

LOCAL CONTENT DEVELOPMENT FOR  
TARGETED GROUP IN COMMUNITY CENTER

ABDUL HAPES BIN MOHAMMED

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# LOCAL CONTENT DEVELOPMENT FOR TARGETED GROUP IN COMMUNITY CENTER

A thesis submitted to the Graduate School in partial fulfillment of the  
requirements for the degree of Master of Science (Information Technology)  
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By

Abdul Hapes bin Mohammed



**KOLEJ SASTERA DAN SAINS**  
**(College of Arts and Sciences)**  
**Universiti Utara Malaysia**

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Nama Penyelia Utama  
(Name of Main Supervisor: **ASSOC. PROF. DR. WAN ROZAINI SHEIK OSMAN**)

Tandatangan  
(Signature) : Rozaini Tarikh (Date) : 18/5/2010

Nama Penyelia Kedua  
(Name of 2<sup>nd</sup> Supervisor: **MR. MOHAMED ALI SAIP**)

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## **ABSTRACT**

Telecenter or community center is a place where it provides an opportunity for those who really in need the exposure to the ICT world. Telcenters has already contributed a lot in guiding and giving training so the people can make use of all the facilities provided. Despite that, by only providing the access to the net and the facilities is still not adequate to help them and make hem utilize the telecenter. So the telecenter administrators need to identify what are the contents to be offered that can magnetize the targeted group. If the contents able to attract them, so it is possible the targeted group especially for those who live in rural area be capable of compete with other groups of society in utilizing all the technologies facilities for the benefits of all the peoples.

## ABSTRAK

Telecenter atau pun pusat komuniti merupakan satu tempat di mana ia memberi peluang kepada golongan-golongan yang memerlukan pendedahan terhadap dunia IT. Telecenter telah banyak membantu dari segi member latihan serta panduan bagi membolehkan mereka menggunakan kemudahan yang disediakan. Walau bagaimanapun, dengan hanya menyediakan akses kepada internet dan kelengkapan sahaja tidak mencukupi untuk membantu golongan sasaran ini supaya terlibat dan boleh menggunakan telecenter ini. Oleh itu, pentadbir telecenter perlu mengenalpasti apakah bahan yang patut disediakan yang mampu menarik perhatian kumpulan sasaran ini. Sekiranya ia mampu dilakukan maka tidak mustahil suatu hari nanti kumpulan sasaran ini yang rata-ratanya adalah golongan yang tinggal diluar bandar mampu untuk turut bersaing dengan kumpulan masyarakat yang lain dalam menggunakan kemudahan teknologi yang ada pada masa kini demi kebaikan semua.

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## LIST OF TABLE

Table 1	MID Development	10
Table 2	Number of people by age	30
Table 3	Education level	31
Table 4	Ever use a computer	32
Table 5	Owning a computer	33
Table 6	Interest to buy a computer	34
Table 7	Level of income	35
Table 8	Number of people by race	36
Table 9	Level of information obtained	37
Table10	Level of information expected	38
Table11	Server testing	50
Table12	Survey question number 1	51
Table13	Survey question number 2	52
Table14	Survey question number 3	52
Table15	Survey question number 4	53
Table16	Survey question number 5	53
Table 17	Research objectives vs. research achievements	55



## LIST OF FIGURES

Figure 1	Schematic of Media Richness Theory	13
Figure 2	Schematic of Information Processing Theory	15
Figure 3	Overall research process	16
Figure 4	Develop the local content application process	18
Figure 5	Map of Kampung Tradisi, Lembah Keriang	28
Figure 6	Login screen	40
Figure 7	Administrator control panel	41
Figure 8	Input screen	42
Figure 9	User layout	43
Figure 10	XAMPP control panel	45
Figure 11	Main page	46
Figure 12	Browsing content	46
Figure 13	Login administrator panel	47
Figure 14	Adding new article	47

## LIST OF ABBERRIATIONS

BDD	Bridging digital divide
CoE	Center of Excellence
GLC	Government Link Companies
ICT	Information and Communication Center
ITU	International Telecommunication Union
MID	Medan Info Desa
MCMC	Malaysian Communications and Multimedia Commission
MID	Medan Info Desa
PHP	Hypertext Preprocessor
PID	Pusat Internet Desa
R&D	Research and Development
SDLC	System development life cycle
SME	Small Medium Enterprise
UUM	Universiti Utara Malaysia

## TABLE OF CONTENT

	Page
PERMISSION TO USE.....	I
ABSTRACT.....	II
ABSTRAK.....	III
ACKNOWLEDGEMENT.....	IV
LIST OF TABLES.....	V
LIST OF FIGURES.....	VI
LIST OF ABBEVIATIONS.....	VII

### CHAPTER 1: INTRODUCTION

1.1 Preface.....	1
1.2 Problem Statements.....	2
1.3 Research Questions .....	3
1.4 Research Objectives .....	3
1.5 Scope of Study.....	3
1.6 Research Outcomes.....	4
1.7 Expected Contributions of Research.....	4
1.8 Organization of the Report.....	5
1.9 Summary.....	5

### CHAPTER 2: LITERATURE REVIEW

2.1 Telecenter.....	7
2.2 Rural .....	8
2.3 Digital Divide.....	8
2.4 Information Kiosk.....	9
2.5 Content.....	10
2.6 Related Theories.....	12

## **CHAPTER 3: RESEARCH METHODOLOGY**

<b>3.1</b>	<b>Methodology</b>	<b>16</b>
3.1.1	Identification of research area.....	17
3.1.2	Conduct literature review.....	17
3.1.3	Produce research proposal.....	18
3.1.4	Develop the local content application.....	18
3.1.4.1	Identify research area.....	19
3.1.4.2	Identify target group.....	20
3.1.4.3	Identify local content.....	20
3.1.4.4	Content design.....	20
3.1.4.5	Develop application.....	22
3.1.4.6	Launch the application.....	23
3.1.5	Develop experiment test plan.....	23
3.1.6	Conduct pilot test.....	23
3.1.7	Conduct experiment and record data.....	23
3.1.8	Summarize findings of testing.....	24
3.1.9	Draw conclusion and suggest recommendation.....	24
3.1.10	Produce final report.....	24
<b>3.2</b>	<b>Summary.....</b>	<b>25</b>

## **CHAPTER 4: DEVELOPMENT AND IMPLEMENTATION OF THE LOCAL CONTENT AND THE APPLICATION**

<b>4.1</b>	<b>Introduction .....</b>	<b>26</b>
4.1.1	Identify research area.....	27
4.1.2	Identify target group.....	29
4.1.3	Identify local content.....	36
4.1.4	Content design.....	39
4.1.5	Develop application.....	39
4.1.5.1	Identify application requirements.....	39
4.1.5.2	Designing the application.....	41
4.1.5.3	Testing the application.....	45

4.1.5.4 Validation.....	45
4.1.6 Launch the application.....	46
 <b>CHAPTER 5: RESEARCH RESULT</b>	
5.1 Experiment setting.....	47
5.2 Run test.....	47
5.2.1 Local testing.....	47
5.2.2 On server testing.....	50
5.2.3 Demonstration session.....	50
5.3 Result.....	51
5.4 Summary.....	56
 <b>CHAPTER 6: CONCLUSIONS &amp; RECOMMENDATIONS</b>	
6.1 Conclusions .....	57
6.2 Recommendations.....	58
 REFERENCES.....	 58
APPENDIX.....	63

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Preface**

Malaysia has already achieved substantial success in its rural development, especially in reducing the incidence of poverty in both rural and urban. During the process, the rural areas have been developed with many infrastructures such as school facilities, social amenities, utility, health and etc. to support the economic development of the country as well as increasing the quality of life of the rural community. According to Badawi (2006) during his speech in Dewan Rakyat when introducing the motion to table the 9<sup>th</sup> Malaysia Plan, 37 percent of Malaysia still live in the rural area and 7 states in Malaysia are holding a large portion of rural land.

There are initiatives that will be taken in order to enhance the competency and productivity as well as to increase opportunities to generate wealth, increase the R&D sector, expand the usage of modern technique and technology as well as develop marketing capabilities and infrastructures. Malaysian government will also need to take part to promote a higher level of

participation from the private sectors including the GLC's companies, SMEs, graduates, and skilled workers.

## **1.2 Problem Statements**

Nowadays, there are many telecenters being developed in Malaysia in order to give them a chance to feel and experienced what ICT looks like and there is no doubt that telecenters has contribute many things to rural communities.

But despites that, telecenters are still exposed to a risk and their success can be compromised anytime and anywhere by a number of factors that can be grouped as follows:

### **❖ *Technological:***

- Some location have limited access to basic utility such as electricity
- Some of the places have low connectivity to access the internet and bandwidth problem.

### **❖ *Socio-economical:***

- Low interest and a little involvement from the communities at the starting phase of the project
- Lack of information or awareness or skills on how to get funding whether from the government or private sector.

❖ *Content*

- Limited access to relevant local content such as market information, religion, banking etc.

### **1.3 Research Question**

What will be the local content required by the target group in Kg. Tradisi to benefit from the telecenter?

### **1.4 Research Objective**

There are several objectives have been outlined for this research:

1. To identify the required local content to be develop for the target group in Kg. Tradisi's telecenter.
2. To develop the required local content for the target group in Kg. Tradisi's telecenter.
3. To verify the required local content for the target group in Kg. Tradisi's telecenter.

### **1.5 Scope of Study**

This research will focus on finding the suitable local content to be develop based on the needs of the target group. An application will be develop as a platform between the target group and the local content so that they can interact with the content in a proper manner.



## **1.6 Research Outcomes**

The outcome of this research is a set of local content that can be used by the target group based on their needs using the application that will be developed. After the completion of the local content and the application, a recommendation and future work are proposed to improvise the content development in community center.

## **1.7 Expected Contributions of Research**

Generally for the expected contribution, I hope that with these set of local contents, the target group will be exposed to the knowledge about ICT and narrowing the gap of digital divide between people who live in rural and urban areas. Thus the target group will have a better preparation to face the borderless world and hope they can upgrade their living style in a matter of social and economy.

From other aspect I hope that after this project the percentage of the people who has interest to buy a computer (current – 49.3%) will increase and also will decrease the percentage of people who doesn't owned any computer at their home (current - 58.8%).

## **1.8 Organization Of The Report**

This research report consists of six chapters. Chapter 1 is an introduction; in this chapter it explains some of the foundation of these researches such as research background, problem statements, research objectives, outcome and the expected contribution. Chapter 2 contains the literature review about the bridging the digital divide, development of local content and things that related to the research. Chapter 3 will explain the methodology that being used in order to do the research. Chapter 4 will emphasize on the development process. This includes the architectural design of the application, tools that involved and the implementation of the application. Chapter 5 will report and discuss the result of the research that has been conducted and also the feedback from the target group. Finally, Chapter 6 will conclude this research report. The recommendation for future work also explained in the same chapter.

## **1.9 Summary**

In order to ensure the telecenter or community center is fully benefited the target group; the content that going to be offered must meet their interest. This is because, even though there are many telecenters that has been developed, most of it can't sustain after a while. There are many factors that can affect this situation such as no champion to run the telecenter, lack of funding either from government or private sectors, content not able to attract people to come and use the telecenter etc.

This project will emphasize on one of the critical factor which is developing the suitable content for the target group because even though the target group can be classify in the same term which is “rural”, but the requirements or needs of these people are unique between the rural area. This project significantly contributes in preparing the right ingredients for the telecenters so that the community can use it and benefited from it.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Telecenter

Telecenter is a place where communities can get an access to the internet and using the ICT's related equipments which allowed them to communicate with other people, gathering information and develop their essential digital skills. Usually the telecenter are focusing on the rural areas because most of the time, people in rural areas still lack about the ICT's knowledge. So telecenter being used as tools in order to narrowing the gap between the rural and urban communities about ICT. From Proenza (2001), he believed that with telecenter, it will open up an opportunities to the rural communities which always being connected with low income to get an access into the internet for networking or information. There are many initiative has been taken worldwide to overcome the gap problem. According to Opsahl (2010) in his article, Tom Vilsack a secretary of agriculture said that almost 309 billion has been award for the broadband project that will support the anchor institutions such as public buildings, libraries and community centers that are necessary for the viability of rural communities.

---

## **2.2 Rural**

From Wikipedia, Rural areas (referred to as "the countryside") are large and isolated areas of a country, often with low population density.

## **2.3 Digital Divide**

Various studies have been conducted to investigate the development of the rural area through Telecenters. The main ideas about developing these telecenters are about BDD or Bridging Digital Divide.

According to Unwin, de Bastion, Rob, & Nigel (2009), '*Digital Divide*' is the term used to describe inequalities in access to, and use of, digital technologies and content. This entry highlights the diversity of spatial scales at which the concept may be considered, and the factors that have helped shape the divide, focusing especially on connectivity, accessibility, literacy, content, networks, and communication. Rao (2005) discusses various technology options for connectivity, viz. terrestrial wireless, satellite, wire line, etc. and presents snapshots of select successful projects that made an impact in helping to bridge digital divide.

Kim, Lee, & Menon (2009) has setup a model of the digital divide which the digitally endowed group receives better information than the digitally challenged group. Results suggest that policymakers must manage the digital divide in a customized manner depending on the preferences context. They should not only focus on improving the welfare of the digitally challenged, but also focus

on the welfare of the digitally endowed group so that this welfare does not decrease.

#### **2.4 Information Kiosk**

The successful implementation of information kiosks depends significantly on whether or not citizens are willing to adopt the new information technology (Wang & Shih, 2009). A case study has been conducted and found that there are examples of kiosks that will be used primarily by frequent users to a facility (such as a railway station), and those that will be used by 'tourists', or people who are new to the facility (Slack & Rowley, 2002).

Through the Ministry of Rural and Regional Development, rural communities have been given many things in order to help bridging the digital divide such as giving ICT training, giving exposure to the people with digital knowledge etc. ("Infodesa [online]," 2010). The ministry has setup a project called "*Medan Info Desa*" or MID in order to support the National Information Technology Agenda which emphasis on creating the knowledgeable and informative community towards year 2020. These centers enable the rural that live in rural area to facilitate the entire infrastructure that has been provided in their own respective area such as business, education, religion etc. ("Infodesa [online]," 2010).

The overall MID development are 220 units including ministry's agencies until 2008 as shown in table 1:

*Table 1: MID development*

No	MID Category	MID unit
1.	District	90
2.	Residential	100
3.	Village	30
	<b>Total</b>	<b>220</b>
<i>Source : <a href="http://www.rurallink.gov.my/infodesa">http://www.rurallink.gov.my/infodesa</a></i>		

## 2.5 Content

According to Hudson (2001) content availability varies substantially among telecentres. Some telecentres have resource materials such as newspapers, magazines, books and videos onsite; others only provide access to content elsewhere, for example, through the Internet. From the Organization (2001) said that access to information, and to the facilities to produce, store, and transmit information, is now considered vital to development, so that the classifications of "information rich" and "information poor" may mean more than distinctions based on GNP or other traditional development indicators (Hudson, 1987).

Too much content on the web is not relevant to farmers and other rural people. It is a common problem around the world, where external information dominates locally-tailored material. This is where credible, useful and user-friendly information needs to be crafted (Colle, 2005). Any new IT has to be design to allow user to easily locate the function they require (Taylor, McWilliam, Forsyth, & Wade, 2002).

From Barrett (2009), he said that there are four ingredients to boost the rural development with technology which is providing access to Internet-connected technology, increasing access to broadband connectivity, developing useful internet content and software solutions for farmers and providing training so farmers can learn how to use computers.

For the maximum impact the content that being offered need to suit the user's interest. According to Bax (1995), at the level of project design, for instance, projects tend now to aim for less "top-down" structures, and emphasis is placed on involving trainees as much as possible at every stage of the process."

Based from Razak (2009) in the National Conference on Rural ICT Development, there are 5 areas in National Strategic Framework in bridging the digital divide such as increase access to and adoption of ICT by underserved groups, create value in BDD programmes, develop local content through participatory approaches, cultivate multi-stakeholder collaboration and coordination and Institutionalise evidence-informed policy and practice.



In developing the local content, as said by Razak (2009), there are several strategies that can be applied in order to give the suitable things to the target group which is develop & increase relevant local content, provide financial support and promote generic local content for interactivity. From Lowry (2006), he mentioned that the quality that usually an organization offer is one of the main factor whether the overall e-learning program is a failure or success.

Clark (2008) said that in developing the content, the main key is to see the subject matter arena before others and try to integrate that insight with the objective. Plus, we can't just focus only to attract the user attention but also help to meet the goals that prompted us in creating the online content.

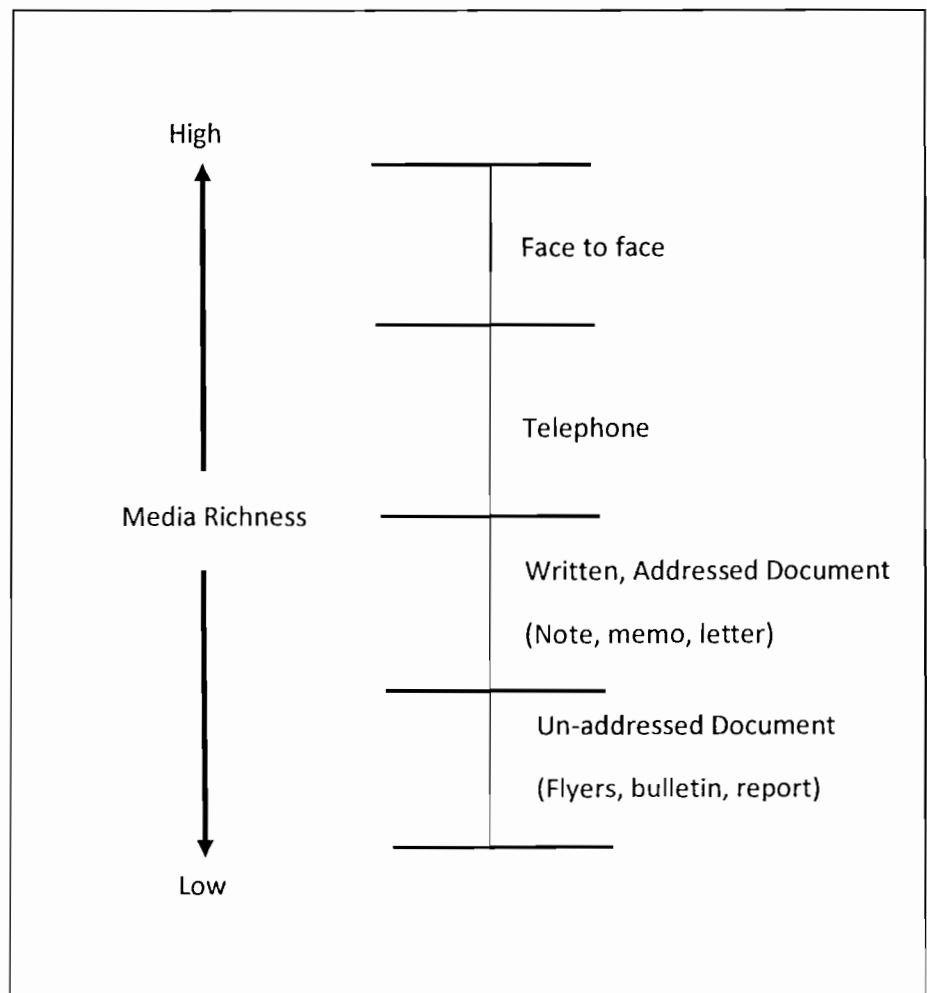
## **2.6 Related theories**

### **a. Media richness theory**

The first thought of this theory is that the organization must process an information to reduce the level of uncertainty and equivocality (L.Daft & Lengel, 1986). Uncertainty defined as when someone or something is in a state of unsure of the outcome and the odds for executing it or not are still unknown. It also can be assume as diversity between the total of information required to execute the task and the total of information necessary that already possessed by the organization (Dimmock, Bacon, Ingram, & Moody). Equivocality is defined as the haziness of the task, caused by contradictory

understanding about a group condition or environment. Therefore, when equivocality is high, people do not know what to ask and when uncertainty is high, they will know what question to ask but have insufficient information about it.

As a conclusion, the more information organization obtained the level of equivocality and uncertainty will also decrease. Figure 1 shows the schematic of the theory.



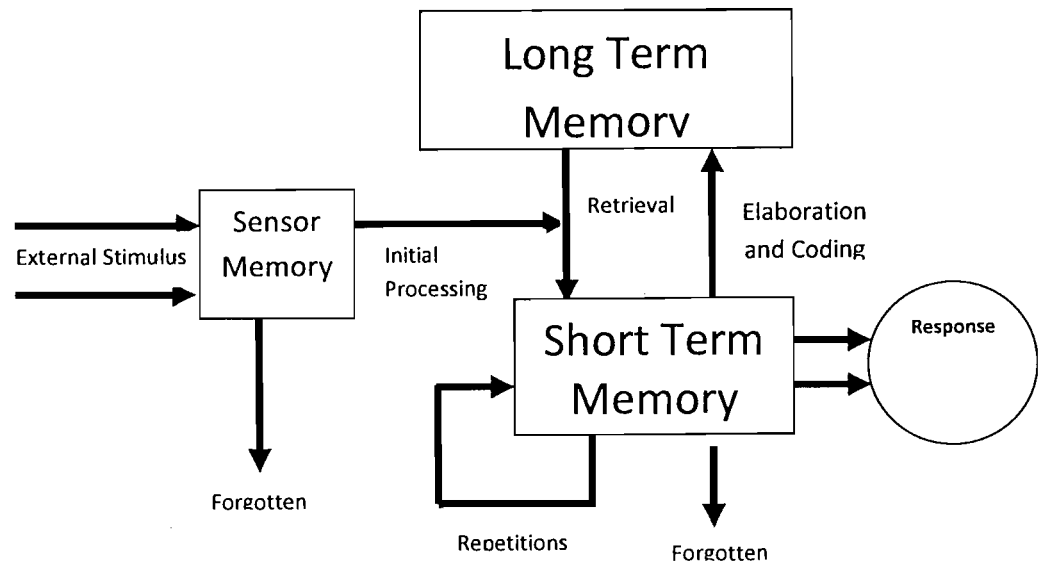
*Figure 1: Schematic of Media Richness theory*

## **b. Information processing theory**

George A. Miller has endowed with two theoretical point of view that can considered as essential to the information processing framework and cognitive psychology more generally.

The first thought is 'chunking' and the space of short term memory (working memory). From Miller (1994), he outlined that the working memory could only accommodate 5-9 chunks of information at one time where a chunk is having an important effect to the human itself. A chunk can be in many forms such as words, people's faces, numbers etc. The ideas of chunking and the maximum capacity of short term memory became a crucial element of all consequent theories of memories.

The second thought, that of information processing uses the computer as a model for human learning. Similar to the computer, the human intellect takes in information, executes the operations on it to transform its form and content, stores and establish it and produce responses to it. Thus, processing involves pulling together and representing information, or encoding; holding information or retention; and acquiring the information when required, or repossession. Figure 2 shows the schematic of the theory.



*Figure 2: Schematic of theory*

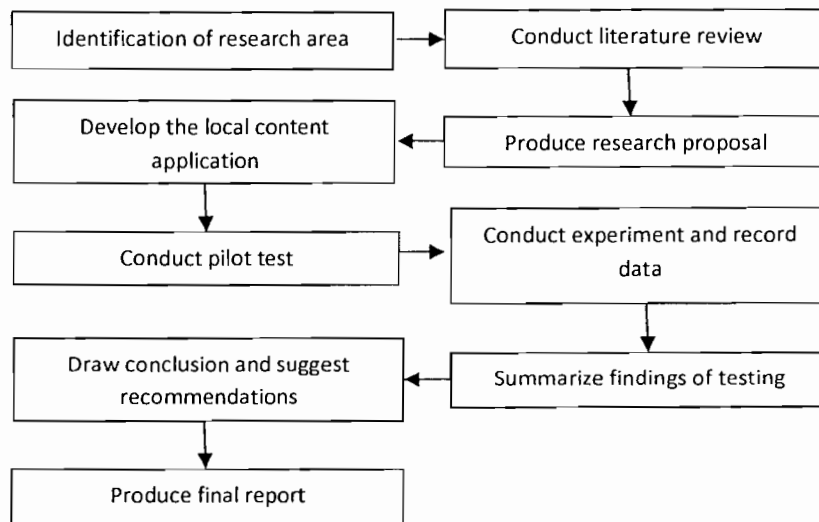
## CHAPTER 3

### RESEARCH METHODOLOGY

Often there are different methods that can be used to develop content to be used by the target group. In this project, I will outline the steps that will be taken in order to choose and develop the suitable local content for the telecenters which is:

#### 3.1 Methodology

Steps to be taken to complete these researches are listed below in figure 3:



*Figure 3: Overall research process*

### **3.1.1 Identification of Research Area**

This is the preliminary stage which the research area, objective and scope are being identified. This phase is critical because it will be the foundation to the research area and will make this research focusing on the right part and the most important thing is it has a clear objective.

### **3.1.2 Conduct Literature Review**

During this phase, reviewing the literature has been conducted. The main purpose of literature review is to gather all the related knowledge on the research area, experience or difficulties faced by others while conducting the research and reviewing the recommendation that being suggested for further improvement or development. According to Brereton, Kitchenham, Budgen, Turner, & Khalil (2007) it is very important to have a basic steps in the systematic literature review process and some modification are needed in order to improves its value as a tools in doing research and as a source of evidence for practitioners.

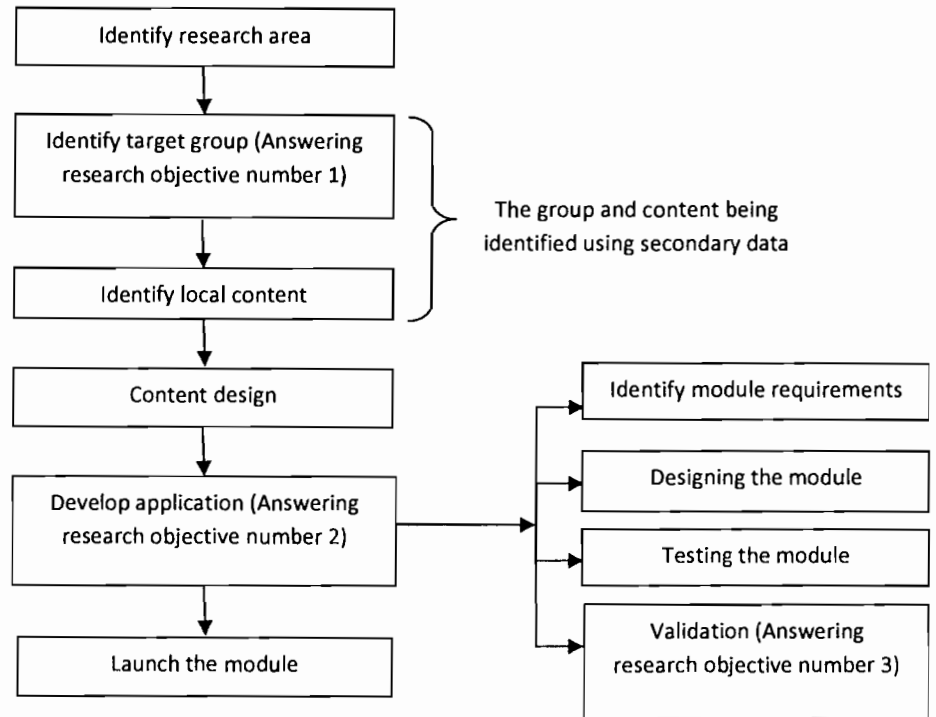
### **3.1.3 Produce Research proposal**

After done reviewing the literature review and understand about the research area, the next step is producing a research proposal. In the proposal, the item that need to be in it such as identify the problem statements, research questions, objective to be achieved and the methodology to conduct the research.

### **3.1.4 Develop the local content application**

Among all the steps to be taken in the methodology section, this is the most critical and time consuming part. Here the application will be develop using certain methodology that has been chosen. The methodology will be a guideline in the developing process.

To develop the application, several steps have been outlines as a guideline to develop the application. Figure 4 shows the overall processes:



*Figure 4: Develop the local content application process*

In this project, the method that will be use to identify the problem is through questionnaires. The findings from the questionnaires will be taken as a guide line to see what exactly the target group need. There are 2 main criteria that need to be identified for this project which is:

#### **3.1.4.1 Identify research area**

During this phase, the research area will be identified. This area will be selected based on the level of access to the information and communities.



#### **3.1.4.2 Identify target group**

In this phase, the main target group will be determined to be as main actor for this research. The method to be used is through the baseline study that will be conducted in the research area.

#### **3.1.4.3 Identify local content**

During this stage, the specified content to be developed will be captured using the research data that has been collected through the baseline study and also the studies that has been done by (Dahalin, 2008).

#### **3.1.4.4 Content design**

Content design in other words can be said as a *deliberate* decision to *enhance* the *value* of an object (Herrod, 2007). During designing the content, must remember to keep focus on the content itself. There are several types of content that can be inserted as content such as:

3.1.4.4.1 Video

- i. Educational
- ii. Promotional

3.1.4.4.2 Audio

- i. Sound tracks interview
- ii. News
- iii. Music
- iv. Pod cast
- v. Radio streaming

3.1.4.4.3 Image

- i. Support content
- ii. Generate discussion

3.1.4.4.4 Text

- i. Page titles
- ii. Page headings
- iii. Navigation labels
- iv. Site content

### **3.1.4.5 Develop application**

In this phase, the solution that has been discovered during the identifying process will be transferred into the form of modules. In order to develop the modules, there is several steps need to be followed. The steps are:

#### **i. Identify application requirement**

- In this stage, the requirements are basically same as the information that has been gathered during the identifying process.

#### **ii. Designing the prototype**

- The designing stage will involve in designing the layout and the content of the application.

#### **iii. Testing the prototype**

- This is the stage where the application will be tested by the developer

#### **iv. User acceptance (validation)**

- This project will need to get the feedback from the target group whether they are satisfied with the content offered or not.

#### **3.1.4.6 Launch the application**

After the application has been tested and being accepted the module will be developed in full scale and deployed in the telecenter for the usage of the target group.

#### **3.1.5 Develop Experiment Test Plan**

During this phase, a test plan is produced in order to test the application systematically with preliminary steps that already set in advance.

#### **3.1.6 Conduct Pilot Test**

In this stage, a pilot test will be conducted by developer in a well controlled situation and this test is very important to detect any major or minor error that can cause the system damage or fail to operate in the actual environment.

#### **3.1.7 Conduct Experiment and Record Data**

An experiment will be conducted to test the application. This experiment will be held in the real environment involving the

target group that has been set from early. The entire experiment outcome will be recorded and feedback regarding the application also be taken from the target group.

### **3.1.8 Summarize Findings of Testing**

All the data and feedback that will be collected from the target group will be presented and summarized in Chapter 5 of this report.

### **3.1.9 Draw Conclusion and Suggest Recommendation**

In this stage, a conclusion regarding the research will be gained based on the findings and all the feedback and experienced. From the conclusion, the improvement and recommendation for future research in the related area will be suggested.

### **3.1.10 Produce Final Report**

A complete final project report is produced as thesis dissertation and will be presented to the respective faculty for the purpose of evaluation and marking.

### 3.2 Summary

Figure 3 shows the methodology to conduct this research. It will be going through step by step according to the level of completion.

The methodology of this research has been outlined in such manner so that it will comply with the university's requirement. All the steps involved in defining the required local content for the target group and developing the application are more alike the normal system development life cycle (SDLC).

## CHAPTER 4

### DEVELOPMENT AND IMPLEMENTATION OF THE LOCAL CONTENT AND THE APPLICATION

#### 4.1 Introduction

As been told in chapter 3, there are certain steps need to be taken in order to develop the most suitable local content for the targeted group. All these steps are required so that the developed application will give high impact and achieved the research objective that has been set earlier.

In this chapter, the details of the steps will be elaborated according to the research processes which consist of identify research area, target group, identify local content, content design, develop application and launch the application.

From Free Dictionary (2010), *identify* means to ascertain the origin, nature, or definitive characteristics of; So during these phase, the main purpose is to recognize the main ideas about who are the primary target group in order to meet the primary objective.

In this project, the target group is being identified by conducting a baseline study in the targeted location and also referring to the study that has been done called "*Requirement for ICT Applications and Content (Including Broadband Usage For Rural Areas In Kedah and Perlis)*" led by Dahalin (2008).

In these studies, 12 villages was involved in the Northern region of Malaysia which covering 2 states; Kedah and Perlis. The primary objectives of these studies are to study the level of ICT adoption among the communities based on economic sectors and to determine what the relevant required information on their daily activities is.

Below are the steps being taken in order to develop the local content application for the targeted group of communities:

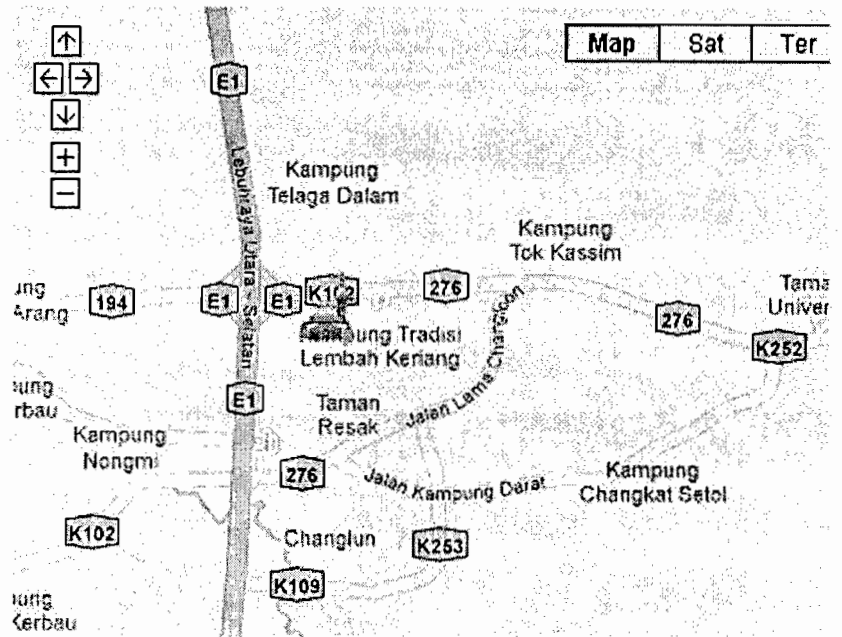
#### **4.1.1 Identify research area**

In order to identify the research area, a discussion has been conducted with the Director of the International Telecommunication Union (ITU) – University Utara Malaysia (UUM) Asia Pacific Center of Excellence (CoE). ITU-UUM and they has suggested one location called Kampung Tradisi Lembah Keriang. This village located at the district of Kubang Pasu and their strategic locations



which can be considered as the connector to several nearby villages such as Kapung Tok Kassim, Batu 13 and Kampung Baru are very suitable to be taken as the community center for all the people who lives in that area. Kampung Tradisi have over 300 houses to support the community center, plus throughout the people, there are only 5% who are working in the government sector and the rest are farmers or working on their own (Munawwar, 2009a).

In this location, ITU-UUM has established one ICT center meant for the communities in Kampung Tradisi. According to Munawwar (2009b), these center has been established in early 2009 when ITU-UUM received a bundle of computer from the Malaysian Communications and Multimedia Commission (MCMC) and being asked to setup a community center. From there, ITU-UUM start to search the perfect location and finally with the full support and cooperation from the people in Kampung Tradisi, ITU-UUM has decided to pick these kampung to setup the community center. Figure 5 shows the map of the Kampung Tradisi.



*Figure 5: Map of Kampung Tradisi, Lembah Keriang*

#### 4.1.2 Identify target group

In this part, the main objective is to find the target group to be taken as the main users for the application. The result is based from the baseline study:

*Table 2: Number of people by age*

Age	Frequency	Percent	Valid percent	Cumulative percent
15-24	9	7.7	7.7	7.7
25-34	19	16.2	16.2	23.9
35-44	34	29.1	29.1	53.0
45-54	37	31.6	31.6	84.6
>=55	18	15.4	15.4	100.0
Total	117	100.0	100.0	
(n=117) Source: (Dahalin, 2008)				

From Table 2, the finding has shown that the majority of the community who lives in this area are people whose age 45 and above (47.0%) which can be considered as a senior or veteran. So this group of people will be the main actor for this research and all the local content to be developed will base on these group's requirements.

*Table 3: Education level*

Level	Frequency	Percent	Valid percent	Cumulative percent
Not attending any school	5	4.3	4.3	4.3
Primary school	41	35.0	35.3	39.7
Secondary school	64	54.7	55.2	94.8
Cert / Diploma / Degree	6	5.1	5.2	100.0
Total	117	100.0	100.0	
(n=117) Source: (Dahalin, 2008)				

According to Table 3, the data shown that most of the people (94.8%) here do not have advance education level. It shows the possibility that they are not fully exposed or fully aware about the current technologies especially in ICT since it is required a good basic knowledge about hardware or software in ICT.

*Table 4: Ever use a computer*

Answer	Frequency	Percent	Valid percent	Cumulative percent
Yes	46	39.3	41.8	41.8
No	64	54.7	58.2	100.0
Total	110	94.0	100.0	
Missing data	7	6.0		
Total	117	100.0		
(n=117)				

In Table 4 above, it shows that 58.2% of the communities do not ever use a computer before. An early assumption can be made that this thing happened due to lack of education and exposure to the ICT world. So when they do not have sufficient knowledge about ICT, which is why these people do not want to try or learn how to use a computer.

*Table 5: Owning a computer*

Answer	Frequency	Percent	Valid percent	Cumulative percent
Yes	47	40.2	41.2	41.2
No	67	57.3	58.8	100.0
Missing data	3	2.5		
Total	117	100.0	100.0	
(n=117)				

Table 5 shows the number of computers being owned by the communities in Kampung Tradisi. From this data, we can see that more than half (58.8%) of the communities here does not own any computers or laptops. This might be one of the critical factors that prevent the communities close the digital divide between the rural and urban.

*Table 6: Interest to buy a computer*

Answer	Frequency	Percent	Valid percent	Cumulative percent
Yes	33	28.2	49.3	41.2
No	34	29.1	50.7	100.0
Total	67	57.3	100.0	
Missing data	50	42.7		
Total	117	100.0	100.0	
(n=117)				

According to the data shown in the Table 6, it shows that 50.7% do not have any interest in getting a computer for themselves. This can be happened due to some reason such as level of income, knowledge about buying a good computer with a good price etc.

Table 7: Level of income

Total income (RM)	Frequency	Percent	Valid percent	Cumulative percent
< 416	10	8.5	9.2	9.2
417- 676	38	32.5	34.9	44.0
677 - 1500	44	37.6	40.4	84.4
1501 - 3000	13	11.1	11.9	96.3
> 3000	4	3.4	3.7	100.0
Total	109	93.2	100.0	
Missing data	8	6.8		
Total	117	100.0		
(n=117)				

As we can see from the finding in table 7, 84.4% from the communities have income lower than RM1, 500. These data can be related why the numbers of people who have computer are quite low and their interest to get a computer also shows most of them are rather not buying it.



#### 4.1.3 Identify local content

In order to identify what is the correct content to be developed, the data that being used is from both studies which is the baseline studies and the studies that been conducted by(Dahalin, 2008). Below are the results that show the content required by the communities:

*Table 8: Number of people by race*

Race	Frequency	Percent	Valid percent	Cumulative percent
Malay	117	100.0	100.0	100.0
(n=117)				

From Table 8 above, we can see that in this area 100% of the communities who lives here are Malays. This factor will help the developing process since there is only 1 type of targeted group.

Table 9: Level of information obtained

Type of Information	Never (%)	Very Little (%)	Little (%)	Somewhat (%)	Much (%)	Great Deal (%)
Agricultural	21.9	10.9	28.1	13.3	8.6	5.5
Health & Medicine	6.3	7.0	21.1	27.3	24.2	3.9
Education	4.6	6.3	19.5	33.6	16.4	9.4
Religion	1.6	1.6	7.0	26.6	38.3	15.6
Business	21.1	14.8	18.0	16.4	13.3	6.3
Life style	20.3	17.2	9.4	32.8	9.4	0.8
Entertainment	20.3	15.6	12.5	14.1	14.1	9.4
Family	8.6	5.5	12.5	30.5	25.8	6.3
Sports	11.7	6.3	11.7	32.8	17.2	7.0
Politics	19.5	10.2	15.6	21.1	16.4	3.1
Employment	25.8	13.3	7.8	18.8	11.7	4.7
IT / Computer	35.2	14.1	9.4	9.4	7.0	2.3
(n=128)						
Source: (Dahalin, 2008)						

From the table 9 above, the data shown the levels of information being obtained by the communities and for them the most obtained information is about religion (38.3%) followed by family (25.8%), health and medicine (24.2%), sports (17.2%) and so forth.

Table 10: Level of information expected

Type of Information	Very Little (%)	Little (%)	Somewhat (%)	Much (%)	Great Deal (%)	Rank (#)
Agricultural	5.5	10.2	16.4	25.8	21.9	9
Health & Medicine	0.8	6.3	11.7	35.9	32.8	4
Education	0.8	3.9	16.4	31.3	37.5	2
Religion	0.0	2.3	4.7	28.1	55.5	1
Business	8.6	3.9	14.8	23.4	33.6	3
Life style	6.3	9.4	25.0	18.0	17.2	10
Entertainment	14.8	14.8	20.3	7.8	16.4	11
Family	2.3	7.8	16.4	30.5	28.9	6
Sports	4.7	7.8	23.4	21.1	22.7	8
Politics	4.7	12.5	21.9	16.4	12.5	12
Employment	3.1	7.8	14.1	22.7	32.0	5
IT / Computer	5.5	7.8	14.8	19.5	28.9	7
<i>T</i> (n=128) Source: (Dahalin, 2008)						

*a*

Table 10 above shows the level of the expectation of the information needed by the communities. These data can be considered as critical because the developments of the application are mostly depending on these set of data.

So from the data that has been gathered, the application will be more emphasize on the religion aspect (55.5%) followed by education (37.5%), business (33.6%), health & medicine (32.8%) and so forth.

#### **4.1.4 Content design**

As the main content has already been decided according to the level of information expected by the communities, the application will focus on 3 areas of content which is religion, education and business. To ensure the application are easy to use by the communities, the interface or interaction must be user friendly since the targeted user are people who have a very low exposure to ICT. The content that will be provided in the application will be in a combination of text, image and video.

#### **4.1.5 Develop application**

##### **4.1.5.1 Identify application requirement**

The application requirements are as follows:

##### **i. Content Management System**

a. Joomla

Joomla! ® is an open source platform for publishing any content required by the information owner on the World Wide Web and intranet. It use a PHP language and all data are stored using MySQL and also include extra features such as RSS feeds, printable versions of pages, searching, news flashes and language internalization. Joomla also allowed the users to keeps track all the contents in the website. Content can be in many forms such as photos, text, video, documents or anything that can be think of.

To install Joomla! ®, it can be done manually from source code on a system running a web server which support PHP application. Usually it requires experience and consumes more time if user decided to install the application manually compare to installing the entire package required using the package management system.

A package management system is a set of tools that will automate all the process starting from installing, upgrading, configure and removing a software package from a computer and it's a consistent method for user to install software and sometimes these system are also wrongly being referred as 'installer'.

**ii. Web server**

- a. XAMPP web server

**iii. Networked computer**

- a. Pentium based processors 1 GHz speed
- b. Minimum 512 MB Memory
- c. Minimum 2GB free disk space
- d. Network device

**4.1.5.2 Designing the application**

The application is divided into 2 sections which is administrator panel and user layout.

The administrator panel will be used to create and manage all the content in the application. Administrator will be able to create, edit and delete all the contents such as article, poll, templates etc.

User layout will be used by the targeted group to look and browse all the contents that has been provided in the application. User will be able to look at the content based on

the criteria that has been set by the administrator such as public, registered or special.

Image below will show the screen that has been developed for both administrator and user to use.

### Administrator layout

- Login screen:

This screen (figure 6) is the first screen before the administrator can enter and execute all the functions meant for them. Administrator must fill in their username and password in the space given.

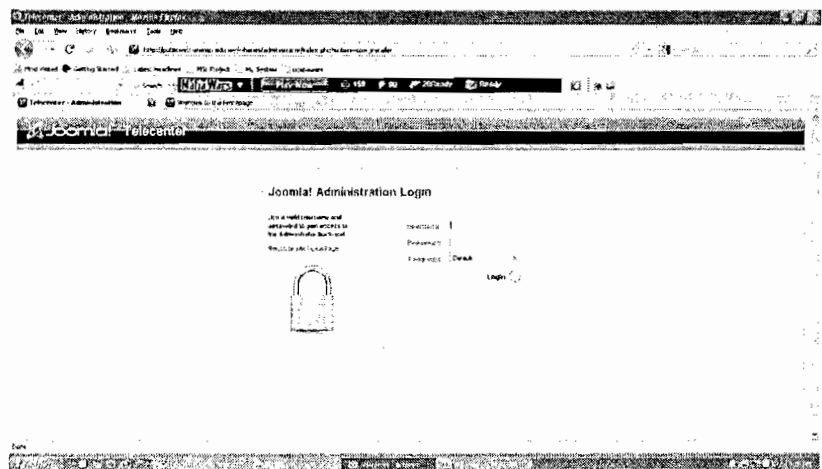


Figure 6: Login screen

- Administrator Control Panel:

This screen (figure 7) will show all the function that can be used by administrator to do all the task and managing all the content in the application. The functions that can be found in this control panel are article manager, front page manager, section manager, category manager, media manager, menu manager, language manager, user manager and global configuration. All these functions will be manipulated by the administrator to come out with the content management system that suits the user's needs.

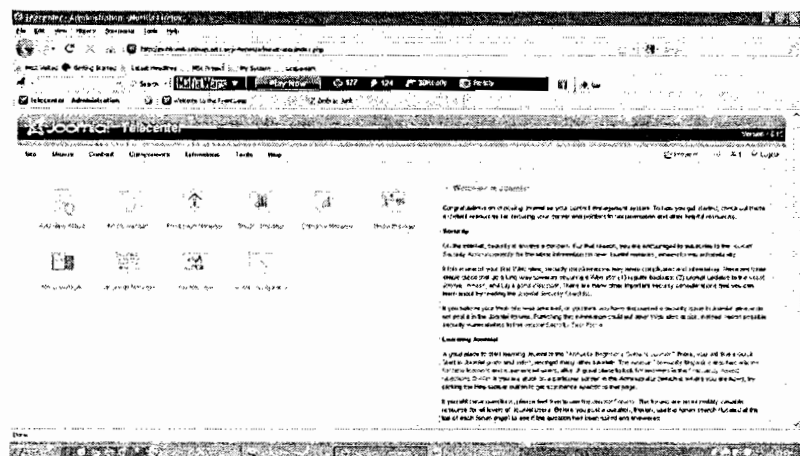


Figure 7: Administrator control panel

- Input screen:

This screen (figure 8) will be used by the administrator to create new article in the application. These articles will be set



in which page will it appear according to its section and category and the section and category must be set first before any articles can be create.

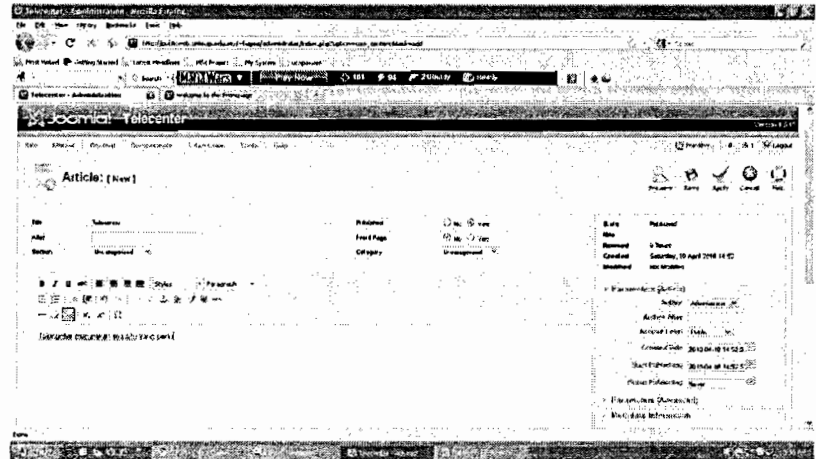


Figure 8: Input screen

## User layout

This is the interface (figure 9) that user will see, use and interact in order to see all the contents inside the application. Users are free to browse all the content unless the administrator set permission to any of the articles.



Figure 9: User layout

#### 4.1.5.3 Testing the application

The application that has been developed will be tested both locally (on PC/Laptop) and online (on the research area).

#### 4.1.5.4 Validation

The application will be validated by the users at the research area and by ITU-UUM representative.

#### **4.1.6 Launch the application**

After the application has been tested to the targeted group and some amendment been made, this application will be uploaded into the server and published for the usage of the communities who use the telecenters.

This application will be monitored by the telecenters authority and maintained by the ITU-UUM if there are any problems or anything related to the contents etc.

## CHAPTER 5

### RESEARCH RESULT

#### 5.1 Experiment setting

The setting for the testing will be divided into 2 sections which is local testing and on server testing.

#### 5.2 Run test

##### 5.2.1. Local testing

##### i. Switching on web server (figure 10)

- Apache – Status – Success
- MySql – Status – Success

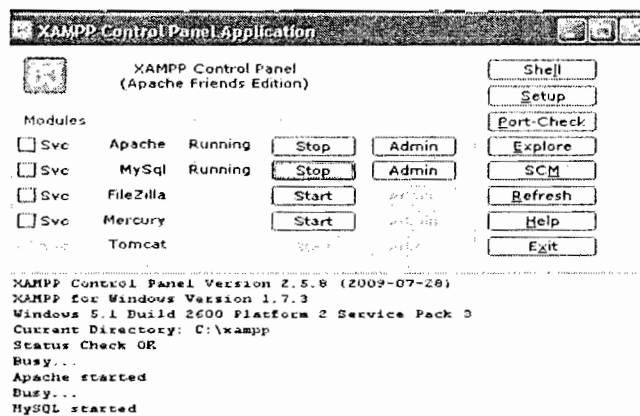


Figure 10: XAMPP control panel

## ii. Testing Application

- Main page (figure 11) – Status – Success



Figure 11: Main page

- Browsing content (figure 12) – Status – Success



Figure 12: Browsing content

- Login administrator panel (figure 13) – Status – Success

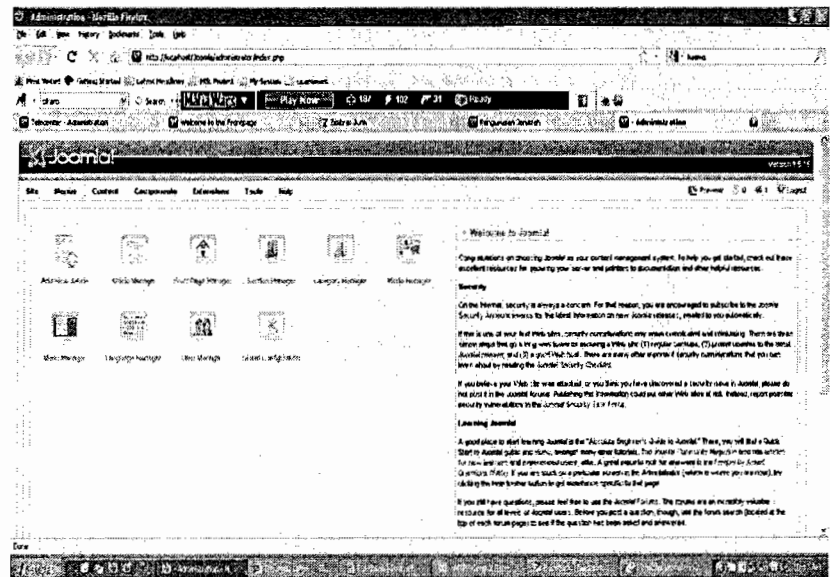


Figure 13: Login administrator panel

- Adding new articles (figure 14) – Status – Success

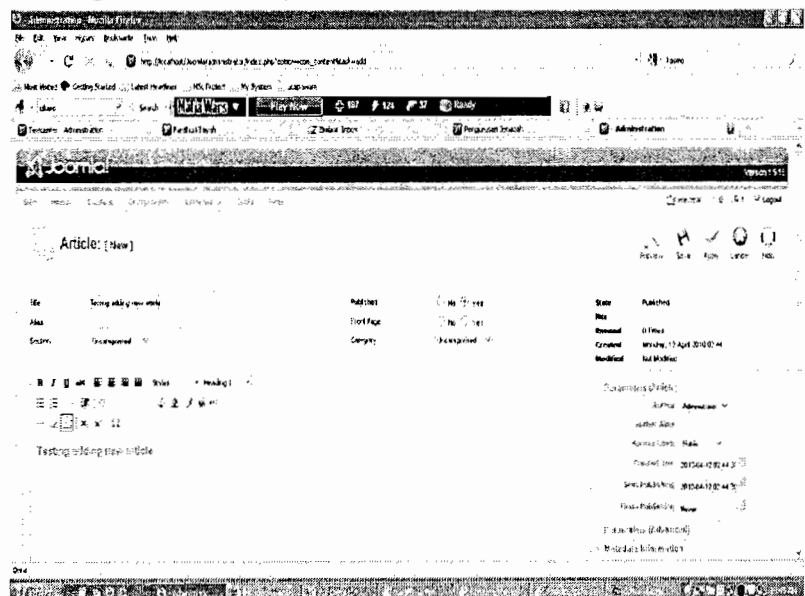


Figure 14: Adding new article

### 5.2.2. On server testing

*Table 11: Server testing*

#	Page	Status
1.	Main page	Success
2.	Browsing content	Success
3.	Login admin panel	Success
4.	Adding new articles	Success

### 5.2.3. Demonstration session

To obtain feedback from the targeted user, one session of demonstration has been setup. In the session, the hardware that being use are:

- i. 7 computers
- ii. 1 laptop
- iii. 1 set of multimedia speakers
- iv. 1 LCD projector
- v. Laser pointer
- vi. Video camera

During the session, all the users have been given a computer that has been set to the website which meant for their use. Each of the users will browse through the website and look at the content that has been developed and they're been guided throughout the browsing session.

### 5.3 Result

After the demonstration session end, a set of survey has been distributed to the users. The main purpose for this survey is to look at the feedback from the users regarding the local content that has been developed. The survey results are as follows (table 12 until table 16):

*Table 12: Survey question number 1*

<b>Q1: Do you think the content related to your needs?</b>			
<b>Answer</b>	<b>Frequency</b>	<b>Valid percent</b>	<b>Cumulative percent</b>
Yes	29	97.0	97.0
No	1	3.0	100.0
Missing data	0		
Total	30	100.0	
(n=30)			



Table 13: Survey question number 2

Q2: Do you agree if there are content that more alike these to be used by the community?			
Answer	Frequency	Valid percent	Cumulative percent
Yes	29	97.0	97.0
No	1	3.0	100.0
Missing data	0		
Total	30	100.0	
(n=30)			

Table 14: Survey question number 3

Q3: Will you use a computer if there are content more alike these?			
Answer	Frequency	Valid percent	Cumulative percent
Yes	30	100.0	100.0
No	0	0.0	100.0
Missing data	0		
Total	30	100.0	
(n=30)			

Table 15: Survey question number 4

Q4: Do you think the layouts are user friendly?			
Answer	Frequency	Valid percent	Cumulative percent
Yes	30	100.0	100.0
No	0	0.0	100.0
Missing data	0		
Total	30	100.0	
(n=30)			

Table 16: Survey question number 5

Q5: Do you agree if the content more alike these being extend to other section?			
Answer	Frequency	Valid percent	Cumulative percent
Yes	30	100.0	100.0
No	0	0.0	100.0
Missing data	0		
Total	30	100.0	
(n=30)			

From the result above, we can see that most of the question being asked got a clear cut answer from the communities. It shows that most of them agreed and accepted if content like that being offered to them for their usage. This is because all the contents that being shown to them are very related to their needs. Plus with content like these the communities will be more attracted to use the community center and from it we can get a direct impact which is the community will be more exposed to the ICT. For started, maybe they still not able to use all the computers advance features, but as a beginner it can be considered as a good start.

Based on the observation made during the session, it shows that the communities are more interested in a content that have element of image and videos. These people put almost of all of their concentrations whenever the content is being shown especially video content. The communities are very eager to wait for the video to be played and very excited to watch it.

Nevertheless, all the research objectives in chapter 1 have been answered after the application and the demo session being conducted. Below in table 17 are the objectives and the achievements based on the result acquired.

*Table 17: Research objectives vs. research achievements*

#	Objectives	Achievements
1.	To identify the required local content to be develop for the target group in Kg. Tradisi's telecenter.	This objective has been achieved by referring to the baseline study that has been conducted earlier. From the study, based on the ranking it shows that the communities need content on a religion aspect to be developed for their usage.
2.	To develop the required local content for the target group in Kg. Tradisi's telecenter	This objective has been achieved by developing an application which using the web based system (Joomla). In the application, the content being introduced is on religion aspect.
3.	To verify the required local content for the target group in Kg. Tradisi's telecenter	This objective has been achieved by conducting a survey after the demonstration session. The results show that they agree with all the content and the application itself. They agreed content such as this are related and can gain their interest to use a computer.

#### **5.4 Summary**

Through the result from the survey, it shows that the communities in the area are really agreed with the content. The communities feel comfortable and the most important thing is they are enjoying the contents provided. This is a good sign from the communities of their acceptance to the ICT world. Even though they are still not good in using computer such as opening a browser, key in the URL or even clicking the mouse, they still try and keep trying to look at all of the content inside the web.

This effort also can be seen as an early support to the National Broadband Initiative that has been announced by our Prime Minister during his National Broadband Initiative and High Speed Broadband (HSSB) speech that outlined 6 broadband initiatives in Kuala Lumpur and one of the initiative are related to the development of the telcenters which is “E-Kiosk at various community centers and mukim office”. Just for these purpose, government has estimate nearly 4 million to be spend in order to achieves this initiative (Azil, 2010)

## **CHAPTER 6**

### **CONCLUSION & RECOMMENDATIONS**

#### **6.1 Conclusion**

Parallel with the 6<sup>th</sup> challenge in Vision 2020, “Establishing a scientific and progressive society.” Telecenter is actually one of the tools that being used to decrease the Digital Divide gap between the urban and the rural. This telecenter or whatever they call it has been benefited many people not just in Malaysia but all around the world.

For example in Malaysia, there are one Telecenter called “Pusat Internet Desa” (PID) already have about 42 telecenters nationwide. Typically, a PID is housed in an annex building of a Post Office specially built for the purpose in partnerships with the Pos Malaysia Sdn Bhd. Each PID usually has 5-7 computers, a printer, and internet connection. Recently, in 2008, under the PID improvement project all of them have received additional two notebooks, a projector, a fax machine, two webcams, and wireless equipment from MEWC.

This has be one of the proof that telecenter can empower rural communities and give them "a voice" that permits them to contribute to

the development process. With new telecenter, rural communities can acquire the capacity to improve their living conditions and become motivated through training and dialogue with others to a level where they make decisions for their own development.

Giving rural people a voice means giving them a seat at the table to express their views and opinions and become part of the decision making process. The approach should be participatory and could lead to improved policy formation and execution.

## **6.2 Recommendations**

For this research, there are still many things can be done in order to maintained the communities' participation with the community center. This is important because the community center will only be benefited if there are people using all the facilities provided.

Based on the research study, we can see that the community really interested and hunger of IT knowledge, they want to know more about IT world not just about how to use computer but also the knowledge about how to search for anything they required through internet and so on.

For this research project, there are several recommendations for future study:

- i. To find the local content requirement for other group of age.
- ii. To enhance the content for other group of communities such as women, kids, students etc.
- iii. To conduct a research on how are the levels of computer literacy to the communities before and after the research been conducted.



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## Appendix

### SOAL SELIDIK:

#### KAJIAN TAHAP PENGGUNAAN ICT PENDUDUK LUAR BANDAR

##### BAHAGIAN A: PROFIL RESPONDEN

1. Umur

15 tahun	
15-24	
25-34	
35-44	
45-54	
>= 55	

2. Jantina

Lelaki  Perempuan

3. Bangsa

Melayu  India  Lain-lain (Nyatakan):

Cina  Siam

#### 4. Taraf perkahwinan

Bujang

Berkahwin

Lain-lain

i-Ibu bapa tunggal

ii-balu

iii-janda/duda

#### 5. Penempatan:

Bandar

Kampung

Pedalaman

Lain-lain

#### 6. Nama komuniti/ kampung/ bandar

---

#### 7. Penguasaan Bahasa:

Bahasa	Pertuturan	Membaca	Menulis
B. Melayu	<input type="text"/>	<input type="text"/>	<input type="text"/>
B. Inggeris	<input type="text"/>	<input type="text"/>	<input type="text"/>
Mandarin	<input type="text"/>	<input type="text"/>	<input type="text"/>
Tamil	<input type="text"/>	<input type="text"/>	<input type="text"/>
Lain-lain:	<input type="text"/>	<input type="text"/>	<input type="text"/>

## 8. Tahap Pendidikan

a)

Tidak bersekolah	
Sekolah Rendah	
Sekolah Menengah	
Sijil/Diploma/Ijazah	
Lain-lain	

b)

Anda seorang pelajar?	Ya		Tidak	
-----------------------	----	--	-------	--

## 9. Status Pekerjaan:

Makan gaji	
Kerja sendiri	
Bersara	
Pelajar	
Menganggur	

10. Jawatan anda dalam komuniti ( Jika berkenaan ) :

---

11. Pendapatan ahli keluarga dalam rumah (Sebulan) :

Kurang dari RM416	<input type="text"/>	RM 1501-RM 3,000	<input type="text"/>
RM 417-RM 676	<input type="text"/>	Melebihi RM 3,000	<input type="text"/>
RM 677-RM 1,500	<input type="text"/>		

12. Isi rumah:

a)

Responden seorang ketua rumah?	Ya		Tidak	
Bilangan isi rumah	Lelaki		Perempuan	
Umur	<15		>55	

b)

Anggaran perbelanjaan isi rumah setiap hari:	
Tidak tahu	
0 – RM 10	
RM 20 – RM 50	
RM 50 – RM 100	
Lebih daripada RM 1000	

## BAHAGIAN B: PENGETAHUAN ICT

1. Adakah anda memiliki komputer di rumah?

Ya ☐ Tidak ☐

2. Jika tidak, adakah anda berminat untuk membeli komputer/laptop anda sendiri?

Ya ☐ Tidak ☐

3. Anda pernah menggunakan komputer?

Ya ☐ Tidak ☐

i) Jika tidak, kenapa:

Tidak mempunyai komputer ☐ Tidak berminat ☐

Takut menggunakan computer ☐ Tiada kepentingan ☐

Lain-lain ☐

ii) Jika Ya, sudah berapa lama anda menggunakan komputer?

Kurang dari 1 tahun ☐ 4 hingga 6 tahun ☐

1 hingga 3 tahun ☐ Lebih 6 tahun ☐



iii) Apakah tujuan menggunakan komputer?

• Untuk pemprosesan perkataan	
• Untuk emel	
• Untuk perbankan internet	
• Untuk melayari Internet	
• Lain-lain	

4. Adakah anda pernah menggunakan Internet?

i) Jika Ya, di mana (sila nyatakan) :

\_\_\_\_\_

ii) Jika Tidak, kenapa :

Alasan	Tandakan (✓)
Kurang berminat	
Tiada pengetahuan	
Tiada peralatan/sambungan internet	
Tiada masa untuk menggunakan internet	
Kos permulaan dan semasa yang tinggi	
Lambat	
Terlalu muda/tua untuk menggunakan internet	
Maklumat yang diperlukan sedikit	
Bimbang mengenai virus dan keselamatan menggunakan internet	

Lain-lain (Nyatakan):

5. Komputer di rumah anda mempunyai sambungan internet?

Ya ☐ Tidak ☐

i) Jika tidak, kenapa:

Kos permulaan yang tinggi ☐ Tiada keperluan ☐

Kos semasa tinggi ☐ Liputan terhad ☐

Kurang pengetahuan tentang kewujudan internet ☐

Lain-lain ☐

ii) Jenis sambungan internet dirumah anda:

Dial-Up ☐ Jalur lebar / *broadband* ☐

6. Sudah berapa lama anda menggunakan Internet?

Kurang dari 1 tahun ☐ 1 hingga 3 tahun ☐

4 hingga 6 tahun ☐ Lebih 6 tahun ☐

7. Kekerapan menggunakan Internet dalam seminggu?

Kadang-kadang ☐ 1 hingga 2 kali ☐ 3 hingga 5 kali ☐  
(bila ada keperluan)

6 hingga 8 kali ☐ Melebihi 8 kali ☐

**Capaian kepada kemudahan maklumat/ komunikasi**

1. Berapa jauhkah pusat komunikasi/pusat capaian maklumat dari kediaman anda ?

<i>Di dalam rumah saya</i>	
<i>0-500 meter</i>	
<i>501- 1Km</i>	
<i>&gt; 1 Km to 3 Km</i>	
<i>&gt; 3 Km to 5 Km</i>	
<i>&gt; 5 Km</i>	

2. Apakah kaedah pengangkutan untuk anda pergi ke pusat komunikasi/ pusat capaian maklumat?

<i>Berjalan kaki</i>	
<i>Kenderaan sendiri</i>	
<i>Pengangkutan awam</i>	
<i>Lain-lain:</i>	

3. Berapa lama masa yang diambil untuk ke pusat komunikasi/pusat capaian maklumat?

<i>0-10 min</i>	
<i>11-30 min</i>	
<i>31min-1 jam</i>	
<i>&gt;1 hingga 2 jam</i>	
<i>&gt;2 jam</i>	

4. Berapa jauh institusi ini dari penempatan anda?

Pejabat Pos	
Telefon Awam	
Pemborong Suratkhobar	
Kedai Buku	
Panggung Wayang	
Klinik/ Hospital	

5. Adakah anda pernah menerima sebarang latihan ICT?

a)Ya	
• Secara bersemuka	
• Secara atas talian	
• Lain-lain:	
b)Tidak	
• Adakah anda berminat untuk menyertai/ mencari latihan ICT di masa hadapan?	

6. Apakah jenis latihan ICT yang menarik minat anda?

Pemprosesan perkataan	
Penyuntingan Video	
Kewangan	
E-Perdagangan	
Pembangunan Laman web/ Blog	
Pengiklanan atas talian	
Internet/ emel	
Lain-lain	

7. Apakah jenis maklumat yang anda perlukan?

	Kepentingan: <i>Sangat penting = 1</i> <i>Agak penting = 2</i> <i>Sedikit penting = 3</i> <i>Tidak penting = 4</i>	Keutamaan: (Hanya pilih 3) <i>Sangat penting = 1</i> <i>Kedua = 2</i> <i>Ketiga = 3</i>
Pendidikan/ kemahiran baru		
Penjagaan kesihatan		
Bagaimana untuk memperbaharui produk/ servis saya		
Harga pasaran untuk produk/ servis saya		
Sumber maklumat		
Peluang pasaran untuk		

produk/ servis saya		
Jawatan kosong		
Acara sosial dan kebudayaan		
Cuaca		
Maklumat kerajaan – cukai, undang-undang, peraturan,		
Berita terkini/ Sukan		
Budaya		
Keagamaan		
Pelancongan		
Lain-lain		

8. Apakah maklumat penting yang ingin anda tahu apabila berkomunikasi dengan orang di luar komuniti anda?

	Kepentingan <ul style="list-style-type: none"> <li>• <i>Sangat penting = 1</i></li> <li>• <i>Agak penting = 2</i></li> <li>• <i>Sedikit penting = 3</i></li> <li>• <i>Tidak berminat = 4</i></li> </ul>	Keutamaan (Hanya pilih 2) <ul style="list-style-type: none"> <li>• <i>Sangat penting = 1</i></li> <li>• <i>Kedua penting = 2</i></li> </ul>
Siapa anda/ apa yang anda lakukan		
Apa yang anda jual		
Budaya anda		
Acara social dan kebudayaan		

Apa yang anda boleh buat (sedang mencari pekerjaan/ penajaan)		
Lain-lain		

9. Adakah anda tahu dan pernah menggunakan aplikasi berikut (tandakan yang berkenaan):

Aplikasi	Tahu (✓)	Pernah guna (✓)
Perbankan Internet		
E-hasil		
UPU Online		
PTPTN		
Saman		
E-Peperiksaan		
E-mel		
Permainan computer		
Lain-lain		

**BAHAGIAN C: ALIRAN DAN KEPERLUAN MAKLUMAT DI  
KALANGAN RESPONDEN (DI KALANGAN PENDUDUK KAMPUNG)**

1. Bilangan tanggungan :
2. Bilangan anak yang masih belajar :
3. Bagaimana anda sebarkan maklumat di kalangan penduduk sekampung?  
(contoh: maklumat tentang majlis perkahwinan, kematian dan lain-lain).
4. Bagaimana anda dapatkan maklumat dari kalangan penduduk kampung?  
(contoh: papan kenyataan, risalah, telefon, dewan orang ramai dll).
5. Apakah jenis maklumat yang anda perlu daripada penduduk sekampung?  
(contoh: harga getah, aktiviti kemasyarakatan dan lain-lain)

**BAHAGIAN D: ALIRAN DAN KEPERLUAN MAKLUMAT DI  
ANTARA RESPONDEN (ANTARA KAMPUNG DENGAN KAMPUNG)**

1. Bagaimana anda sebarkan maklumat kepada penduduk kampung lain?  
(contoh: maklumat tentang majlis perkahwinan, kematian dan lain-lain).
2. Bagaimana anda dapatkan maklumat dari penduduk kampung lain?  
(contoh: papan kenyataan, risalah, telefon, dewan orang ramai dll).



**BAHAGIAN E: ALIRAN DAN KEPERLUAN MAKLUMAT DI ANTARA RESPONDEN DENGAN AGENSI DAN PIHAK BERKUASA TEMPATAN (PBT)**

1. Bagaimana anda salurkan maklumat kepada agensi dan pihak berkuasa tempatan? ( contoh: papan kenyataan, risalah, telefon, dewan orang ramai dan lain-lain).
2. Jenis maklumat yang anda perlukan daripada agensi dan pihak berkuasa tempatan?  
( contoh: harga getah, aktiviti kemasyarakatan, pendidikan dll).

**SOAL SELIDIK:**

**KAJIAN TAHAP PENERIMAAN KANDUNGAN YANG DISEDIAKAN**

**BAHAGIAN A: PROFIL RESPONDEN**

1. Umur

15 tahun	<input type="checkbox"/>
15-24	<input type="checkbox"/>
25-34	<input type="checkbox"/>
35-44	<input type="checkbox"/>
45-54	<input type="checkbox"/>
>= 55	<input type="checkbox"/>

2. Jantina

Lelaki ☐ Perempuan ☐

3. Bangsa

Melayu ☐ India ☐ Lain-lain (Nyatakan): ☐

Cina ☐ Siam ☐

4. Taraf perkahwinan

Bujang

Berkahwin

Lain-lain

i-Ibu bapa tunggal

ii-balu

iii-janda/duda

5. Penguasaan Bahasa:

Bahasa	Pertuturan	Membaca	Menulis
B. Melayu			
B. Inggeris			
Arab			
Mandarin			
Tamil			
Lain-lain:			

6. Tahap Pendidikan

a)

Tidak bersekolah	
Sekolah Rendah	
Sekolah Menengah	
Sijil/Diploma/Ijazah	
Lain-lain	

b) 

Anda seorang pelajar?	Ya		Tidak	
-----------------------	----	--	-------	--

7. Status Pekerjaan:

Makan gaji	
Kerja sendiri	
Bersara	
Pelajar	
Menganggur	

8. Jawatan anda dalam komuniti ( Jika berkenaan ) :

9. Pendapatan ahli keluarga dalam rumah (Sebulan) :

<input type="checkbox"/> Kurang dari RM416	<input type="checkbox"/> RM 1501-RM 3,000
<input type="checkbox"/> RM 417-RM 676	<input type="checkbox"/> Melebihi RM 3,000
<input type="checkbox"/> RM 677-RM 1,500	

## BAHAGIAN B: PENGETAHUAN ICT

8. Adakah anda memiliki komputer di rumah?

☐ Ya ☐ Tidak

9. Jika tidak, adakah anda berminat untuk membeli komputer/laptop anda sendiri?

☐ Ya ☐ Tidak

10. Anda pernah menggunakan komputer?

☐ Ya ☐ Tidak

i) Jika tidak, kenapa:

☐ Tidak mempunyai komputer ☐ Tidak berminat

☐ Takut menggunakan computer ☐ Tiada kepentingan

☐ Lain-lain

iii) Jika Ya, sudah berapa lama anda menggunakan komputer?

☐ Kurang dari 1 tahun ☐ 4 hingga 6 tahun

☐ 1 hingga 3 tahun ☐ Lebih 6 tahun

11. Sudah berapa lama anda menggunakan Internet?

☐ Kurang dari 1 tahun    ☐ 1 hingga 3 tahun

☐ 4 hingga 6 tahun    ☐ Lebih 6 tahun

12. Kekerapan menggunakan Internet dalam seminggu?

☐ Kadang-kadang  
(bila ada keperluan)    ☐ 1 hingga 2 kali    ☐ 3 hingga 5 kali

☐ 6 hingga 8 kali    ☐ Melebihi 8 kali

13. Adakah anda pernah menerima sebarang latihan ICT?

☐ Ya    ☐ Tidak

14. Apakah jenis latihan ICT yang menarik minat anda?

Pemprosesan perkataan	
Penyuntingan Video	
Kewangan	
E-Perdagangan	
Pembangunan Laman web/ Blog	
Pengiklanan atas talian	
Internet/ emel	
Lain-lain	

15. Adakah anda tahu dan pernah menggunakan aplikasi berikut (tandakan yang berkenaan):

Aplikasi	Tahu (✓)	Pernah guna (✓)
Perbankan Internet		
E-hasil		
UPU Online		
PTPTN		
Saman		
E-Peperiksaan		
E-mel		
Permainan computer		
Lain-lain		

### BAHAGIAN C: PENGISIAN LAMAN WEB.

1. Adakah maklumat yang disediakan menepati keperluan anda?

Ya			Tidak	
----	--	--	-------	--

2. Adakah anda setuju jika ada pengisian sebegini untuk digunakan oleh penduduk kampung?

Ya			Tidak	
----	--	--	-------	--

3. Adakah anda akan menggunakan komputer jika ada pengisian yang sebegini?

Ya			Tidak	
----	--	--	-------	--

4. Adakah paparan yang disediakan mudah untuk digunakan?

Ya			Tidak	
----	--	--	-------	--

5. Adakah anda bersetuju sekiranya pengisian seperti ini diteruskan untuk bahagian-bahagian yang lain?

Ya			Tidak	
----	--	--	-------	--



Developed application to be used as a platform to present the local contents

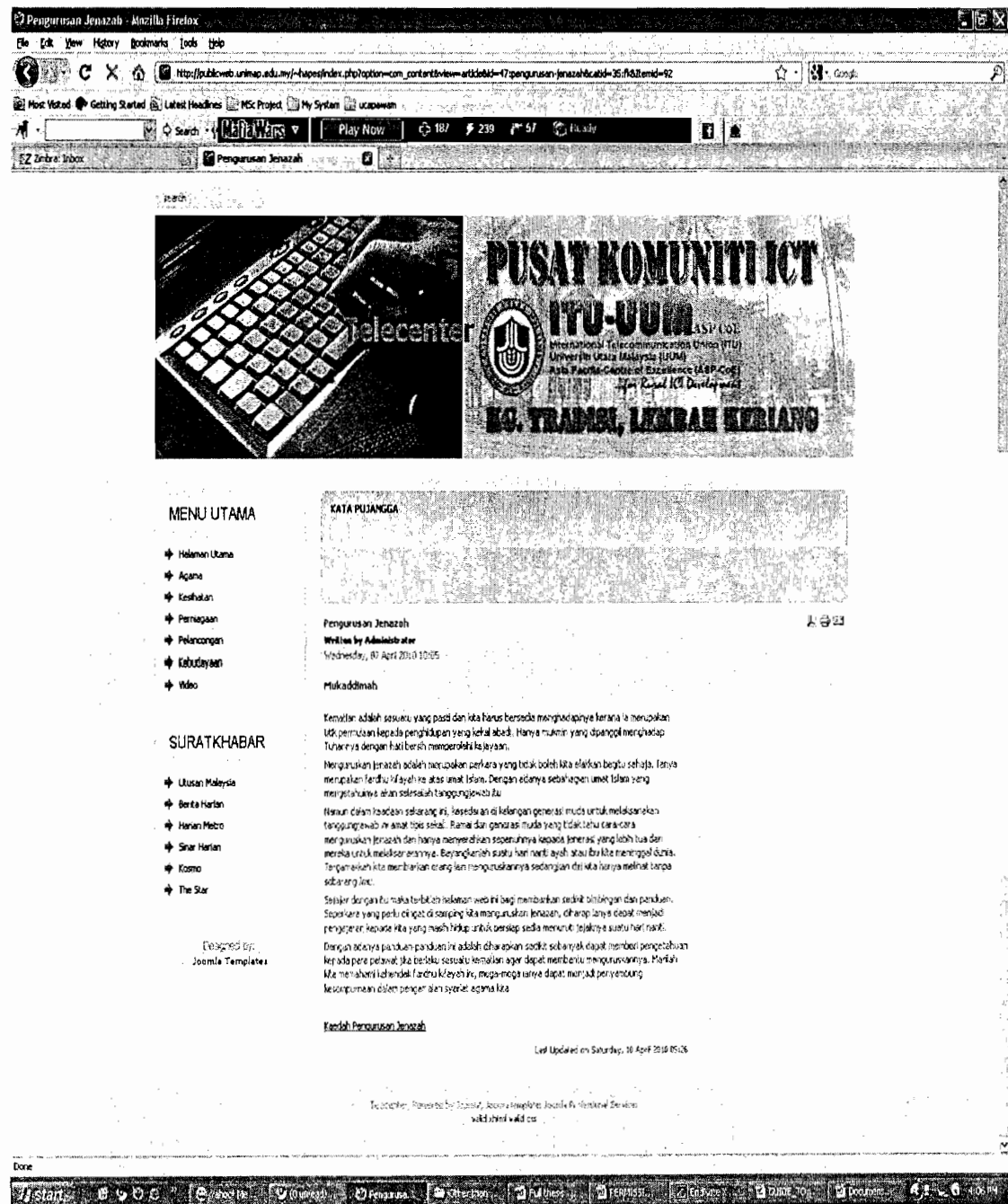
## i. Layout Main page



ii. Layout for 'Fardhu Kifayah'



### iii. Layout for 'Pengurusan Jenazah'



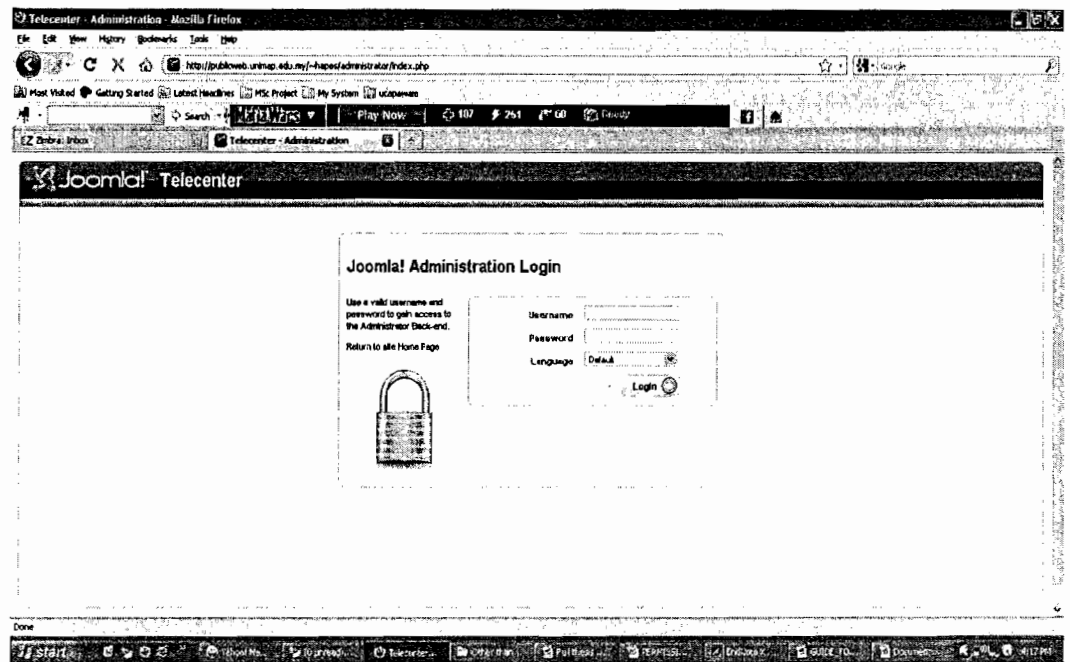
iv. Layout for item in 'Pengurusan Jenazah'



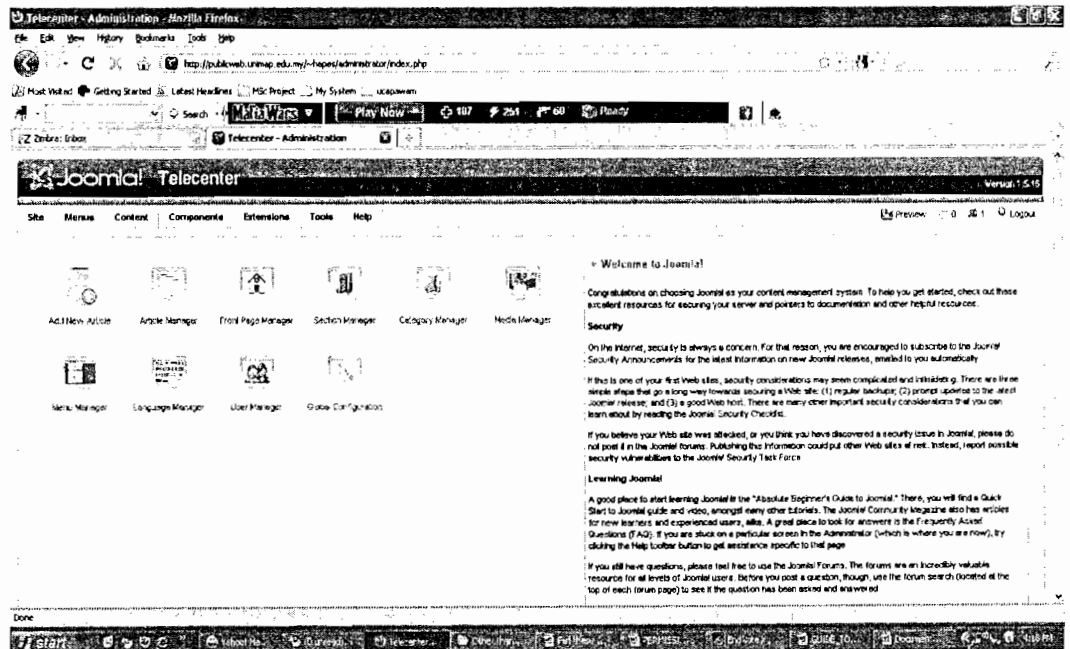
v. Layout for video 'Pengurusan Jenazah'



vi. Layout for administrator's login page



vii. Layout for administrator's control panel



viii. Layout for adding new section

The screenshot shows the Joomla! Telecenter Administration interface in a Mozilla Firefox browser. The address bar displays the URL: `http://publibweb.unimap.edu.my/~hapes/administrator/index.php?option=com_section&scope=content`. The page title is "Joomla! Telecenter". The navigation menu includes: Site, Menu, Content, Components, Extensions, Tools, Help. The main content area is titled "Section: (New)". It contains the following fields and options:

- Scaper:** content
- Title:** [Text input field]
- Alias:** [Text input field]
- Published:** ☐ No ☒ Yes
- Order:** New Sections default to the last place. Ordering can be changed after this Section is saved.
- Access Level:** [Dropdown menu with options: Registered, Special]
- Image:** [Select Image button]
- Image Position:** Left
- Description:** [Rich text editor with Paragraph style selected]
- Path:** p
- Image:** [Image icon] **Toggle editor**

At the bottom of the form, there is a "Done" button and a status bar with various icons. The footer text reads: "Joomla! is Free Software released under the GNU/GPL License."

ix. Layout for articles manager

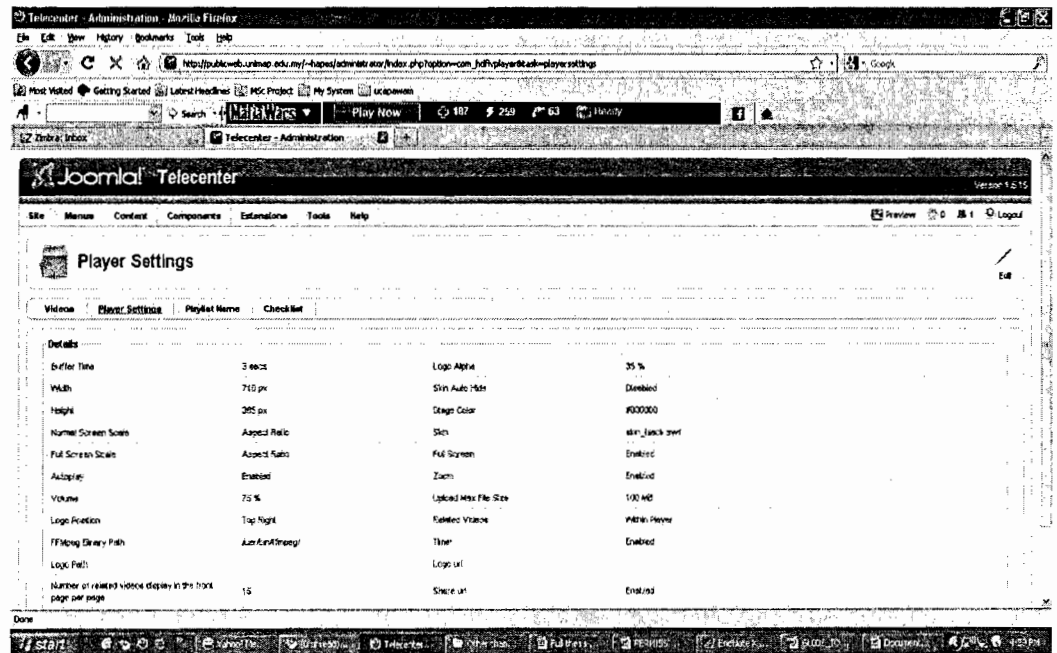
The screenshot displays the Joomla! Telecenter Article Manager interface. At the top, there's a navigation bar with links like 'Site', 'Menus', 'Content', 'Components', 'Extensions', 'Tools', and 'Help'. Below this, the 'Article Manager' section is active, showing a list of articles. The interface includes a search bar, filters for section, category, author, and state, and a table of articles with columns for ID, Title, Published status, Front Page, Order, Access Level, Section, Category, Author, Date, Hits, and ID. The table lists 20 articles, mostly related to 'Jenazah' (Funeral) and 'Mandi' (Bathing).

#	Title	Published	Front Page	Order	Access Level	Section	Category	Author	Date	Hits	ID
1	Fardhu Kheyah	✓	0	1	Public	AGAMA	Fardhu Kheyah	Administrator	12/04/10	46	65
2	Video Pengurusan Jenazah	✓	0	2	Public	AGAMA	Fardhu Kheyah	Administrator	11/04/10	41	67
3	PENGURUSAN JENAZAH	✓	0	3	Public	AGAMA	Fardhu Kheyah	Administrator	10/04/10	103	68
4	Pengurusan Jenazah	✓	0	4	Public	AGAMA	Fardhu Kheyah	Administrator	07/04/10	55	47
5	Adab Memand dan Mengkafankan Jenazah	✓	0	5	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	25	49
6	Tulang Mandi	✓	0	6	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	15	50
7	Persiapan Mandi Jenazah	✓	0	7	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	6	51
8	Cara-cara memandikan jenazah (Bhgn 1)	✓	0	8	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	17	52
9	Cara-cara memandikan jenazah (Bhgn 2)	✓	0	9	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	10	53
10	Cara-cara memandikan jenazah (Bhgn 3)	✓	0	10	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	4	54
11	Cara-cara memandikan jenazah (Bhgn 4)	✓	0	11	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	6	55
12	Cara-cara memandikan jenazah (Bhgn 5)	✓	0	12	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	7	56
13	Cara-cara memandikan jenazah (Bhgn 6)	✓	0	13	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	5	57
14	Cara Mengkafankan Jenazah (Bhgn 1)	✓	0	14	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	9	58
15	Cara Mengkafankan Jenazah (Bhgn 2)	✓	0	15	Public	AGAMA	Fardhu Kheyah	Administrator	06/04/10	8	59
16	Cara Mengkafankan Jenazah (Bhgn 3)	✓	0	16	Public	AGAMA	Fardhu Kheyah	Administrator	05/04/10	5	60
17	Cara Mengkafankan Jenazah (Bhgn 4)	✓	0	17	Public	AGAMA	Fardhu Kheyah	Administrator	05/04/10	6	61
18	Kaflet Solar Jenazah	✓	0	18	Public	AGAMA	Fardhu Kheyah	Administrator	03/04/10	13	62
19	Rukun Solat Jenazah	✓	0	19	Public	AGAMA	Fardhu Kheyah	Administrator	03/04/10	17	63
20	Pengurusan Jenazah	✓	0	20	Public	AGAMA	Fardhu Kheyah	Administrator	03/04/10	12	64

At the bottom of the table, there are pagination controls: 'Display # 20', 'Page 1 of 2', and a legend for article states: 'Published, but is Pending', 'Published and is Current', 'Published, but has Expired', 'Not Published', and 'Archived'. A note at the very bottom states 'Joomla! is Free Software released under the GNU/GPL License'.



x. Layout for setting video player



xi. Layout for global configuration

