Knowledge is perceived as meaningful information. Xiaoming Cong and Kaushik V. Pandya (2003) points out that knowledge is an understanding, and one gains through experience, reasoning, intuition and learning.

Knowledge is often classified into two types: explicit and tacit knowledge. Polanyi (1966) explained that tacit knowledge is highly personal and hard to formalize, making it difficult to communicate or share with others. While according to Nonaka and Takeuchi (1995), explicit knowledge is codified knowledge that can be transmitted in formal, systematic language.

Knowledge management is a new concept that requires linkage of information with information, information with activities and information with man in order to realize the sharing of knowledge (Shanhong, 2000). Charles T. Townley (2001) defined knowledge management as the set of processes that create and share knowledge across an organization to optimize the use of judgment in the attainment of mission and goals. Knowledge management had also been defined as the process of transforming information and intellectual asset into enduring value by connecting people with the knowledge that they need to take action, when they need it (Hawkins, 2001). Hawkins further added that the idea of knowledge management is on unraveling individual know-how and applying it to explicit driven processes so that the right knowledge is available to the right people at the right time. From the two definitions, one can conclude that knowledge management is a concept that provides connection between information, process and people in order to initiate knowledge sharing.

As mention earlier, knowledge is classified into two types – tacit knowledge and explicit knowledge. Each of this can be converted to one another. Nonaka and Takeuchi (1995) believe that the knowledge creation process is a clockwise spiral if viewed as a continuous learning process. Figure 2.1 show the knowledge conversion process. This process is well known as SECI Model which consists of four phases; socialization, externalization, combination and internalization. Many experts had used this model to come up with knowledge management solution.

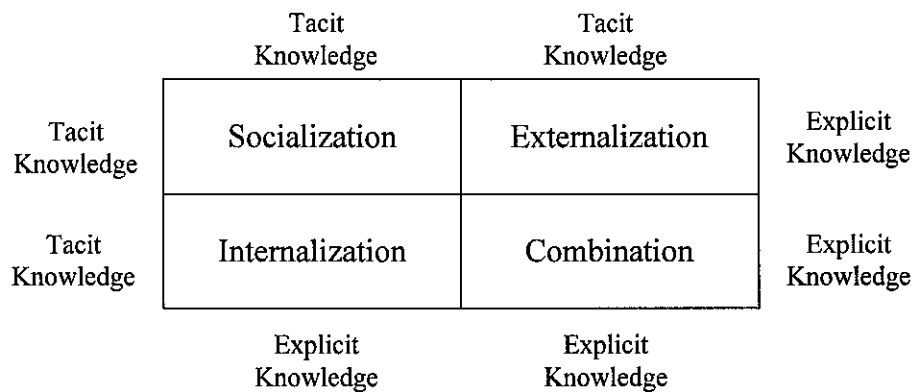


Figure 2.1: SECI Model

Although knowledge management is a new concept to public sector, it is been implemented quite heavily in private sector. Several private organizations have undertaken work in KM and prove that their investment is worth every cent. For example, Xerox have developed a Web-hosted repository of best practices for managing technical knowledge, named Eureka which brings the company to cost reduction up to 10%. Same goes to famous car manufacturer, Ford who implemented a Best Practice Replication system to recognize, capture and share cost-saving and process improving practices among its 38 assembly plants (KM case studies, 2004) resulting the company to save up to \$100 million per year.

2.2. Virtual Community, Communities of Practice and Communities of Interests

What is virtual community (VC)? Virtual community is a community of people sharing common interests, ideas, and feelings over the Internet or other collaborative networks (Creotec, 2006). Some might called it online communities, while some called it e-communities. For Gupta and Hee-Woong (2004), they define virtual communities as places on the web where people can find and then electronically talk to others with similar interest. Different people have different definition to virtual communities. However, Gupta and Hee-Woong (2004) had summarizes several definitions from different perspectives and comes to this conclusion, almost all of the definition share four common attributes, which are:

- Community – group of people who joined VC
- Location – VC provides a place for social and economic development
- Bonding – people in VC form personal relationship with others in the community
- Shared Objective / Purpose – VCs have central purpose

Virtual communities can exist in discussion groups, chat rooms, listservs, listprocs, and newsgroups. Basically two common types of knowledge community are Communities of Practice (CoP) and Communities of Interest (CoI).

Lave and Wenger (1991) first introduced the concept of a Community of Practice. According to Wenger (1998), communities of practices is a joint enterprise where exist mutual engagement that binds all members together into social entity which produced shared repertoire of communal resources that members have developed over time. The value of the communities of practice lies in its ability to connect personal development and yield short-term and long-term benefits to both the organization and the individual community member (Alton Chua, 2002). Usually, communities of practice are link to a group of professionals working under the same domain which expose to a common class of problems, pursuing common solutions (Peter and Johnson-Lenz, *Awakening Technology*). Among companies that provides communities of practice within their

organization are Xerox, Texas Instruments and National Semiconductor. These communities of practice provide technical knowledge to support products and services provided by these companies.

As mention earlier, Xerox has their own version of communities of practice known as Eureka, a Web-hosted repository of best practices for managing technical knowledge. In 2002, Eureka has already stores about 50,000 products fixes which had helped solve 350,000 service problems and saved Xerox approximately \$15 million in parts and labor in the previous year (PC Magazine, March 2002). While for National Semiconductor and Texas Instruments, they both have developed websites somewhat similar to what Xerox has. In National Semiconductor websites, they have this section called Analog University, a resource center which provides access to reference documents, design guides in Library, Technical Support, free on-line analog seminar in Theatre and also an on-line lab.

In the other hand, CoI is defined as a community of people with similar interest or passion, whereby these people exchange ideas and thoughts about the given passion despite of their backgrounds, position or geographical locations. One might wonder the difference between CoPs and CoIs. According to Fischer (2001), CoPs are homogenous design communities while CoIs are heterogeneous design communities. This is because CoPs consist of practitioners who work as a community in a certain domain undertaking similar work while CoIs are consists of members with different background but with similar objectives, passions or aims.

Example of CoIs are Bookcrossing.Com and NIMHE website. Bookcrossing.Com is an example of communities of interest whereby it gathers individual from different background from all over the world which have one common interest – books. It is an on-line book club promoting bookcrossing; the act of leaving a book in a public place to be picked up and read by others, who then do likewise. This website provides its members notifications on latest book caught, latest book released, latest news on

bookcrossing.com, list of book that had been released, search for other member(s), online discussion forum and email discussion group.

NIMHE website is an online knowledge community where people can exchange knowledge, information and experiences relating to any aspect of mental health. It also provides people to people connection where users can search members and view their profiles, join special group interest to collaborate and share work, listings of documents, journals, articles, websites available related to mental health, notify with current news and events happening.

2.3. Knowledge Sharing and Virtual Community in Library

The concept of knowledge management is always allied with knowledge sharing initiatives. Promoting knowledge management is indirectly asking public libraries' users and staffs to share their tacit or implicit knowledge with one another. Although, it is hard to document any positive results of applying knowledge sharing tools and philosophies, many of us believe strongly that knowledge sharing can positively influence organizational performance (Christensen, 2005).

According to Tang Shanhong (2000) knowledge management in libraries should be focused on research and development of knowledge, knowledge bases creation, knowledge sharing between library staff and its users, library staffs training and speeding up explicit processing of the implicit knowledge and realizing of its sharing. He also further added knowledge management in libraries should have the following characteristics:

- (1) Human resource is the important part of KM in libraries. Library staffs' quality should be improved and made it as library's asset.
- (2) Library should focus on promoting knowledge innovation, act as a bridge to turn scientific knowledge to productive act. Knowledge management in libraries is to promote relationship in and between libraries, between library and user, to strengthen knowledge networking and to quicken knowledge flow.
- (3) Use information technology to enlarge knowledge acquisition by having computer networks and knowledge warehouse which provide knowledge storage for retrieval, sorting and security of knowledge.

Again, Wei Lee (2005) had also emphasis on above mentioned characteristics which he called key areas of library services that can be improved. Public libraries should also develop means to capture all tacit knowledge that is of importance to their users, their organizations, and to the internal operation of libraries. This tacit knowledge along with explicit knowledge should then be inventoried, archived, indexed, frequently updated, and made accessible in digital form. He also further added that the most important is to provide users with a variety of quality services in order to improve the

communication, use and creation of knowledge. This is where information technology comes into the picture.

Problem of information glut can be addressed by having certain technologies, applications or systems that can help library users accessing this information in a more customize way. Web portals, on-line communities and virtual communities are among the ways that can be used to realize this. According Sun Lee (2006), in the knowledge sharing perspective, online communities provide the space to share knowledge in a certain category of interest for Internet users. Geographical aspect is not a barrier anymore. With virtual community or on-line community, sharing knowledge among library users and staffs from all over Malaysia is no longer a problem.

2.4. Virtual Community Framework

Developing a knowledge community portal, a lot of aspects must be taken account. Studies on establishing virtual community framework in several domains have been done quiet vigorously by many researchers. Models and frameworks are more important in the real world than is sometimes acknowledged; since they help us to how we look at things and frame the language we use to describe it (Rowlands and Bawden, 1999). This framework helps to outline important characteristic that need to be included in the final product of the virtual community.

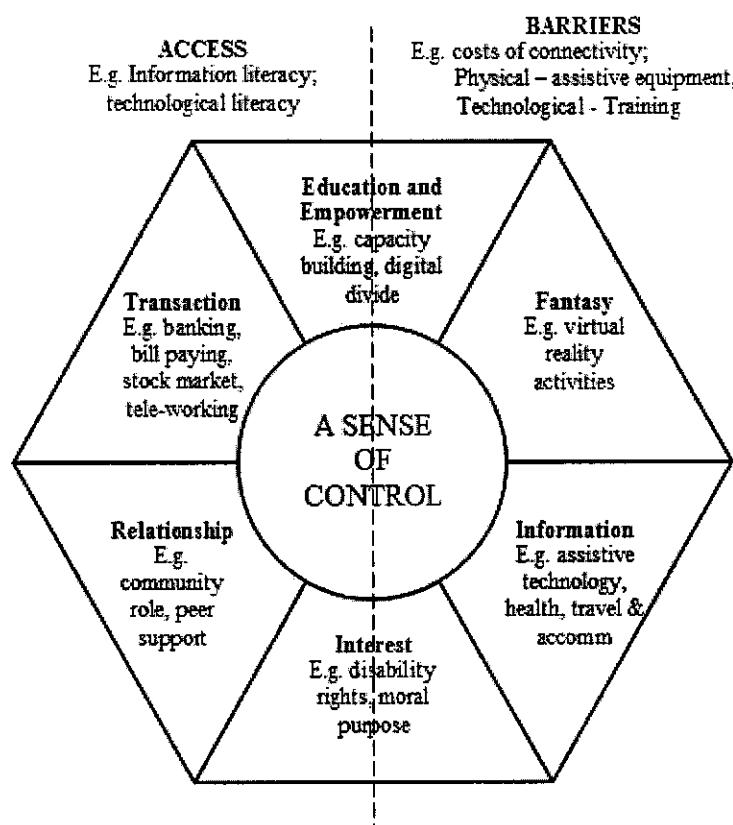


Figure 2.2: Virtual community model for disabled people

In April 2006, a model for the development of virtual communities for people with long-term, severe physical disabilities had been established. According to the authors, C.M. Tilley, C.S. Bruce, G. Hallam, and A.P. Hills (2006), the aims of the research was to focus on the needs of the virtual communities' users which in this case are persons

with long term physical disabilities and use all findings to facilitate and develop understandings on how virtual communities for disabled persons might best be facilitated. Figure 2.2 denotes combination of six types of electronic communities - Education, Fantasy-oriented, Information-oriented, Interest-oriented, Relationship-oriented and Transaction-oriented with Sense of Control as its foundation stone of the model.

Each of this elements are interrelated with one another allowing for objectifications explains who (relationship), what (information), when (interest), where (transaction), why (education and empowerment), how (fantasy) and with what consequences (access and barriers) an event occurs (Tilley et al, 2006). Disabled persons need to gain a sense of control in order for virtual communities to gain their interest and commitment. All six elements must not be ignored for full virtual community experience to be available to persons with disabilities (Tilley et al, 2006).

While for Frappolo and Koulopoulos's (1999) model, there are basically four key applications of knowledge management, regardless in whatever form they are (virtual community, lesson learned system etc.). Figure 2.3 shows the relationship between the four applications of knowledge management.

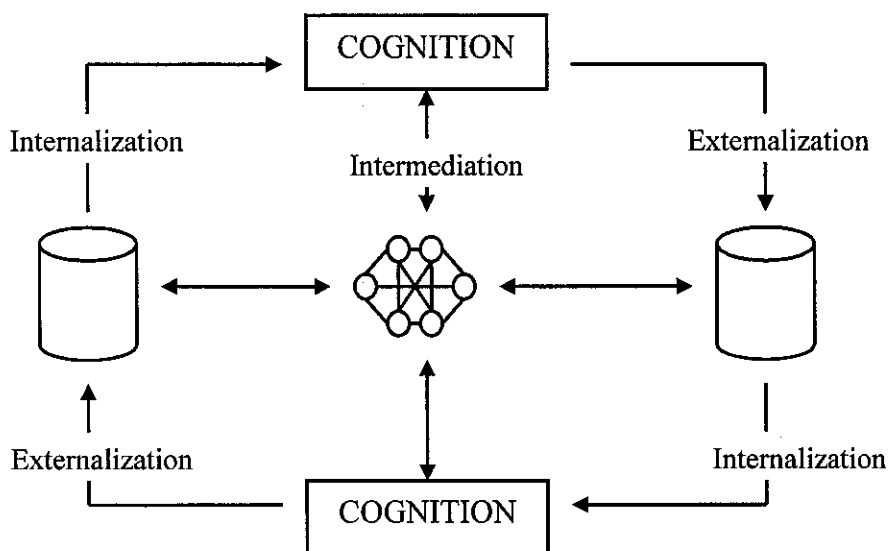


Figure 2.3: Relationship between intermeditation, externalization, internalization and cognition

Knowledge and people are connected by intermediation. Intermediation role is to match a knowledge seeker with the knowledge they seek and the provider of that knowledge. Externalization refers to the process of capturing knowledge in an external repository and organizes it to some classification framework. In other words it connects knowledge to knowledge. The function of externalization is to provide knowledge sharing (Frappolo and Koulopoulos, 1999). Externalization emphasis on three components which are:

- Capture and storage of the knowledge in suitable repository
- Interpretation of knowledge to a usable form
- Classification of knowledge into easy-to-used format.

Internalization provides a matching between knowledge to what the individual wants to know. It provides greater relevance to the knowledge seeker with its filtering of the knowledge from the knowledge repositories. Lastly is the cognitions element. Cognition links knowledge to process which can be achieved by applying experience to determine the most suitable outcome which resulting of creation of a new knowledge.

2.5. Knowledge Management and Virtual Community Potential Values

The philosophy of right knowledge is available to the right people at the right time should be implemented in libraries. Few factors separate ordinary practices in public libraries with knowledge management. First, knowledge management is almost entirely goal oriented which means that as soon as goal changes, knowledge management is able to tune its way to address the new goal. Second, knowledge management tends to be much more proactive in terms of users. Next, ordinary public libraries tend to be everything to everybody whereas knowledge management tends to be very focused and selective and it is very committed to time value of knowledge. (Townley, 2001)

As a learning organization, public libraries should provide a strong leadership in knowledge management. Unlike those business organizations whose goal for knowledge management is for competitive advantage, most public, academic, and research libraries, have a different orientation and value which is to expand the access of knowledge for their users. (Wei Lee, 2005). Charged by this mission, libraries should aim their knowledge management goal high.

In general, virtual community can bring a lot of benefits and values to library users and staffs. Not only that it enable information and knowledge exchange between participants of the community, it also an ideal learning tool because it provides facilities for users to share their knowledge and experiences with one another (Sun Lee, 2006). Virtual community let its users bond without being in close proximity either spatially or temporally. It can also encompass individuals from all kinds of backgrounds, young and old, and even people with disabilities.

As for library's sake, by having virtual community, web portal, or on-line community can give them some competitive advantage in this Internet-is-everything era. Since information is available from alternative Web sources, libraries should find way to compete with a diversity of new information services (Lakos, 2004).

2.6. Conclusions

As a conclusion, knowledge management should be taken seriously by library management in Malaysia. For a sound knowledge management and knowledge sharing initiatives, it can be a knowledge community portal or other knowledge management applications; one should start focusing on how public libraries manage their resources from knowledge itself to their very own staffs. Then, by using existence information technologies and applications all objectives in spreading and providing easy access to the library resources perhaps can be achieved.

CHAPTER 3: METHODOLOGY

3.1. Procedure Identification

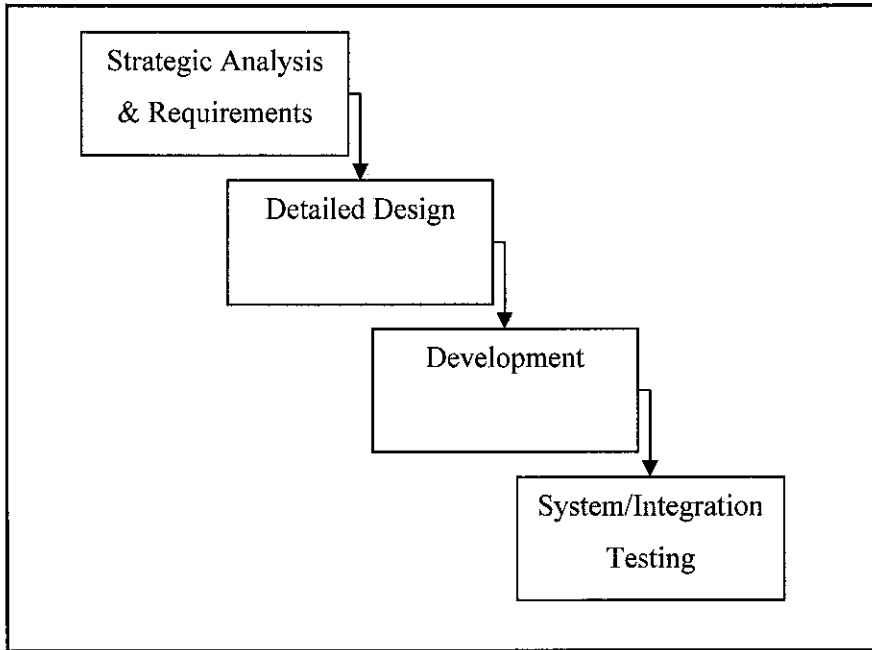


Figure 3.1: Project Methodology Diagram

3.1.1. Phase 1: Strategic Analysis & Requirements

This phase focused more on researching and studying on knowledge management concepts, technology available and existing applications that can be made as guides to develop a suitable public library's knowledge community portal. Visits to public libraries selected had been done and studied their flow of distribution of knowledge and familiarize with what kind of functionalities that can be incorporated to be developed knowledge management application. The public libraries are Malaysia National Library, Batu Gajah Public Library and Taiping Public Library.

During the visit, questionnaires had been distributed to library users as well as to the library staffs. These questionnaires were distributed with the aimed to analyze the current situations related to knowledge management at these three public libraries. All results had been tabulated and analyzed. At the end, 117 respondents for user's

questionnaire and 12 respondents for administrator's questionnaire were collected. From the questionnaires, one can conclude that the KM concept is existed but in informal way such as through face-to-face communications between users and benefits are fairly said are limited. Scope of projects and initial requirements of portals were discussed with supervisor and outlined during this phase.

3.1.2. Phase 2: Detailed Design

Portal's architecture and its web interface were designed during this phase. System requirements and conceptual design were translated into detailed work units. Researches on technologies commonly used in knowledge community portals were done. Several knowledge model and framework from different domains were analyzed as a guide for conceptual framework to be created later. Time was also allocated to familiarize with programming language and software to be used during development.

3.1.3. Phase 3: Development

Several knowledge communities were selected as a test subject for comparisons of functionalities between the knowledge communities. Objectives of this observation were to look at technologies and functionalities commonly incorporated in those knowledge communities and also to see any certain pattern existed that can be used to derive conceptual framework for developing a knowledge community portal in library.

Using all information collected from observations and research of knowledge model and framework, a conceptual framework for developing library's knowledge community portal was produced. Information from observations was also used together with the framework to finalize functionalities of the knowledge community portal. Functionalities were group in three categories (grouping were made based on framework derived):

Group	Functionalities Included
Main Functions	People, Group, Forum, Resources and News
Personalized functions	My Profile, My Group, My Archives
General Functions	Main, Login, Log Out, Registration

Table 3.1: Categories of portal functionalities.

Based on the table 3.1, development of the portal was decided to be done function by function according to its dependency of each function to one another. The groups are as followed:

- Login, Log out & Registration
- People & My Profile
- Group & My Group
- Forum
- Resources
- News
- Main Page
- My Archives

Interface designs were finalized at this phase. Storyboards of the portal are sketched as a guideline during development. Dialogue chart were drawn for estimation of page will be produced during development of portals and overview of the navigation layout of the portal. Analysis diagrams of portals which include use case diagram and class diagram were also produced for documentation.

Portal is developed using Active Scrip Page (ASP) using Macromedia Dreamweaver and for Microsoft Access as its database. Development of each function listed above will be followed by unit testing, to test whether functions work correctly or not.

3.1.4. Phase 4: System and Integration Testing

After all functions are developed, each work units had undergone a system integration testing where each work unit was integrated incrementally together and tested to ensure its compatibility with one another. After that, a number of possible users of public libraries will be selected to perform user acceptance testing. Result of this testing

will be used to correct and enhance the portal for future use. These two testing are mainly focus on ensuring that the entire individual parts of the portal work together and that the portal as a whole meets the requirements identified.

3.2. Tools

The following are the tools suggested to be used in the development of the project:

3.2.1. Software

The software that is going to be used throughout the system development is as follows:

- Adobe Photoshop CS
- Active Script Page (ASP)
- Internet Information Service (IIS)
- Macromedia Dreamweaver MX
- Microsoft Access

3.2.2. Hardware

The hardware for the system development is one personal computer with Internet Information Service (IIS)

specification:

- Intel Pentium 4 Processor
- 2.4GHz
- 256 of RAM or above
- 40GB of hard disk

CHAPTER 4: RESULTS AND DISCUSSIONS

4.1. Distribution of Questionnaires

4.1.1. Objectives

The objectives of these questionnaires is collect and gather information regarding the current situation in public library, to see whether any of the library has already implemented knowledge management concept in any form and studied their flow of distribution of knowledge and observed interaction between library users and staffs.

4.1.2. Method

Two types of questionnaires had been distributed. One set of questionnaire was for library users and the other set was for library staffs. Distribution of questionnaires had been done at three public libraries - Malaysia National Library, Batu Gajah Public Library and Taiping Public Library. At the end, 117 respondents for user's questionnaire and 14 respondents for administrator's questionnaire had been collected. All results were keyed-in and tabulated using SPSS 13.0 for Windows.

4.1.3. Questionnaires Results – Does KM exist?

	Yes		No	
	Yes	No	Yes	No
Female	32	19	21	21
Male	10	6	4	4

Table 4.1: Communicate and Suggest Books

Table 4.1 shows number of respondents based on two criteria's, (1) those who have communicated with other patrons and (2) those who have suggested books to other patrons. Basically, there are 42 respondents or 35.8% of overall total respondents who have communicate as well as suggested some books to the other patrons. While, 25 (21.4%) respondents have communicated with other patrons but never suggest any books, 25 (21.4%) respondents never communicate with other patrons but have suggested some books to other patrons and lastly, 25 (21.4%) respondents both never

communicate and never suggest any books to other patrons. From this table, student can conclude that the concept of knowledge management and knowledge sharing exist within the public libraries. Almost 57.3% of overall respondents have the experienced of sharing their knowledge by suggesting books with others.

		Gender		Total
		Female	Male	
Find the right book	Rarely	33	7	40
	Undecided	6	1	7
	Sometimes	47	13	60
	Often	7	3	10
Total		93	24	117

Table 4.2: Finding the right book with the right material

51% of respondents rated “*Sometimes*” when asked frequency of them able to find the right books with right material while 40 respondents or 34% rated “*Rarely*” able to find the books that they are searching for and only 10 respondents rated “*Often*”. Table 4.2 denotes that although most of the libraries are equipped with good librarian to assist patrons or good book search cataloging system, patrons still have difficulties in finding the right books consists of material that they are searching for.

As a conclusion, one could say that knowledge management concept existed in our public libraries culture. The only problem is that, sharing of knowledge and the use of technology provided (books search system) in the public libraries can still be considered low. Patrons still find it easy to find books themselves rather than consulting librarians which were supposed to be the knowledge officer in the library itself.

4.1.4. Questionnaires Results – Awareness of KM

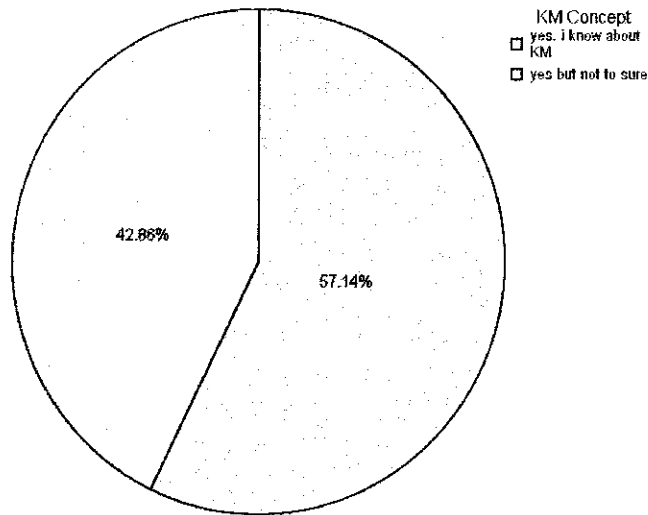


Figure 4.1: Awareness of KM

57.14% respondents for questionnaires set no.2 (library staffs as participants) knows very well about KM while 42.86% of respondents are not very sure with what KM can do or offer. This could be probably due by lack of initiatives of library management to expose librarians with this new concept of managing knowledge.

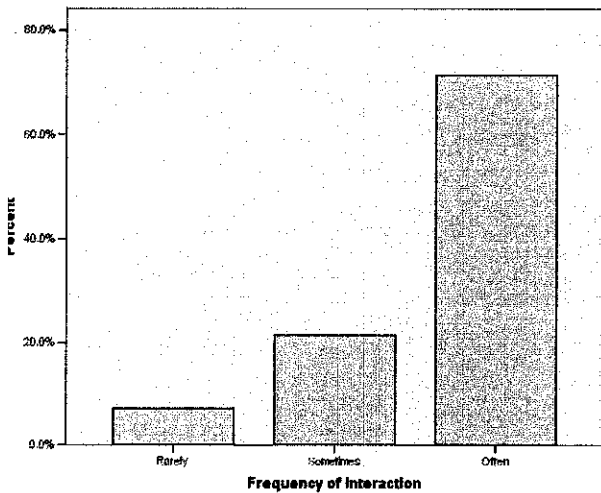


Figure 4.2: Frequency of Interaction

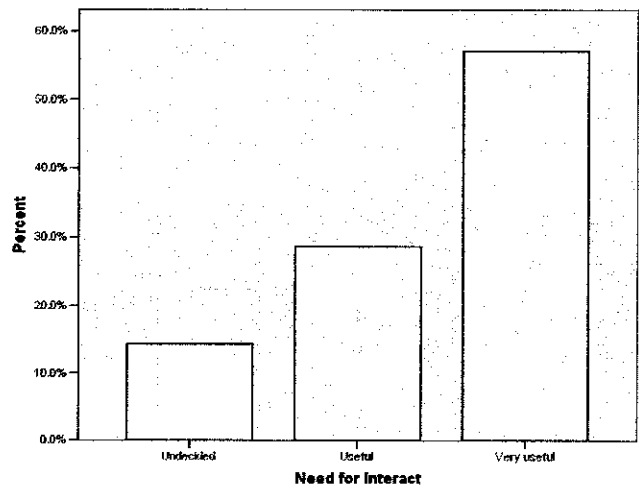


Figure 4.3: Need for Interaction

From figure 4.2, one can say that good interaction exist between library users and library staffs with almost 71.43% of respondents rated that they often had interaction with library users. While for figure 4.3, 57.14% respondents rated “*Very Useful*” when asked if the library staff need any sorts of platform or medium to interact with the users and 28.57% respondents rated “*Useful*”.

As a conclusion, awareness of knowledge management concept among library staffs are high and further steps to enhance their knowledge on this matter should be taken. Most of library staffs felt that lack of communication between library users can be improved by having a better communication which can enable them to disseminate knowledge to the library users via this medium.

4.2. Knowledge Communities Comparisons

4.2.1. Objectives

The purpose of this activity was basically to observe selected knowledge communities for its contents, functionalities and technologies commonly used in knowledge communities websites and portals.

4.2.2. Method

Six knowledge communities of interest had been selected as test subjects for this observation activity. These knowledge communities are selected based on the fact that all six of them can be categorized as communities of interests by looking at their functionalities provided at their sites. Listed below are names of the six knowledge communities with their sites address:

1. The Gurteen Knowledge Community -
<http://www.gurteen.com/gurteen/gurteen.nsf/id/gkc>
2. National Institute of Mental Health in England (NIMHE) -
<http://kc.nimhe.org.uk>
3. KnowledgeBoard - <http://knowledgeboard.com>
4. learningForum @FHWA - <http://knowledge.fhwa.dot.gov/LearningForum>
5. The Bologna Center; Johns Hopkins University -
<http://www.jhubc.it/forum/default.asp>
6. Bookcrossing.com - <http://www.bookcrossing.com/>

4.2.3. Statistical Findings of Knowledge Communities Functionalities

Criteria \ Websites	Gurteen KC	NIMHE	Knowledge Board	FHWA	Bologna Center	Bookcrossing
People		√	√	√	√	√
Search Mechanism	√	√	√	√	√	√
Discussion Area			√	√	√	
Special Interest Group		√		√	√	√
Link to resources	√	√	√			√
Notification mechanism		√	√	√	√	√
News / events		√	√			√
Others (e.g. tagging mechanism)		√				

Table 4.3: Statistic of applications in existing knowledge communities

From the observations, five out of six knowledge communities have specific link to its users, whereby it provides ways for other members to contact other members in order for them to exchange information or any other related matter. KnowledgeBoard and learningForum @FHWA provides their members personalized page which enable users to have their own page where they not only be able to set their personal details but also set up their interest profile.

All of the knowledge communities provides search mechanism which somewhat similar to one another. This search mechanism usually used for members searching, resources searching and special interest group searching. Some also provided search mechanism incorporated with their forum / discussion segment where users can search for specified messages or replies in the forum.

Four out of six knowledge communities practice special group interests. These special group interests are mostly based on the objective to provide users a platform for

collaboration work among users of the groups. Users can join a specific group of interest available, monitor groups' activities and search for other groups available in the knowledge communities. Some of the knowledge communities have integrated discussion area with the group of interest. While some knowledge communities provide a public discussion area whereby users from any group of interest, are able to join any topic of their interest. KnowledgeBoard and The Bologna Center have not only provided discussion area but also an online chatting area for its users who opt for real-time discussions.

A link to list of resources stored is also a common practice in some of the knowledge communities observed. Four out of six had implemented this. This might be done in order to provide users with easy access to stored resources. For example NIMHE has an A-Z Directory to their list of resources whereby users can browse resources such as link to other websites, journals and articles stored by alphabetical order or just use the search functionality to find what they want. Same goes to KnowledgeBoard.

Other attributes of knowledge communities are they usually provide notification on latest update happened in the knowledge communities (in forum, new group added, new members registered) as well as news and announcement on upcoming event related to the knowledge communities.

As a result of this observation, author has come up with a conceptual framework for library as well as functionalities for author's knowledge community portal.

4.2.4. Conceptual Framework for Knowledge Community in Library

This conceptual framework is the results of combining information gathered during the observations made to various knowledge communities and analyzing some knowledge model frameworks. This framework is aim for the use of developing knowledge community portal in a public library. Figure 4.4 denotes the conceptual framework with five internal elements.

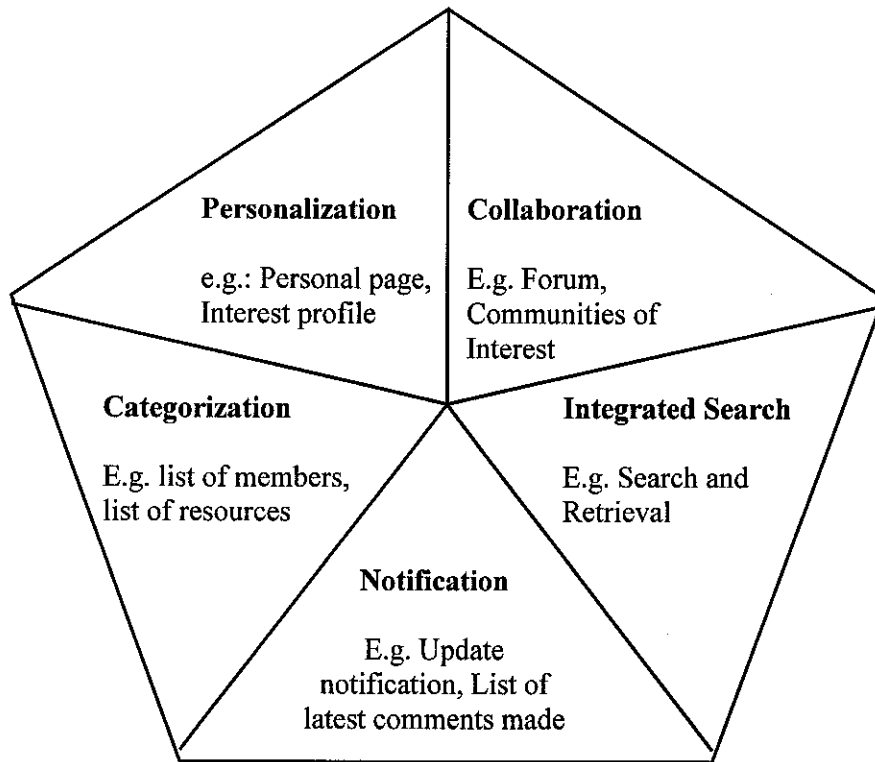


Figure 4.4: Conceptual Framework for Knowledge Community in Libraries

In clockwise order, the first element is called Personalization. Here, personalization is referred to how the knowledge communities able to provide knowledge according to its users preferences. In other words, they are able to provide personalize content and services tailored based on several user criteria or preference which for example interest profile. Personalization also related to how knowledge communities want to initiate the knowledge sharing within the community without them losing their identity in the cyberspace. Each users should be able to be identified by others by for instance providing a personal page displaying their information (name, contact numbers), and no knowledge communities should practice anonymity concept. Robertson and Reese (1999) points out

That anonymity blocks community building and knowledge sharing and further added in order to support a community building and knowledge sharing, users have to be identified and observable to others.

Collaboration is the second element in this conceptual framework. “Two heads are better than one”. This English saying is clearly emphasizing the importance of working together in completing a task given. This element helps to design people’s network (connect people to people) in the knowledge communities itself through communities of practice or communities of interest. It also provides the opportunities for users to collaborate among them in finding the best solution for a certain matter whatsoever. Collaboration can provide a framework for bringing the different heads together, organizing their efforts, managing the process and producing the outstanding results (Rusli et al, 2005). Referring Nonaka’s SECI Model, collaboration comes under the conversion of tacit knowledge to explicit knowledge in Externalization. Examples of application are forum and online chatting.

Third element is Integrated Search. By providing an integrated search, knowledge communities not only provide a faster mechanism to find knowledge or information but also it is designed to reduce the information overload to the users. This not only limited to providing the users information searching or browsing capabilities but knowledge communities can also move ahead one step further by providing a knowledge inquiry capabilities. Knowledge inquiry here means that it can provide not only documents but also knowledge –level answers to human’s high order cognition questions, together with documental justification and evidences (Ling Feng et al, 2001).

Fourth element in the conceptual framework is Notification, which is the easiest element to understand. Knowledge communities should provide a way for users to be able to join a knowledge community, take part in it and be updated on what’s going on within the knowledge communities itself. By doing that, users are able to keep themselves abreast on the latest events or activities in the knowledge community. Lastly the fifth element is the Categorization. This element is closely related on how the knowledge communities present the knowledge or its information stored in its

repositories to its users. Some sort of classified or categories should be implemented so that it helps to ease the users in finding the knowledge or information that they want without a hassle, for an instance, listing out resources (documents, books or articles) in the libraries in alphabetical orders.

Incorporating these five elements should makes up an efficient knowledge community regardless what technologies or applications used. Below is the summarize descriptions of each element of the framework.

Elements	Descriptions
Personalization	It helps personalize content and services tailored based on several user criteria or preference.
Collaboration	It is designed to connect people with people through communities of practices or communities of interest and provide collaboration among them.
Integrated Search	It is designed to reduce the information overload and provide faster search of content to the users.
Categorization	It helps to categorize content to a more precise way whereby it can offer and easy access for the user to the content.
Notification	It provides users update agent on what's happening in the knowledge community by integrating it with knowledge repositories available.

Table 4.4: Summarize descriptions of framework's elements

4.3. Library Knowledge Community Portal Functionalities

Using information collected during distribution of questionnaires at selected libraries, observations and comparisons made between selected knowledge communities, below are the list of knowledge community portal's functionalities. These functionalities are also firm up based on the framework explained in Section 4.2.4.

Elements	Functionalities
Personalization	My Profile, My Group, My Archives
Collaboration	Group, Forum, People
Integrated Search	Search Mechanism in People, Group and Resources
Categorization	Resources
Notification	Notification mechanism for update in People, Group, Forum, News

Table 4.5: Relationships between framework elements and functionalities

These functionalities are then categorized in three main categories which are:

Group	Functionalities Included
Main Functions	People, Group, Forum, Resources and News
Personalized functions	My Profile, My Group, My Archives
General Functions	Main, Login, Log Out, Registration

Table 4.6: Categories of portal functionalities.

1. Registration

- all users of KMLS need to register to the system before they are able to use the system
 - a form will be provided consists of all the following details:
 - Name
 - Email
 - NRIC
 - Interest Profile
 - User ID (auto-generate)
 - Date Registered,
 - Access Level (default - User)
 - Address,
 - Username
 - Contact No.
 - Password
 - All text boxes should be filled with correct and valid information.

2. Login / Access

- To ensure the security of the system, user need to login to the system using the username and password created during registration.
 - Below are information needed to perform this function:
 - Username
 - Password
 - User trying to login using wrong username or password will be notified

3. Personal Page

- Registered users will have their own personal page which will be divided into three parts:
 - My Profile – display users personal details
 - My Group – display users' list of joined group of interest
 - My Archive – list of forums they had chosen to track and created, books they had requested and list of messages send by other members to the user.
- Latest notification related to forum they track or created will be listed here.

4. People

- Users are able to search for other users using the following criteria:
 - o Location of the library (where the users are registered to)
- People directory is also provided whereby user can view members name by alphabetical order.
- They are also allowed to view other users profile page.
- They are basically three types of access: administrator, moderator and user (by default).
- Admin: admin can grant and remove access for specified user.

5. Group

- Users are able to search for group of interest using the following criteria:
 - o Group name
- Group directory is also provided whereby user can view list of group available by alphabetical order.
- Each group has their own personal page where user can view list of members and a “Join” button is also available.
- Users will be notified if they had joined the group earlier.
- Admin: can submit new group and delete existing group.

6. Forum

- Provide discussion facilities to users.
 - User can join any topic in the forum as long as they are registered to the system.
 - Each topic in the forum will be monitor by a moderator (person who created the topic).
 - All entries will also be monitored by editor (preferably a staff)
 - Any update will be notified using the notification engine.
 - All entries submitted will be approved by the moderator of the topic first before it will be displayed.
- Link to online chatting will be available here. Users can have a real-time discussion with other users.

- Admin: can create new category, topic, approve submission of new categories, topics and replies. They can also delete any category, topics and replies.

7. Resources

- Users will be provided with A-Z Directories of list of books available in the libraries.
- Here, users are able to view information about the books and if they are interested they can request for the books.
- User able to search for books according to the following criteria:
 - o Title of books
 - o Author's Name
 - o Call Number

8. News

- This functionality will provide users with latest news or upcoming events related to the libraries or what's going on at other libraries.
- Admin: can submit news and delete any back dated news.

9. Latest Notification

- At the main page there will be a list of updated information on the website such as latest comments made (in forum), latest members registered and latest book available in the library.

4.4. Library Knowledge Community Portal Architecture

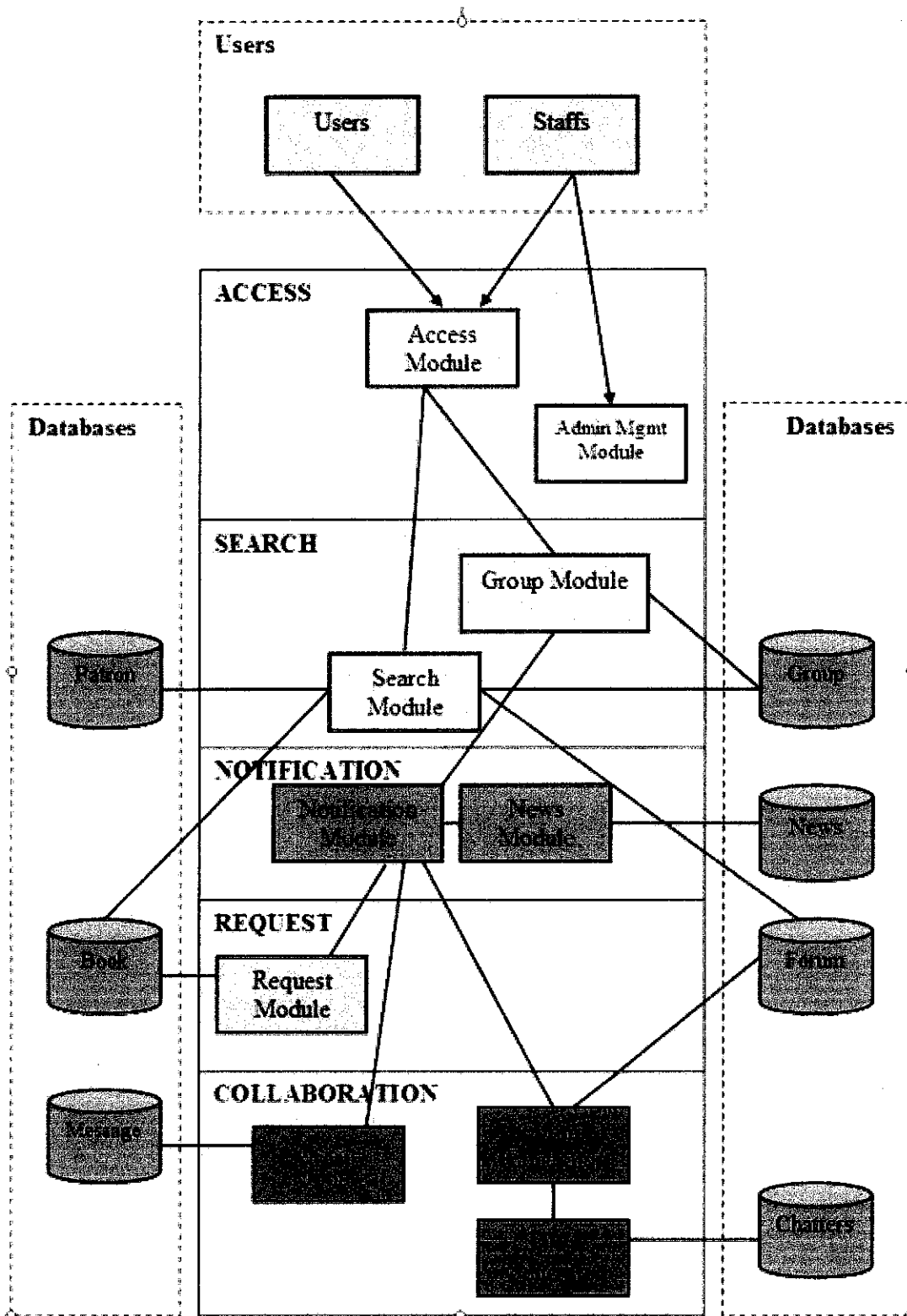


Figure 4.5: Architecture for Knowledge Community of Interest Portal



Legend	
	Data Access Path
	Active Communication between agents

Figure 4.5 shows that knowledge community portal's architecture. This architecture consists of five layers with seven databases and eleven components with each of the components have their own specific functionalities. The five layers are ACCESS, SEARCH, NOTIFICATION, REQUEST and COLLABORATION. Seven databases involved are Book, Chatters, Forum, Group, Message, News and Patron. While the eleven components are Access Engine, Search Engine, Query Adapter, Interest Engine, Group Chain Engine, Notification Engine, News, Request Engine, Message, Forum generator and Chat Generator.

4.4.1. System Workflow

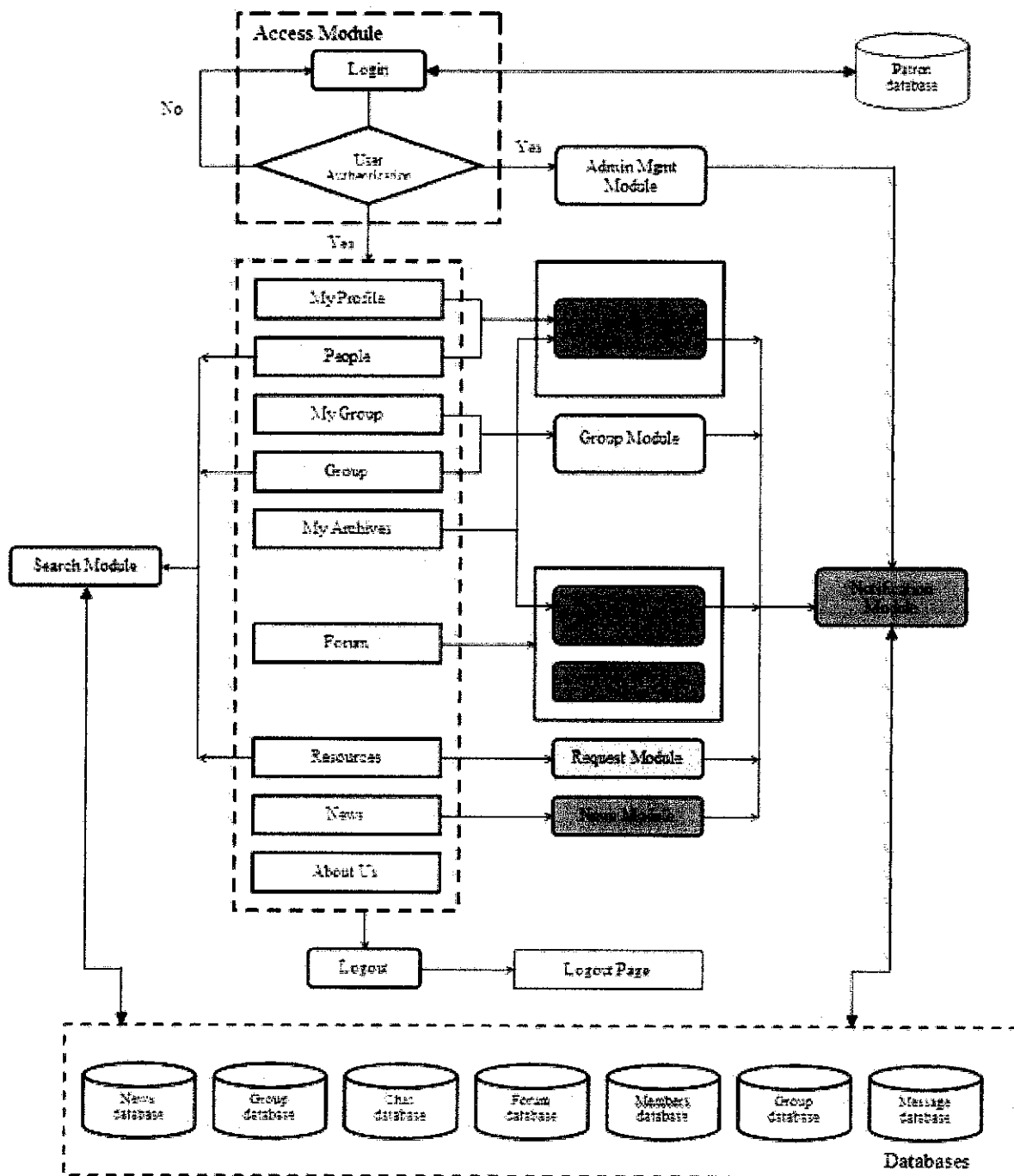


Figure 4.6: Workflow Diagram of Library Knowledge Community Portal

Access engine provides user an access to the system. New users need to be registered first before they are able to login. For login purposes, they need to enter their

username and password that they have specified earlier during registration. If login is successful, users will be directed to their own personal page where all their information that they have entered during registration is displayed. They can view it and choose to edit the profile. This personal page is also viewable by other users of the community. While for administrator, they will be linked to admin management module which enables them to administer the portal.

Users are able to join special group interests available in the community. Group module helps to administer special group interests. It helps to maintain the group's personal page which is viewable for all its members and non-members. While for search engine, it provides a search mechanism to the community. It consists of three types of sub-modules – search people module, search group module and search book module.

Forum generator will monitor and administer the discussion area in the knowledge community. Every new topic submitted or reply made will be subjected to administrator approval before it is viewable by others. Chat generator also performs function similar to forum generator where it administers the on-line chatting capabilities.

News module helps to feed user with latest news to users while message module in Collaboration later helps to administer and monitor messages send and replied by member(s) to other member(s). Lastly is the notification module, which acts as monitoring agent for the community. It will monitor updates in book, patrons, forum and messages databases.

4.4.2. List of Databases

Databases	Descriptions
Book	Store information on books - book title, author's name, ISBN, book category, publisher's name, year the book had been published, call number of the book.
Chatters	This database store live chatting messages which include message content, sender ID and date message send.
Forum	Store list of categories available, topics submitted and approved, and replies submitted and approved.
Group	Keep details on special group interest available such as group ID (auto-generate), group name, group description and date group created.
Message	Messages send by user to user are store here. Information stored are as follow – message title, message content, sender ID, receiver ID and date message send.
News	Store news details – news ID, news title, news content and date news posted.
Patron	Used to store information on registered users' personal details which are Name, NRIC, User ID (auto-generate), Address, Contact No., Email Interest Profile, Date Registered, Access Level (default - User), Username, and Password.

Table 4.7: List of databases involved

4.4.3. List of Components

Components	Descriptions
Access Module	Used for login process by users and it is connected to patron database. This component will check whether the username and password entered are correct and match with data stored in the database.
Admin Management Module	Provide administrator with ways to monitor and administer the portal. Consists of few sub-modules such as create new group module, new forum category module, approve submission module and delete forum category / topic module.
Chat Generator	Generate the live chat capabilities for real-time discussion area.
Forum Generator	Generate and monitor the discussion area provided in the knowledge community.
Group Module	Administer groups available in the knowledge community.
Messages Module	Administer and monitor messages send and replied by members and integrate with notification engine to inform user
News Module	Administer news information.
Notification Module	Helps to notify user on new update(s) that match their interest profile, new update(s) related to topic in the forum that they join and new message(s) send to them by other member(s).
Request Module	Enable user to request for a particular book and all request(s) are subjected to administrator approval.
Search Module	Integrate with query adapter to provide search functionality to users. This search engine provides members searching, group searching and resources searching.

Table 4.8: List of components involved

4.4.4. Storyboards

After finalizing the functionalities of the knowledge community portal, storyboards for the portal were drawn. These storyboards will be used as a guide during development for each page of the screen to be developed.

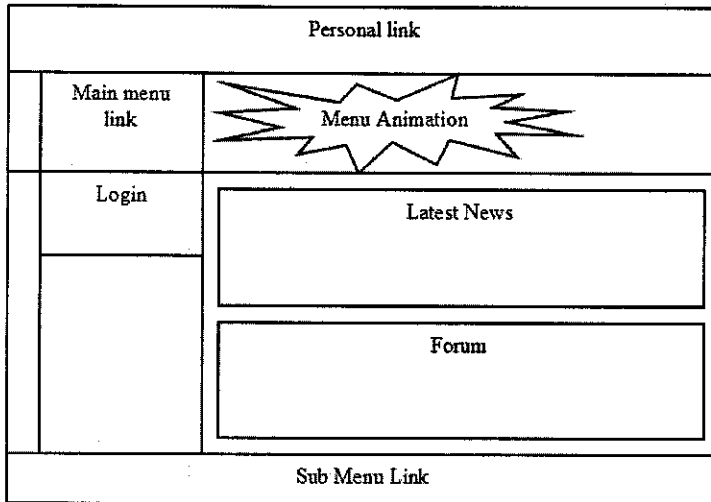


Figure 4.7: Storyboard for Login page

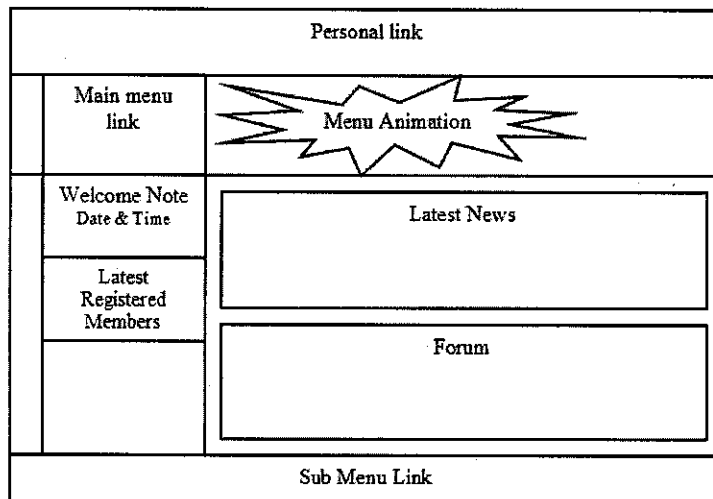


Figure 4.8: Storyboard for Main page

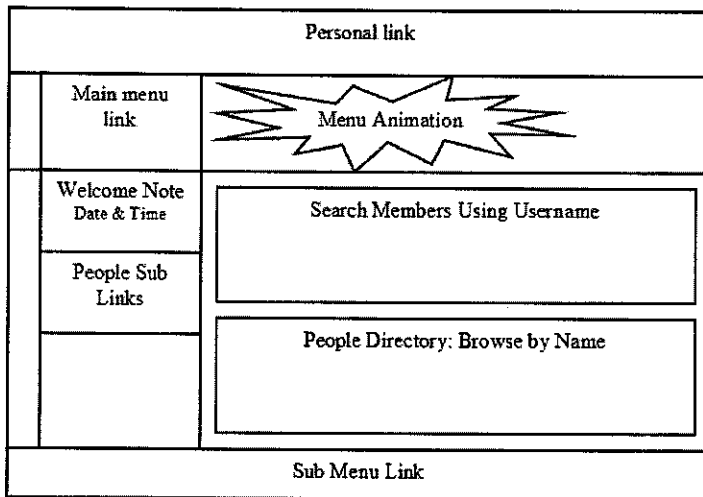


Figure 4.9: Storyboard for People page

All subsequent pages will have similar layout as People page using below template.

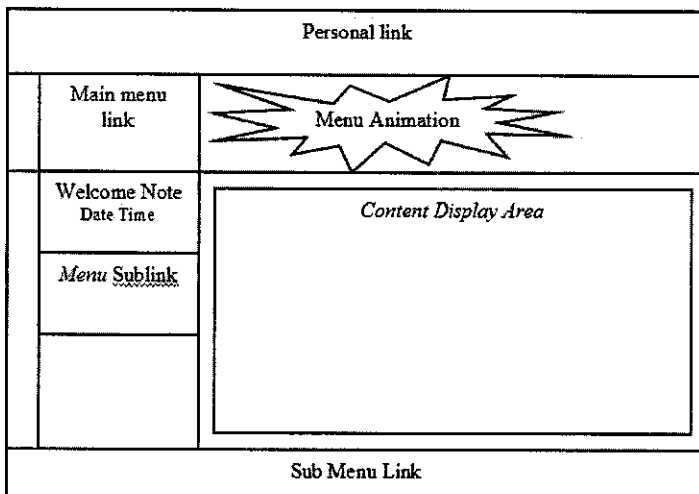


Figure 4.10: Storyboard for People page

4.5. Analysis Model

4.5.1. Use Case Diagram

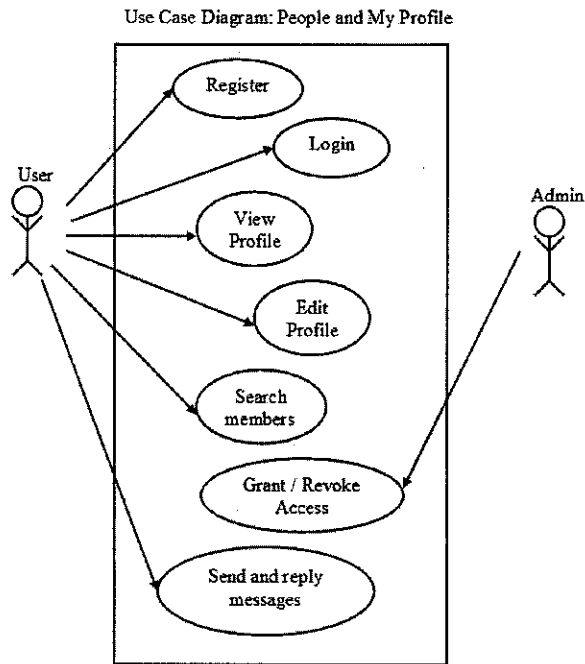


Figure 4.11: Use Case Diagram of People and My People Functions

Use Case description:

To access the portal, user need to register to the system. Information entered are as mention earlier. Once registered, user can login to the portal using the username and password set during the registration. User can view and edit their profile. User can also search for other registered members (by username), browse by full name, view their profile and contact other members by sending messages. Each user has own access level (*User, Admin and Moderator*). For *Admin or Moderator* access level, administrator can grant or revoke from members.

Actors involved:

User and Admin

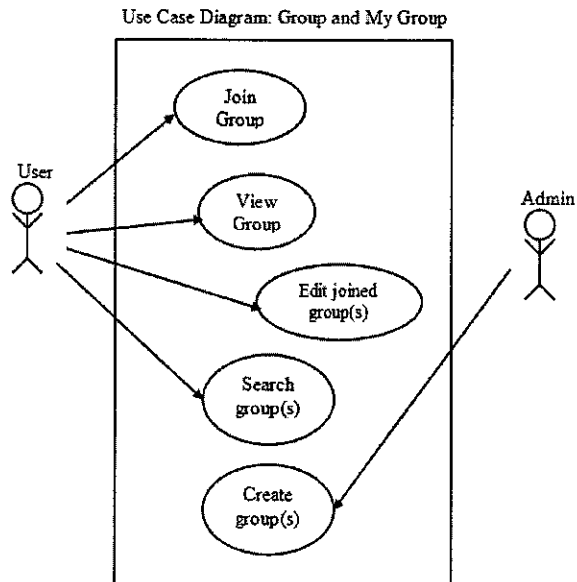


Figure 4.12: Use Case Diagram of Group and My Group Functions

Use Case description:

User can join special group interest of their choice. Once joined, all groups that they had joined will be listed in My Group page, which they can edit by disjoined any group of their choice. User can also search and browse group(s) existed by group name. Only admin can create new group to the portal.

Actors involved:

User and Admin

Use Case Diagram: My Archives

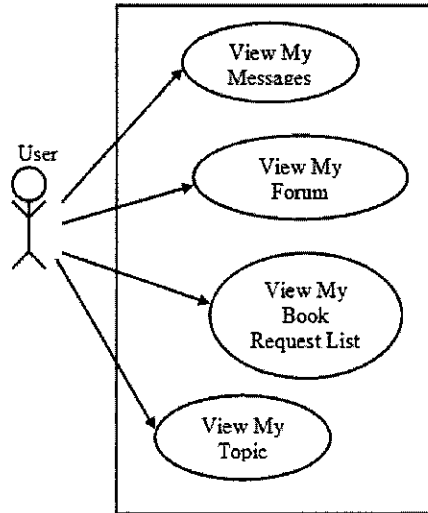


Figure 4.13: Use Case Diagram of My Archives function

Use Case description:

User can view their messages, forum that they participate and list of book that they had requested.

Actors involved:

User

Use Case Diagram: Forum

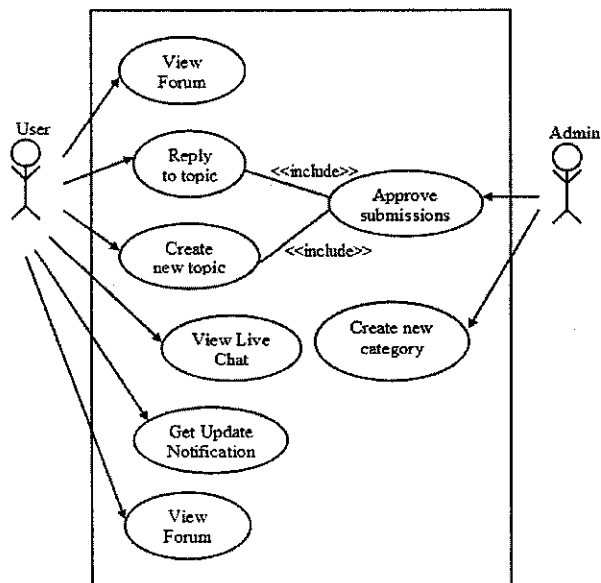


Figure 4.14: Use Case Diagram of Forum function

Use Case description:

This portal also provides forum capabilities to all users. Forum activities will constantly be monitored by administrator. User can view forum topics and replies, reply to any topic of their choice, create new topics and get update notification (in My Profile). All replies and topics submitted are subjected to administrator approval. Only administrator can create new category.

Actors involved:

User and Admin

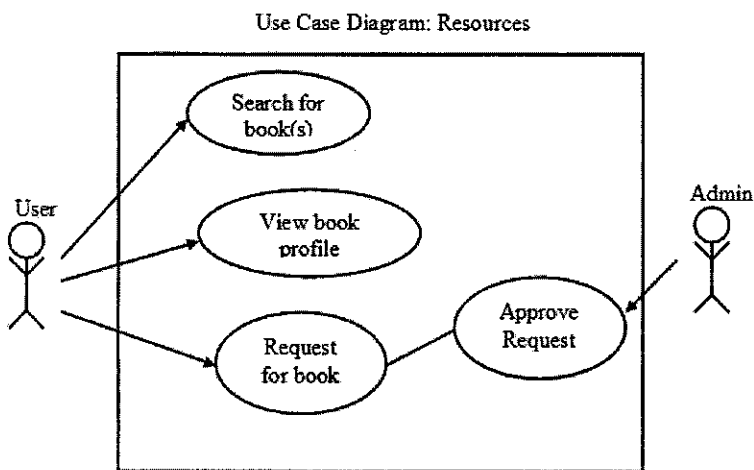


Figure 4.15: Use Case Diagram of Resources function

Use Case description:

User can search and browse list of books in the library. User can also view profile of the books as well as request for the book. Admin: all book requests are subjected to librarian approval.

Actors involved:

User and Admin

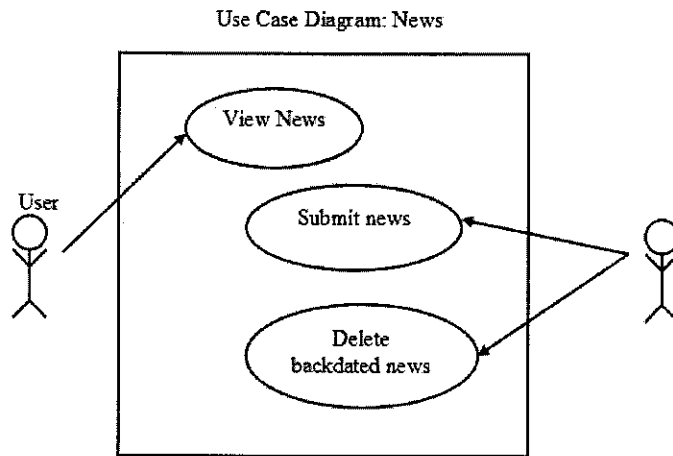


Figure 4.16: Use Case Diagram of News function

Use Case description:

User view news related to library. Admin: News is submitted by administrator and any backdated news can be deleted by the administrator.

Actors involved:

User and Admin

4.5.2. Class Diagram

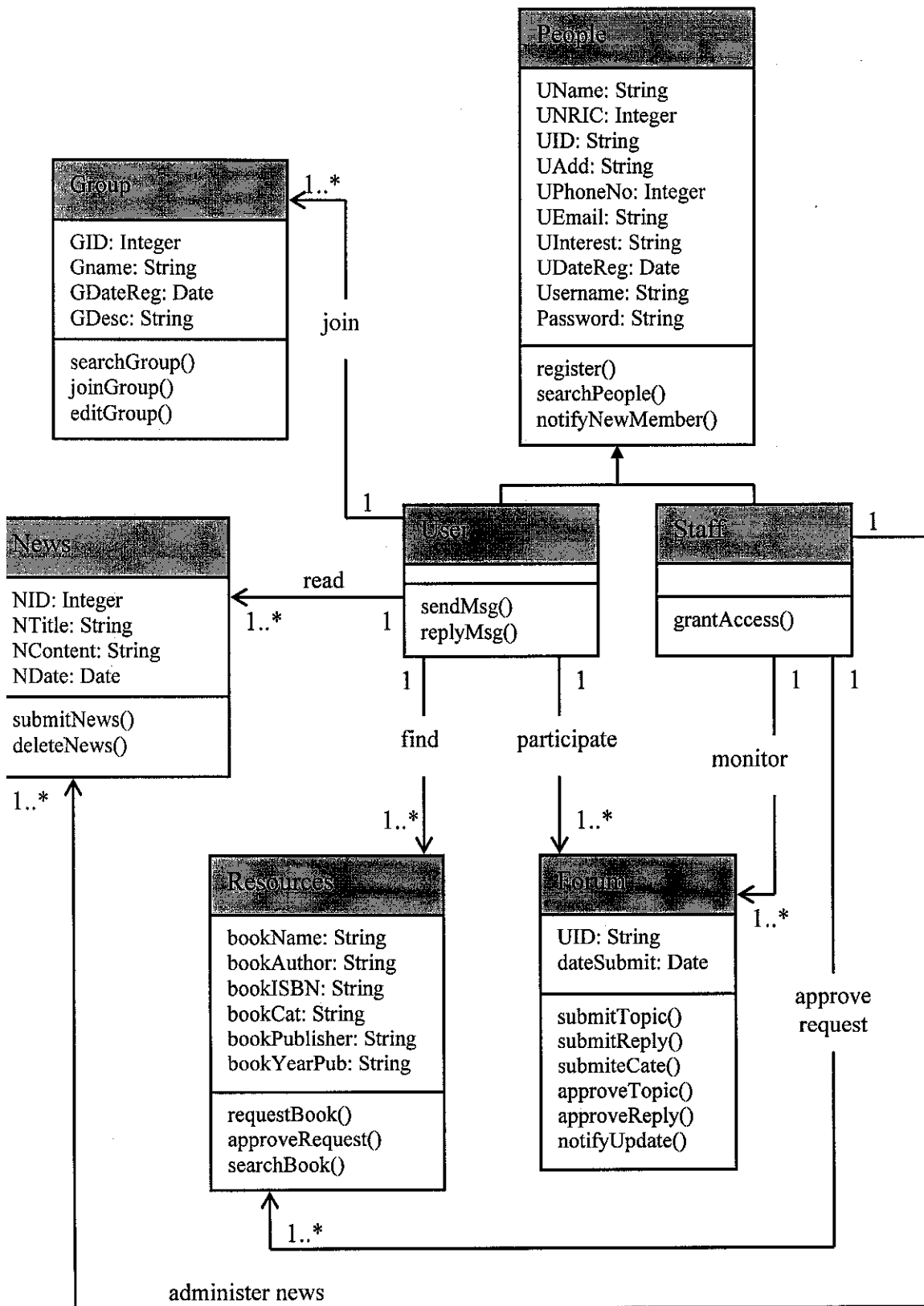


Figure 4.17: Class Diagram for Library's Knowledge Community of Interest Portal

4.5.3. Dialogue Chart

Below is dialogue chart or navigational diagram for knowledge community portal. Boxes in white are viewable to both library users and portal administrator(s) while boxes in yellow are only viewable to portal administrator(s).

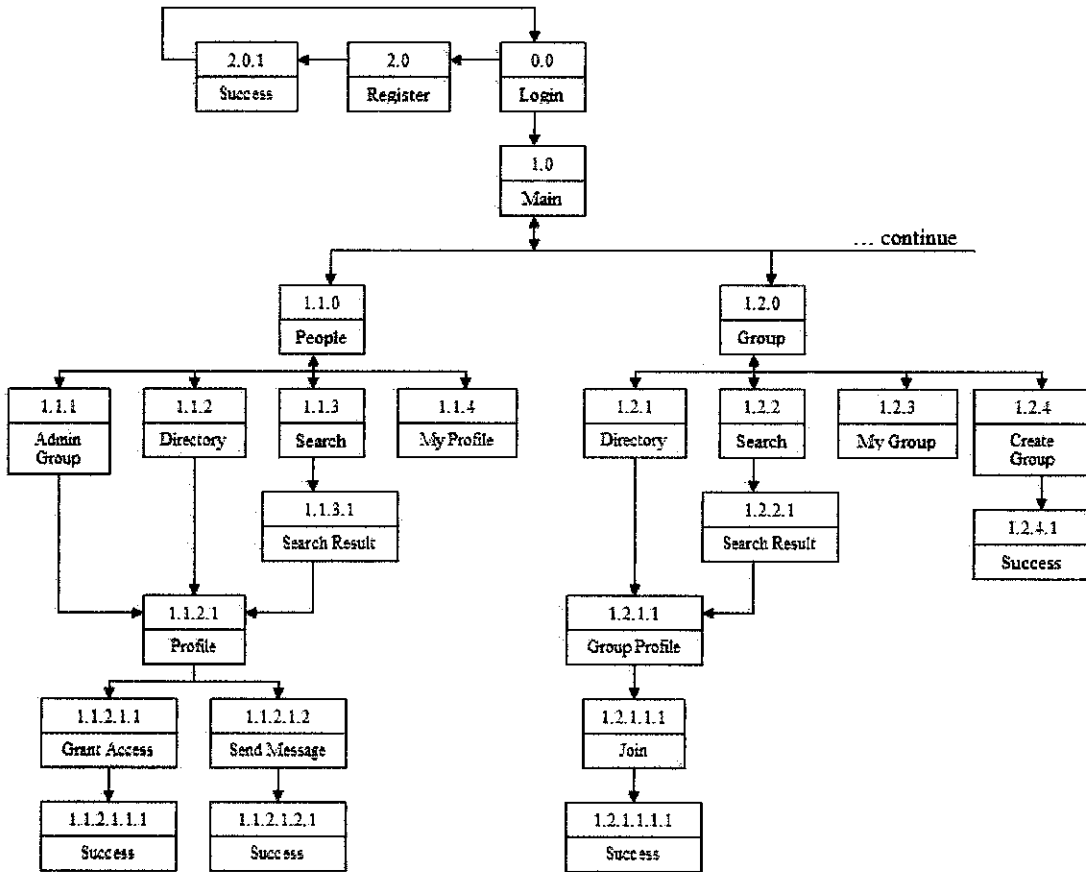


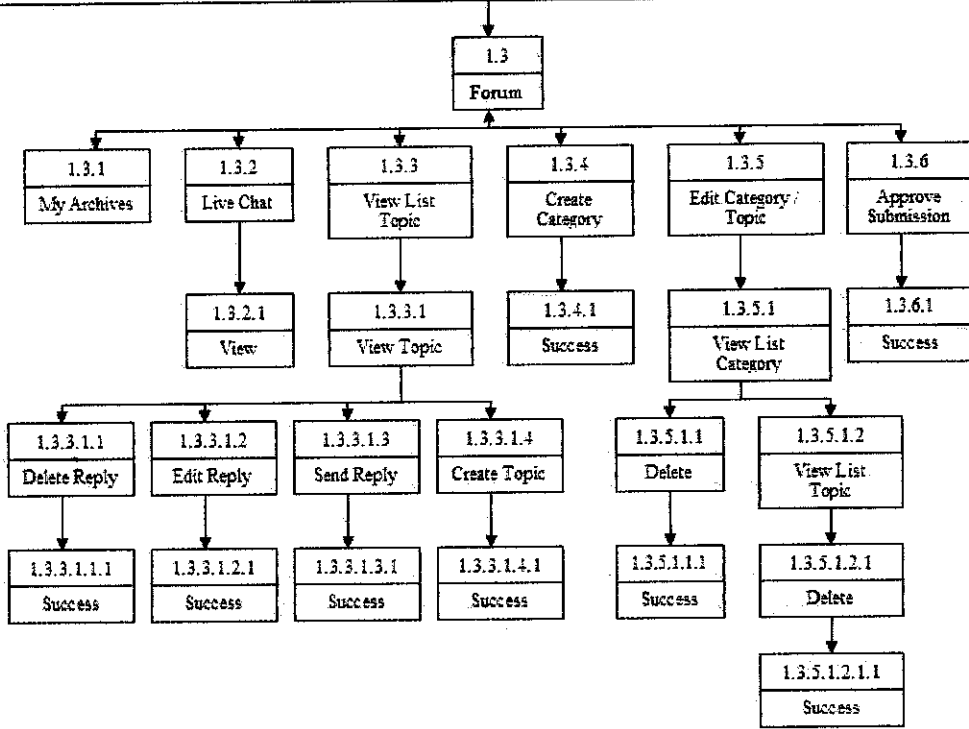


Figure 4.18: Dialogue Chart of Library Knowledge Community Portal

Legend	
	User and Admin
	Admin Only

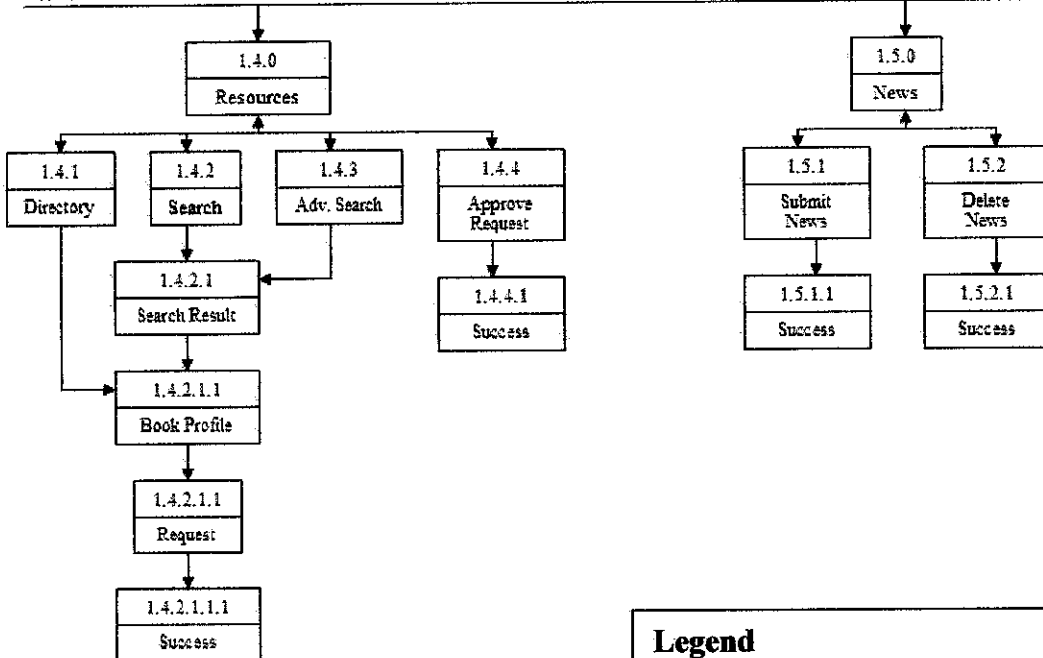
... continue

... continue

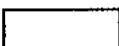



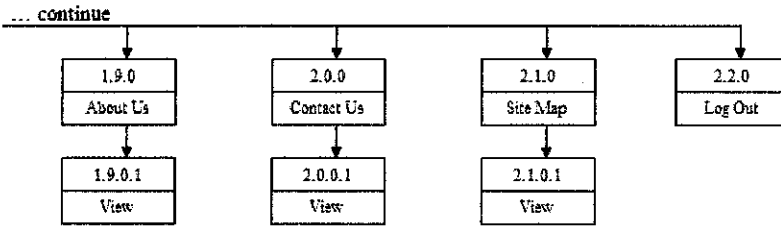
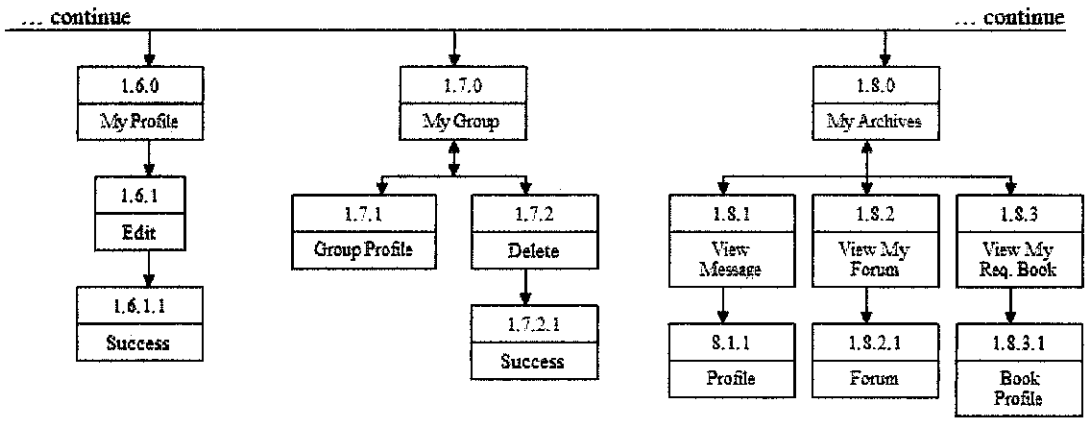
... continue



... continue



Legend

	User and Admin
	Admin Only



Legend	
	User and Admin
	Admin Only

4.6. User Acceptance Test

4.6.1. Objectives

This user acceptance test is for the users to verify the portal, testing the portal and become familiar with how the work flows of the portal) and as well as provides an opportunity for the system developers to receive feedback on the system.

4.6.2. Method

The user acceptance testing was performed for two days with duration between two to three hours per sessions. Each session per tester was divided into two sections – Portal Exploration and Questionnaire and was done according to the following steps:

1. Questionnaire was given to tester to allow them to browse and read the questions.
2. Tester was then given 15 minutes to perform the Portal Exploration where tester browse portal and get used to the features provided. During this session, tester was also given a brief introduction on the portal such as the objectives of development of the portal.
3. After that, tester was given 5 minutes to answer the questionnaire.

At the end of the user acceptance testing, 41 testers were involved and all results were keyed-in and tabulated using SPSS 13.0 for Windows.

4.6.3. Questionnaire Results – Heuristic Evaluations

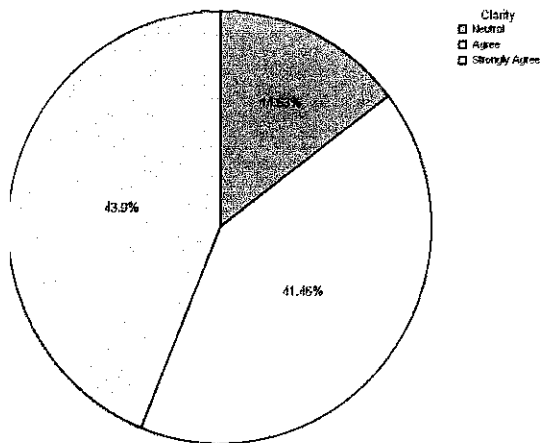


Figure 4.19: Clarity in words used

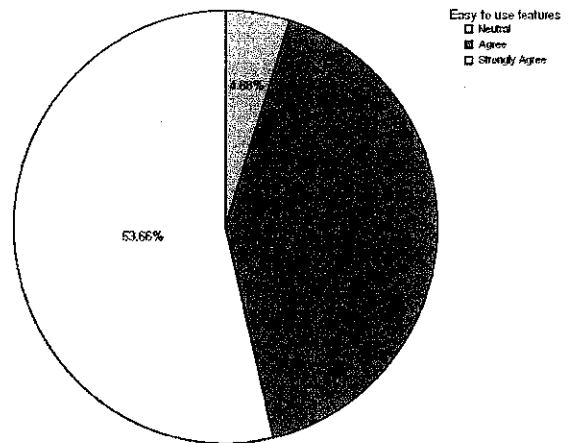


Figure 4.20: Easy to used features

Figure 4.19 denotes results derived from questions no.5 from the questionnaires which asked the testers whether the instructions / information or words used in the portal is easy to understand and familiar to them. 43.9% testers strongly agree and 41.46% testers agree with the statement that the portal used a familiar words and easy to understand instructions. This shows that portal able to speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms.

While figure 4.20 denotes 53.66% of testers strongly agreed and 41.46% of testers agreed that all features provided in the portal such as forum, send messages capabilities, live chatting and special group interest are easy to use. However, the portal still lacks in one aspect which is visibility of the system. Next, figure 4.21 shows that almost 90% of testers felt either strongly disagree, disagree or neutral when asked whether the portal provides notification after certain tasks performed such as replies had been submitted or profile has been edited successfully or not.

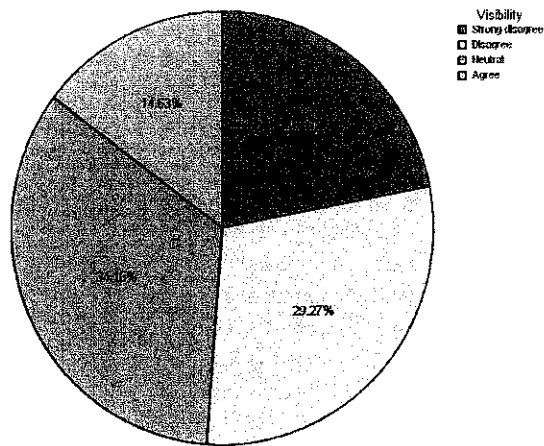


Figure 4.21: Portal Visibility

As overall conclusion from the heuristic evaluation on the portal, what one can say is that, the portal has its own strengths (provide consistency in layout, instructions; provide total control to the users and easy to use features) and some weaknesses (lack of system visibility and error prevention) which can be overcome to provide better portal to library users.

4.6.4. Questionnaire Results – Technology Acceptance

Figure 4.22 below illustrates results from question no.14 which asked the user to evaluate whether the tester see or think that the portal is useful for a library user to share common interest and ideas with other library users. Almost 98% of the testers gave positive responses with 58.54% of the testers strongly agreed with the statement and 39.02% of the testers agreed to the statements.

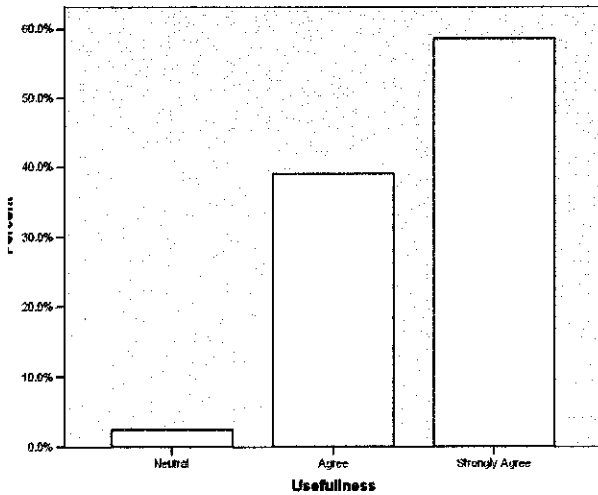


Figure 4.22: Usefulness of the portal

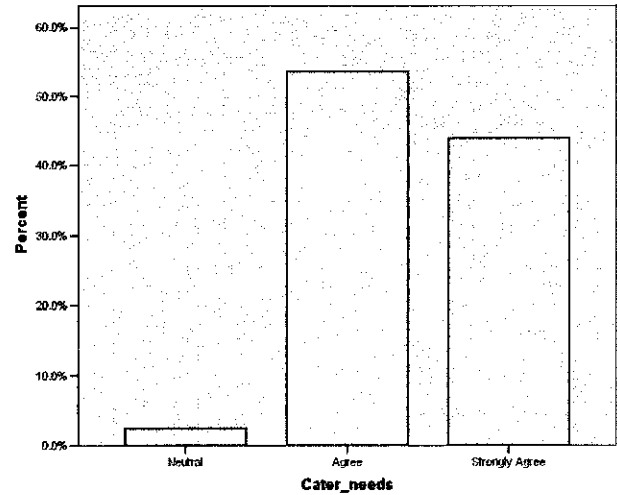


Figure 4.23: Ability to provide right library resources

Good responses were also received when asked whether the tester perceived the portal will be able to help them in searching for the right library resources that suits their needs by involving in a discussion with other library users. Figure 4.23 shows the result. 43.9% testers strongly agreed with the statements and 53.66% of the testers agreed to the statements. From this bar graph, one can conclude that by using features provided such as the forum discussion, testers were able to see the opportunities to share their knowledge with other library users as well as learn from them. As a conclusion, this portal is well accepted in terms of features provided in the portal, possible benefits if were used, and the easiness using features provided such as forum, live chatting and send messages.

CHAPTER 5: CONCLUSION

Knowledge management is still a new concept for public libraries in Malaysia. However it has a great potential to be implemented in order to produce and used knowledge that libraries have to the maximum level.

Through questionnaires distributed to three public libraries which are Malaysia National Library, Batu Gajah Library and Taiping Library, the knowledge management concept is exist only that it is more in informal way such as face-to-face communication between users or between users and library staffs. Communication among users and staffs are also good and most of the staffs agreed that library need to have a certain platform where they can communicate better and disseminate information and knowledge better to library users. This activity had involved 117 respondents for user's questionnaire and 14 respondents for administrator's questionnaire.

While the business world is changing in the new knowledge economy and digital age, public libraries of all types are undergoing drastic changes also. The new role of public libraries in the 21st century needs to be as a learning and knowledge center for their users as well as the intellectual commons for their respective communities (Wei Lee, 2005). Knowledge sharing initiatives among library users and staffs should be more encouraged. Libraries should not be just a repository for books or other information materials but also a place whereby patrons can share their knowledge to others by perhaps using suitable platform. One of the ways to make this possible is by having a virtual knowledge community.

Observations on knowledge communities had been done with the aim to look at common technologies used and important contents that usually had been implemented in those knowledge communities. As a result, a conceptual framework for developing an on-line knowledge community portal in public library had been derived.

Using a waterfall model, an on-line knowledge community portal had been developed phase by phase. Phases involved Strategic Analysis & Requirements, Detailed Design, Development and the last phase is System and Integration Testing.

Targeted users for this knowledge community portal are public library users from all over Malaysia. By using this knowledge community portal, user is able to join special group interest available and involve in on-line discussion forum or real-time chatting functionality provided with other library users. Each user also has personalized pages which enable other users to view their profile as well as to contact them by sending messages. This portal is aimed to initiate and nurture the knowledge sharing concept in public libraries in Malaysia among library users and library staffs.

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CHAPTER 7: APPENDIXES

7.1. Sample of Questionnaire for User

INTRODUCTION/PENGENALAN

The objective of this questionnaire is to study the current situation in the public library in Malaysia related as required for student's final year project entitled "Development of Knowledge Management in E-Government". This project is basically involved on researching the possibilities of implementing a knowledge management application in e-government specifically for public library area as well as develops the application.

According to Davenport and Prusak (1998), "*knowledge management is the process of capturing, distributing, and effectively using knowledge.*" At the current moment, knowledge management application has been widely used by private sectors. Among companies that have applied this concept within their organization are **Petronas Management Unit (PMU)**, **Colgate-Palmolive (M) Sdn Bhd**, **Hewlett Packard** and **IBM**. Examples of knowledge management applications are expert system and lesson learned system.

This questionnaire mainly include two sections - Section A and B. Respondents are required to answer all sections.

Tujuan kajiselidik ini adalah untuk mengetahui keadaan semasa perpustakaan awam di Malaysia seperti yang diperlukan untuk menjalankan projek akhir tahun pelajar yang bertajuk "Development of Knowledge Management in E-Government". Projek ini melibatkan kajian tentang kebarangkalian melaksanakan aplikasi pengurusan ilmu di perpustakaan awam dan juga membina aplikasi tersebut.

*Menurut Davenport dan Prusak(1998), pengurusan ilmu adalah proses untuk mendapatkan, menyebarkan serta menggunakan ilmu dengan effective. Ketika ini, aplikasi pengurusan ilmu lebih banyak digunakan di sector-sektor swasta. Diantara syarikat yang mempunyai aplikasi pengurusan ilmu adalah **Petronas Management Unit (PMU)**, **Colgate-Palmolive (M) Sdn Bhd**, **Hewlett Packard** dan **IBM**. Contoh aplikasi pengurusan ilmu adalah sistem pakar dan sistem "lesson learned".*

Kajiselidik ini mengandungi dua bahagian iaitu Seksyen A dan B. Anda dikehendaki menjawab semua soalan.

Location/Lokasi: _____

Date/Tarikh: _____

SECTION A: RESPONDEN'T BACKGROUND

SEKSYEN A: LATAR BELAKANG RESPONDEN

Please (X) your answer / *Sila tandakan (X) jawapan anda*

1. Gender / *Jantina*

<input type="checkbox"/>	Female/ <i>Perempuan</i>
<input type="checkbox"/>	Male / <i>Lelaki</i>

2. How old are you / *Berapakah umur anda?*

<input type="checkbox"/>	Below 15 years old / <i>Di bawah 15 tahun</i>
<input type="checkbox"/>	Between 15 to 21 years old / <i>Di antara 15 hingga 21 tahun</i>
<input type="checkbox"/>	Between 21 to 40 years old / <i>Di antara 21 hingga 40 tahun</i>
<input type="checkbox"/>	Above 40 years old / <i>Lebih dr 40 tahun</i>

3. How frequent did you visit this library / *Nyatakan kekerapan anda mengunjugi perpustakaan ini?*

<input type="checkbox"/>	Weekly basis / <i>Setiap minggu</i>
<input type="checkbox"/>	Once per month / <i>Sebulan sekali</i>
<input type="checkbox"/>	Once per sixth month / <i>Sekali dalam 6 bulan</i>
<input type="checkbox"/>	Other / <i>Lain – lain:</i> Please state / <i>Sila Nyatakan:</i> _____

4. Choose answer that best describes your IT background / *Pilih jawapan terbaik menerangkan latar belakang teknologi komputer anda.*

<input type="checkbox"/>	Advance / <i>Mahir</i>
<input type="checkbox"/>	Average / <i>Sederhana</i>
<input type="checkbox"/>	Basic / <i>Asas</i>

SECTION B: LIBRARY, BOOK & INFORMATION
SEKSYEN B: PERPUSTAKAAN, BUKU & INFORMASI

5. Time you spent at the library per day/ Masa yang diperuntukan di perpustakaan dalam sehari.

Less than 1 hour / Kurang dari 1 jam.
Between 1 to 2 hours / Antara 1 hingga 2 jam.
Between 3 to 5 hours / Antara 3 hingga 5 jam.
More than 5 hours / Lebih dari 5 jam.

6. What sorts of books do you usually read or borrowed here / Apakah kategori buku yang anda baca atau pinjam disini?

Science and Technology / Sains dan teknologi
Fictions / Fiksyen
Management Books / Buku Pengurusan
Self-Improvement Books / Buku kemajuan diri
Other / Lain – lain: Please state / Sila Nyatakan: _____

7. Whenever you want to find a book, do you... / Setiap kali ingin meminjam buku, anda...

Ask the librarian for the location / Bertanya kepada perpustakawan.
Use book search system available / Menggunakan sistem pencarian buku yang disediakan. E.g. Book Catalogue / Contoh: Katalog Buku
Find it yourself./ Mencari buku itu sendiri.
Other / Lain – lain: Please state / Sila Nyatakan: _____

8. Time it takes for you to find a book / Masa yang diambil untuk mencari sesebuah buku.

Less than 5 minutes / Kurang dari 5 minit.
Between 5 to 10 minutes / Antara 5 hingga 10 minit.
Between 10 to 30 minutes / Antara 10 hingga 30 minit.
More than 30 minutes / Lebih dari 30 minit.

9. Have you suggested any books that you have read or borrowed here to others/ Pernahkah anda syorkan buku yang pernah anda baca atau pinjam disini kepada sesiapa?

E.g. other library user, friends / pengguna yang lain, kawan-kawan.

Yes / Ya
No / Tidak

10. Have you ever communicate with other users of the library / *Pernahkan anda berkomunikasi dengan pengguna perpustakaan yang lain?*

E.g Discussing a book and its material. / *Contoh: Berbincang tentang isi kandungan buku.*

	Yes / <i>Ya</i>
	No / <i>Tidak</i>

For the following questions (11 to 18), please circle your answer according to **1 represent the least to 5 represent the most.**

Untuk soalan seterusnya (11 ke 20), sila bulatkan jawapan anda berpandukan skala 1 mewakili paling sedikit ke 5 mewakili paling banyak.

11. I perceived the book cataloging is useful to find the correct library materials that suit to my needs. / *Kerbekesanan sistem katalog buku sedia ada membantu anda mencari buku yang tepat.*

Strongly disagree / <i>Sangat tidak bersetuju</i>	Disagree / <i>Tidak bersetuju</i>	Neutral / <i>Neutral</i>	Agree / <i>Setuju</i>	Strongly agree / <i>Sangat setuju</i>
1	2	3	4	5

12. The frequency of you finding the book that you want with the right material. / *Kekerapan menemui buku yang ingin dicari dengan isi kandungan yang menepati spesifikasi.*

Never / <i>Tidak pernah</i>	Rarely / <i>Jarang</i>	Undecided / <i>Tidak tahu</i>	Sometimes / <i>Kadang-kadang</i>	Often / <i>Selalu</i>
1	2	3	4	5

13. The frequency of you requesting assistance from the librarian / *Kekerapan anda meminta bantuan dari perpustakawan?*

Never / <i>Tidak pernah</i>	Rarely / <i>Jarang</i>	Undecided / <i>Tidak tahu</i>	Sometimes / <i>Kadang-kadang</i>	Often / <i>Selalu</i>
1	2	3	4	5

14. Frequency of the reference librarian able to fully answer your question / *Kekerapan perpustakawan berjaya membantu anda.*

Never / <i>Tidak pernah</i>	Rarely / <i>Jarang</i>	Undecided / <i>Tidak tahu</i>	Sometimes / <i>Kadang-kadang</i>	Often / <i>Selalu</i>
1	2	3	4	5

15. Frequency of you using the book search system to locate books or other materials / *Kekerapan anda menggunakan sistem katalog buku yang disediakan.*

Never / <i>Tidak pernah</i>	Rarely / <i>Jarang</i>	Undecided / <i>Tidak tahu</i>	Sometimes / <i>Kadang-kadang</i>	Often / <i>Selalu</i>
1	2	3	4	5

16. Overall, how easy do you feel it is to use the library's computer catalog to find library resources / *Pada keseluruhannya, apa pendapat anda tentang sistem katalog buku dalam mencari buku atau material yang dikehendaki?*

Very difficult / <i>Sangat susah</i>	Difficult / <i>Susah</i>	Undecided / <i>Tidak tahu</i>	Easy / <i>Senang</i>	Very easy / <i>Sangat senang</i>
1	2	3	4	5

17. Usefulness of information in the book(s) that you have read or borrowed / *Isi kandungan buku-buku yang pernah dibaca atau dipinjam.*

Useless / <i>Tidak berguna</i>	Not that useful / <i>Tidak berapa berguna</i>	Undecided / <i>Tidak tahu</i>	Useful / <i>Berguna</i>	Very useful / <i>Sangat berguna</i>
1	2	3	4	5

18. Placement of books / *Kedudukan buku.*

E.g. Location, Division of books / *Contoh: Lokasi, pembahagian kategori buku.*

Very inconvenient / <i>Sangat tidak selesa</i>	Inconvenient / <i>Tidak selesa</i>	Undecided / <i>Tidak tahu</i>	Convenient / <i>Selesa</i>	Very convenient / <i>Sangat selesa</i>
1	2	3	4	5

Thank you for your time

"Courtesies of a small and trivial character are the ones which strike deepest in the gratefully and appreciating heart."

-Henry Clay-

7.2. Sample of Questionnaire for Administrator

INTRODUCTION/PENGENALAN

The objective of this questionnaire is to study the current situation in the public library in Malaysia related as required for student's final year project entitled "Development of Knowledge Management in E-Government". This project is basically involved on researching the possibilities of implementing a knowledge management application in e-government specifically for public library area as well as develops the application.

According to Davenport and Prusak (1998), "*knowledge management is the process of capturing, distributing, and effectively using knowledge.*" At the current moment, knowledge management application has been widely used by private sectors. Among companies that have applied this concept within their organization are **Petronas Management Unit (PMU)**, **Colgate-Palmolive (M) Sdn Bhd**, **Hewlett Packard** and **IBM**. Examples of knowledge management applications are expert system and lesson learned system.

This questionnaire mainly include two sections - Section A and B. Respondents are required to answer all sections.

Tujuan kajiselidik ini adalah untuk mengetahui keadaan semasa perpustakaan awam di Malaysia seperti yang diperlukan untuk menjalankan projek akhir tahun pelajar yang bertajuk "Development of Knowledge Management in E-Government". Projek ini melibatkan kajian tentang kebarangkalian melaksanakan aplikasi pengurusan ilmu di perpustakaan awam dan juga membina aplikasi tersebut.

*Menurut Davenport dan Prusak(1998), pengurusan ilmu adalah proses untuk mendapatkan, menyebarkan serta menggunakan ilmu dengan effective. Ketika ini, aplikasi pengurusan ilmu lebih banyak digunakan di sector-sektor swasta. Diantara syarikat yang mempunyai aplikasi pengurusan ilmu adalah **Petronas Management Unit (PMU)**, **Colgate-Palmolive (M) Sdn Bhd**, **Hewlett Packard** dan **IBM**. Contoh aplikasi pengurusan ilmu adalah sistem pakar dan sistem "lesson learned".*

Kajiselidik ini mengandungi dua bahagian iaitu Seksyen A dan B. Anda dikehendaki menjawab semua soalan.

Location/Lokasi: _____
Date/Tarikh: _____
Position/ Jawatan: _____

SECTION A: RESPONDEN'T BACKGROUND
SEKSYEN A: LATAR BELAKANG RESPONDEN

Please (X) your answer / *Sila tandakan (X) jawapan anda*

1. Gender / *Jantina*

<input type="checkbox"/>	Female/ <i>Perempuan</i>
<input type="checkbox"/>	Male / <i>Lelaki</i>

2. How old are you / *Berapakah umur anda?*

<input type="checkbox"/>	Between 21 to 30 years old
<input type="checkbox"/>	Between 31 to 40 years old
<input type="checkbox"/>	Between 41 to 50 years old
<input type="checkbox"/>	Above 50 years old

3. Choose answer that best describes your IT background / *Pilih jawapan terbaik menerangkan latar belakang teknologi komputer anda.*

<input type="checkbox"/>	Advance / <i>Mahir</i>
<input type="checkbox"/>	Average / <i>Sederhana</i>
<input type="checkbox"/>	Basic / <i>Asas</i>

SECTION B: KNOWLEDGE MANAGEMENT CONCEPT & LIBRARY
SEKSYEN B: KONSEP PERGURUSAN ILMU & PERPUSTAKAAN

4. Have you ever heard about Knowledge Management (KM) Concept / *Pernahkan anda mendengar tentang konsep pengurusan ilmu?*

<input type="checkbox"/>	Yes. I know about KM. / <i>Ya. Saya tahu tentang KM</i>
<input type="checkbox"/>	Yes. But I am not so sure what it is. / <i>Ya saya tahu tetapi tidak berapa pasti.</i>
<input type="checkbox"/>	No. Never heard of it. (Jump to question 6) / <i>Tidak. (Terus ke soalan 6)</i>

5. Are you aware of the functionalities of KM and its benefits / *Adakah anda sedar tentang fungsi KM dan kelebihannya?*

<input type="checkbox"/>	Yes, of course. / <i>Sudah tentu.</i>
<input type="checkbox"/>	No. / <i>Tidak</i>

6. By any chance, do you think that the library needs to improve on the cataloging system / *Adakah sistem catalog buku sedia ada perlu diperbaiki?*

<input type="checkbox"/>	Yes / <i>Ya</i>
<input type="checkbox"/>	No / <i>Tidak</i>

For the following questions (7 to 12), please circle your answer according to **1 represent the least to 5 represent the most.**

Untuk soalan seterusnya (7 ke 11), sila bulatkan jawapan anda berpandukan skala 1 mewakili paling sedikit ke 5 mewakili paling banyak.

7. I perceived the current book cataloging system is useful to the user / *Keberkesanan sistem pencarian buku sedia ada kepada pengguna.*

Strongly disagree / <i>Sangat tidak bersetuju</i>	Disagree / <i>Tidak bersetuju</i>	Neutral / <i>Neutral</i>	Agree / <i>Setuju</i>	Strongly agree / <i>Sangat setuju</i>
1	2	3	4	5

8. Through my observation, user **always** used the current book cataloging system / *Dari pemerhatian saya, pengguna sering menggunakan sistem katalog buku sedia ada.*

Strongly disagree / <i>Sangat tidak bersetuju</i>	Disagree / <i>Tidak bersetuju</i>	Neutral / <i>Neutral</i>	Agree / <i>Setuju</i>	Strongly agree / <i>Sangat setuju</i>
1	2	3	4	5

9. The frequency of users asking for your assistance in finding books / *Kekerapan pengguna meminta bantuan anda untuk mencari buku.*

Never / <i>Tidak pernah</i>	Rarely / <i>Jarang</i>	Undecided / <i>Tidak tahu</i>	Sometimes / <i>Kadang-kadang</i>	Often / <i>Selalu</i>
1	2	3	4	5

10. The frequency of user complained about not getting the right material. / *Menerusi pemerhatian anda, pilih kekerapan pengguna membuat aduan tidak berjumpa dengan buku yang tepat dengan isi kandungan yang dikehendaki.*

Never / <i>Tidak pernah</i>	Rarely / <i>Jarang</i>	Undecided / <i>Tidak tahu</i>	Sometimes / <i>Kadang-kadang</i>	Often / <i>Selalu</i>
1	2	3	4	5

11. Through your observation, rate the interaction between users and librarian. / *Menerusi pemerhatian anda, nilaikan interaksi antara pengguna dan perpustakawan.*

Never / <i>Tidak pernah</i>	Rarely / <i>Jarang</i>	Undecided / <i>Tidak tahu</i>	Sometimes / <i>Kadang-kadang</i>	Often / <i>Selalu</i>
1	2	3	4	5

12. The need of having a platform or a system that enables users to interact with other users and librarian. / *Keperluan mempunyai sebuah platform atau sistem yang boleh membantu pengguna berinteraksi dengan pengguna lain dan juga perpustakawan.*

Useless / <i>Tidak berguna</i>	Not that useful / <i>Tidak berapa berguna</i>	Undecided / <i>Tidak tahu</i>	Useful / <i>Berguna</i>	Very useful / <i>Sangat berguna</i>
1	2	3	4	5

Thank you for your time

“Courtesies of a small and trivial character are the ones which strike deepest in the gratefully and appreciating heart.”

-Henry Clay-

7.3. Observation form for knowledge communities

Name:	The Gurteen Knowledge Community - http://www.gurteen.com/gurteen/gurteen.nsf/id/gkc	
Description:	A global learning community of over 12,000 people in 138 countries across the world which is a resource platform for knowledge workers	
Main Features:	Categories	It provides users links to useful websites, articles and organizations. For example if user choose “Knowledge Sharing” category, it will provide below information to users, related articles, documents, books, presentation slides, upcoming event involving knowledge sharing as main topic discussion, past event, list of useful links, quotations and even weblog related to the category
	Search	It also provides search functionality whereby user can search the entire website for a specific topic or categories. The search functionality is also connected to Google.com
Others:	<i>none</i>	

Name:	National Institute of Mental Health in England (NIMHE) - http://kc.nimhe.org.uk	
Description:	The knowledge community is aimed at anyone with an interest or responsibility in mental health, including those who use mental health services, their family and friends.	
Main Features:	People	User can use this functionality to find other users by directly search their name, browse by alphabetical order or browse by role.
	Groups	Users are able to join groups available and collaborate with others. They can also search groups, and see active groups.
	Organizations	Users can also find out what other organization locally or nationally doing at the current moment by searching or browsing by alphabetical order.
	Resources	List of resources available such as web sites, documents, reports.
	News	current mental health news
	Events	List of national and regional events and conferences.
Others:	A-Z Directory of articles available in the website; users can see recent reviews made on any articles on the sites. They also have General Themes link which have 50 most popular themes people have used to describe (or 'tag') items in the website. Users are also provided with search functionality to search for specific groups or people	

Name:	KnowledgeBoard - http://knowledgeboard.com	
Description:	Platform developed for users collaborating on subjects around Knowledge Management and Innovation in the worlds of business and academia	
Main Features:	Home	At the main page, this website has provided the below link: <ul style="list-style-type: none"> • Latest articles and comments made • Latest forum conversations • List of new documents (in .pdf format) available • List of upcoming events • List of latest members registered to the knowledge community • Link to online chat
	Events	Users can view book of the month that had been reviewed by the administrator as well as join special interest groups which enable them to view news, discussions, documents and links related to the special interest groups.
	Discussion	This community also provides discussion area.
	KnowledgeBank	Link users to all resources available in the site such as articles, newswire archive, journal, organization, library and links
	My Profile & My Newswires -	Registered users will have their own profile page called My Profile and can even filter news that they want to be updated in My Newswires
	Others:	Online Chat
People		Users can also search for a particular members using search functionality provided

Name:	learningForum @FHWA - http://knowledge.fhwa.dot.gov/LearningForum	
Description:	Platform developed for users collaborating on subjects around Knowledge Management and Innovation in the worlds of business and academia	
Main Features:	MyInterest	Each user has their own personal page – MyInterest whereby here they can set their interest (which automatically join to the group they set) and receive daily e-mail notifications when items of interest are added to the site.
	Group	This community provides a list of group of area available for members to join. For each group, there will be discussion (forum), reference, work-in progress (documents under progress) and directory (list of useful contact person).
	Search	Search functionality is also provided in the website.
Others:	<i>none</i>	

Name:	The Bologna Center; Johns Hopkins University - http://www.jhubc.it/forum/default.asp	
Description:	This online community is open for all students or ex-students of School of Advanced International Studies of Johns Hopkins University	
Main Features:	The Lobby	An online chatting functionality.
	Forum	Provide several topics for discussion among members.
	Classes	Members can join classes they graduated in, just like community of interest.
	Search	Members can search for forum messages.
	Profile	Registered users have their own profile members.
	Member	Users can also browse for other members' profiles.
Others:	Active Topics	Users can also view active topics under discussion.

Name:	Bookcrossing.com - http://www.bookcrossing.com/	
Description:	An online book club open for all which promote bookcrossing which is the practice of leaving a book in a public place to be picked up and read by others, who then do likewise. Currently, this community has 486,603 users registered to it.	
Main Features:	Home	Have latest notifications on latest book caught, latest book released, latest news on bookcrossing.com and active forum topics.
	Book	Users would be able to browse for books registered to the community, submit journal entry on books, registered books that will be released and even search for particular books
	People	Users are able to browse or search for other members, view which members have registered the most books and see latest new member registered.
	Go Hunting	This link provides list of countries with books that had been released accompanied with number of books that had been released.
	Community	This community also provides discussion area which is in two format – online discussion forum and email discussion group. Users can also use search functionality provided to search content of the forum.
Others:	<i>none</i>	

7.4. Sample of Questionnaire for User Acceptance Testing

Duration of exploration: 15 minutes

Date: _____

SECTION A: RESPONDENT BACKGROUND

Please (X) your answer

19. Gender

<input type="checkbox"/>	Female
<input type="checkbox"/>	Male

20. How old are you ?

<input type="checkbox"/>	Below 15 years old
<input type="checkbox"/>	Between 15 to 21 years old
<input type="checkbox"/>	Between 21 to 40 years old
<input type="checkbox"/>	Above 40 years old

21. Choose answer that best describes your IT background

<input type="checkbox"/>	Advance
<input type="checkbox"/>	Average
<input type="checkbox"/>	Basic

SECTION B: PORTAL'S EXPLORATION

Please circle your answer

22. Portal provide good information / notifications on the status of the portal or what's happening after I had performed certain tasks. E.g. informed you that the reply has been submitted, or profile has been updated etc.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

23. Instructions/ information/ words used or provided in the portal is easy to understand and familiar to me.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

24. I have a total control and freedom to navigate through this portal without any limitations.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

25. Layout, information and instructions provided in the portal are very consistent and easy to understand.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

26. Portal provides error notification whenever error occurs.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

27. I am aware of where I am in the site. E.g. what page are you in – forum, profile etc.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

28. Features provided in the portal are easy to use. E.g. forum, live chat, messages

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

29. Information provided is enough for me to perform the needed task

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

30. When error occurs, I know what to do and how to solve the error.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

31. Help documentation / Site map able to help me to navigate better and easier within the portal.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

SECTION C: PORTAL'S EXPLORATION

Please circle your answer

32. I perceived that the portal is useful for a library user to share common interest and ideas with other library users.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

33. I perceived that the portal will help me in searching for the right library resources that suits my needs by involving in a discussion with other library users.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

34. I perceived that the Search feature in People page is an effective tool to search for members who have the same interest as me.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

35. I perceived that the Group, Forum, Forum: Live Chat and send messages features are effective ways to collaborate with other users from different libraries

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

36. I perceived that the Group & send Messages features are easy to use

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

37. I perceived that the Forum feature is easy to use

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

38. I perceived that the Forum: Live Chat feature is easy to use

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

7.5. Screenshots for library knowledge community portal

VIRTUAL COMMUNITY
INTEREST
BATU GAJAH LIBRARY

MY PROFILE MY GROUP MY ARCHIVES LOG OUT

PEOPLE
FORUM
WEATHERS
NEWS

> WELCOME

0443 PM
Thursday, October 12, 2006
Helo sarah
New Message(s)

> LATEST MEMBERS

- grace
Member since 10/12/2006 1:32:21 AM
- syah
Member since 10/2/2006 11:00:43 AM
- faiz
Member since 10/2/2006 10:36:41 AM
- fuzz
Member since 10/12/2006 9:30:41 PM

For more list of members, click here

> ANNOUNCEMENT

LIBRARY TAPING OPEN DAY
There will exhibition on Saturday, 13 October 2006. Book promoters - new and second hand books, auctions of limited edition books. Do come and join us.

BOOKS FROM AISYA SOFEA
posted on 9/8/2006 7:59:27 PM
New books from Malaysian novelist, Aisya Sofea is now available here, at Batu Gajah Library. Titles available include Gelora Jiwa, Adam & Hawa and Jauh
For more news, click here

> FORUM

Join our **FORUM: LIVE CHAT**

ISLAM-CUSTOMS AND PRACTICES
[Concentrate on discussion related Islamic literatures and its practices in the modern society]
• Ramadan

KNOWLEDGE COMMUNITY
[Tell us what you think]

BOOK REVIEW
[Books books and more books]
• Gelora Jiwa by Aisya Sofea
:New Reply(s):
• Da Vinci Code by Dan Brown
:New Reply(s):
• AZ-ZAMIRAWI - PAKAR BEDAH
:New Reply(s):

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Figure 7.1: Main Page

VIRTUAL COMMUNITY INTEREST **BATU CAYAN LIAISON**

MY PROFILE MY GROUP MY ARCHIVES LOG OUT

PEOPLE GROUP FORUM RESOURCES NEWS

WELCOME

08:11 PM
Monday, November 06, 2006

Halo FUZZ

New Message(s)

SEE ALSO

- Edit My Profile
- Search for Members
- Members Directory
- Join Live Chat
- List of Admin Group

ANNOUNCEMENT

LIBRARY TAMPING OPEN DAY

There will exhibition on Saturday, 13 October 2006. Book promotions - new and second hand books, auctions of limited edition books. Do come and join us.

NOOR FUZZIHA ABD. HALIN

User ID	1008
NRIC	S42611-L0-5660 [E.g. 941219-10-5150]
Address	Taman Ehsan, Kepong, Kuala Lumpur
Contact No.	012-3344337
Library Location	Perpustakaan Negara Malaysia
Email	fuzz@lyros.com
Interest Profile	Constructions, Geol
Date Registered	10/1/2006 9:30:43 PM
Username	Fuzz
Password	www

[Edit myProfile](#)

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Figure 7.2: My Profile Page

VIRTUAL COMMUNITY INTEREST **BATU CAYAN LIAISON**

MY PROFILE MY GROUP MY ARCHIVES LOG OUT

PEOPLE GROUP FORUM RESOURCES NEWS

0405 PM
Thursday, October 12, 2006

Halo FUZZ

SEE ALSO

- See My Profile
- Search for Members
- Members Directory
- Join Live Chat

ANNOUNCEMENT

LIBRARY TAMPING OPEN DAY

There will exhibition on Saturday, 13 October 2006. Book promotions - new and second hand books, auctions of limited edition books. Do come and join us.

SEARCH OTHER MEMBERS

Find This User From This Location: Search

Displaying Results for: Perpustakaan Negara

- Noor Fuzziha Abd. Halin
...malaysia...
Member since 10/1/2006 9:30:43 PM
- Ahmad Faiz Ahmad Fauzi
...malaysia...
Member since 10/2/2006 10:30:43 AM
- Nur Haliza Bin Md. Ali
...malaysia...
Member since 8/23/2006 7:23:45 AM

Displaying Record(s) 1 - 3 of 3 Matches Found

PEOPLE DIRECTORY: BROWSE BY NAME

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

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Figure 7.3: Members Search & Directory Page

VIRTUAL COMMUNITY INTEREST BAYU GAJARI

MY PROFILE MY GROUP MY ARCHIVES LOG OUT

PEOPLE GROUP FORUM RESOURCES NEWS

WELCOME

04:27 PM
Thursday, October 12, 2006
Hello Sarah
New Message(s)

SEE ALSO

- See My Profile
- Search for Members
- Members Directory
- Join Live Chat

ANNOUNCEMENT

LIBRARY TALKING OPEN DAY

There will exhibition on Saturday, 13 October 2006. Book promotions - new and second hand books, auctions of limited edition books. Do come and join us.

MEMBER'S PROFILE

NOOR FUZZIHA ABD. HALIN

User ID	1008
Username	fuzz
Email	fuzz@ycos.com
Library Location	Perpustakaan Negara Malaysia
Interest	Construclions, Geology
Group Joined	Paperback Lovers: Fiction , Perak-Customs of Royalty , Malay Literature .
Access level	User
Date Registered	10/1/2006 9:30:43 PM

CONTACT THIS PERSON

Your Email:	sarahomihuddin@gmail.com
Date:	10/12/2006 4:26:56 PM
Title:	
Subject:	
<input type="button" value="Send"/> <input type="button" value="Cancel"/>	

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Figure 7.4: Member's Profile page with 'send message' capabilities


		MY PROFILE MY GROUP MY ARCHIVES LOG OUT	
<p>PEOPLE</p> <p>GROUPS</p> <p>FORUMS</p> <p>PERFORMANCE</p> <p>NEWS</p>			
<p>WELCOME</p>			
<p>04:12 PM Thursday, October 12, 2006</p> <p>Hiho FUZZ</p>		<p>Track this forum Create New Topic Reply to this topic</p>	
<p>SEE ALSO</p> <ul style="list-style-type: none"> See My Archives Join Live Chat Create New Topic Reply to this topic 		<p>Galera Jiwa by Alsya Sofea, by [User] on Thursday, September 28, 2006 12:30:00 AM Mari Bincang pasal best seller...</p>	
		<p>Re:Galera Jiwa by Alsya Sofea, by [User] on Sunday, October 01, 2006 12:45:01 PM sesape yg dah baca buku nii.. meh ilaa kite review buku nii...</p>	
		<p>Re:Galera Jiwa by Alsya Sofea, by [User] on Wednesday, October 04, 2006 12:21:23 AM Takde sape2 ker nk start review nii?</p>	
		<p>Re:Galera Jiwa by Alsya Sofea, by [User] on Thursday, October 05, 2006 11:21:23 AM Saya pernah baca buku nii. At first I was quiet boring. But once u get to the middle part, u takkan leh letak buku nii lag!</p>	
		<p>Re:Galera Jiwa by Alsya Sofea, by [User] on Thursday, October 05, 2006 12:21:23 AM An I don't really like the book. I preferred her earlier book</p>	
		<p>Re:Galera Jiwa by Alsya Sofea, by [User] on Thursday, October 12, 2006 4:11:08 PM I like all books from her... especially this one..if anyone interested... I know this one place yg not only can buy books from Malaysian famous authors but can borrow books...</p> <p>[Delete] [Edit]</p>	
		<p>Pages: [1]</p>	
<p>LIBRARY TAIPING OPEN DAY</p> <p>There will exhibition on Saturday, 13 October 2006. Book promotions - new and second hand books, auctions of limited edition books. Do come and join us.</p>			
<p>Home / my profile / about us / contact us / site map All contents © copyright 2006 [4033] All rights reserved</p>			

Figure 7.5: Forum Page

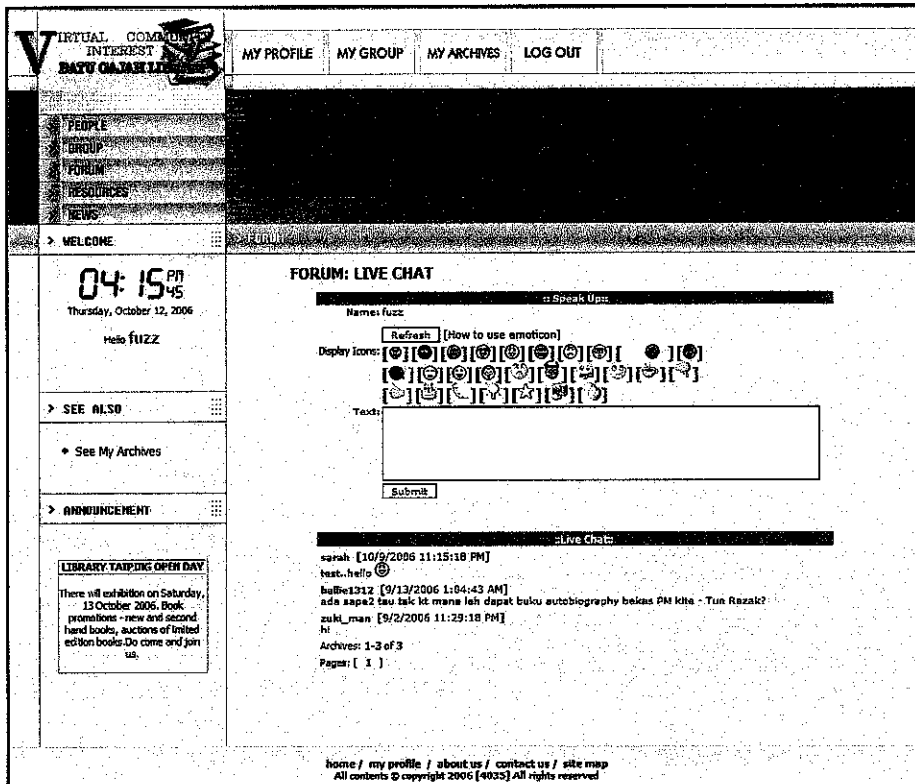


Figure 7.6: Forum Live Chatting Page

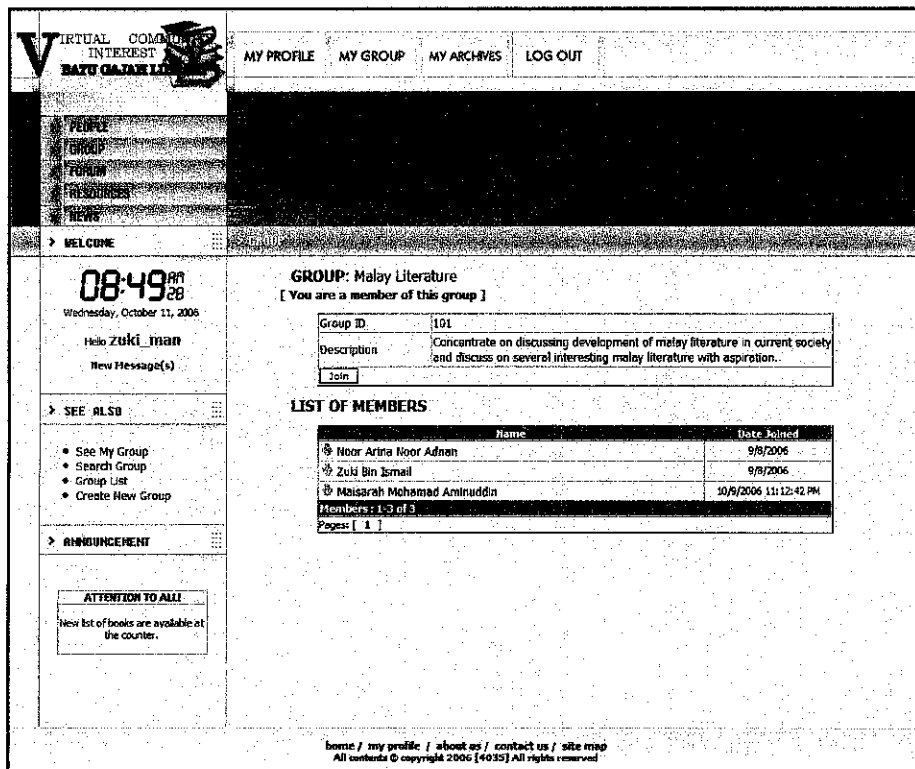


Figure 7.7: Group Profile Page with 'Join' capabilities