KNOWLEDGE PORTAL FOR HANDICRAFT PRODUCTS (KM)

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ABSTRAK

Pengetahuan adalah penting dalam kehidupan. Ia adalah termasuk pengalaman dan data dalam jangka mengubah jenis format media. Sistem Pengurusan pengetahuan digunakan untuk membuat, menyimpan, berkongsi dan menggunakan pengetahuan bagi orang yang tepat pada masa yang betul. Kraftangan adalah semangat budaya. Portal pengetahuan untuk Produk Kraftangan adalah satu titik akses tunggal kepada pengetahuan kraftangan. Model kaedah yang digunakan dalam membangunkan portal ini ialah metodologi lelaran dan tokokan. Kajian semula sistem yang sedia ada dan sesi temu bual telah dijalankan untuk mengumpul data berkenaan untuk produk kraftangan. Ujian fungsian digunakan untuk menguji fungsi portal ini adalah memenuhi keperluan pengguna. Portal ini diuruskan oleh Jabatan Pertanian Negeri Pahang. Pakar kraftangan boleh memberi nasihat. Ahli perniagaan kraftangan boleh mempromosikan produk mereka dan pengguna berdaftar juga boleh memberi komen pada forum. Portal ini boleh membantu untuk menyelesaikan kekurangan platform komunikasi dalam masa pengguna. Temu bual dengan ahli perniagaan dan pakar dijalankan untuk mengumpul pengetahuan dan pengalaman daripada mereka. Kajian semula sistem sedia ada adalah membantu untuk mengenal pasti isu-isu semasa sistem yang sedia ada dan menggunakan teknologi baru-baru ini Portal Pengetahuan Produk Kraftangan dijangka untuk meningkatkan produktiviti produk kraftangan di Pahang negeri dan Malaysia. Ia juga membantu untuk mengenal pasti pakar-pakar kraftangan untuk berkongsi pengetahuan dengan pengguna. Motivasi dari pengguna dalam perkongsian pengetahuan adalah penting untuk mencapai objektif portal pengetahuan ini.

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ABSTRACT

Knowledge is important in life. It is include experience and data in term of vary types of media format. Knowledge Management System is used to create, store, share and use knowledge for right people at the correct time. Handicraft is the spirit of cultural. Knowledge Portal for Handicraft Products is a single access point to the handicraft knowledge. The methodology model that used in developing this portal is iterative and incremental model. Review existing system and interview session was conducted to collect data regarding to the handicraft products. Functional testing is used to test the functional of the portal is fulfil user requirements. This portal is managed by Jabatan Pertanian Negeri Pahang. Handicraft expert may give advices. Handicraft businessman can promote their product and registered user also can comment at the forum. It can help to solve lack of communication platform within users. Interview with the businessman and expert is conducted to collect the knowledge and experiences from them. Review of the existing system is help to identify the current issues of the existing system and technology using recently Knowledge Portal for Handicraft Products is expected to increase the productivity of handicraft products in Pahang state and Malaysia. It is also help to identify handicraft experts to share knowledge with users. Motivation of users in sharing knowledge is important to achieve the objectives of this knowledge portal.

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CHAPTER 1

INTRODUCTION

This chapter briefly describes the Knowledge Portal for Handicraft Products that will be developed later. It will describe background, problem statement, research objectives and scope for this project. The last part will explain the thesis organization.

1.1 Background

Knowledge Management System (KMS) is a system which managing knowledge (creating, storing, sharing and using) for the benefits of people and community (Ni et al., 2010). It will be two ways communication between contributors and users. According to Li and Dong (2008), knowledge Portal (KP) is one point access software system which supports easy access to the information and practices communities of knowledge people who share same targets. Knowledge Portal Pertanian is a portal for manage knowledge of farmers to facilitate knowledge creation, storing, sharing and usage. While Knowledge Portal for Handicraft Products is one of the sub portals for the Knowledge Portal Pertanian. It is includes the collections of handicraft's knowledge from farmer on how to handle a situation and their practical experiences on this field and research from expert. It can advice especially for young farmers to avoid themselves from repeat the same mistakes and learn how to become a success handicraft businessman. Jabatan Pertanian Negeri Pahang (Portal Jabatan Pertanian Negeri Pahang, n.d.) is one of the contributors which also administer for Knowledge Portal Pertanian. Administer will manage this portal to make sure all the knowledge and information that share at portal is updated and trusted.

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Handicraft is a product that has artistic or traditional cultural attraction that requires proper technique and creative. So far there is limited portal that allow users sharing their knowledge and experiences on specific handicraft products. This cause new generation lack of handicraft knowledge and less interesting on the handicraft field. Besides, without proper techniques and good marketing strategies, many problems will occur on the handicraft business, especially those are new to handicraft field. So, Knowledge Portal for Handicraft Products had proposed as one of the modules in the Knowledge Portal Pertanian.

Knowledge Portal for Handicraft Products is a portal that can be share knowledge and experiences between experts and the handicraft makers, especially fresh handicraft learners in Pahang state. It is provide the knowledge from worldwide on the handicraft field. For the people who is interesting on sharing their knowledge and experience on the handicraft field will need to register as members first to enhance the information shared is trusted. There will be have expert profile, handicraft businessman profile and various types of handicraft product profile. The experts mostly are government or private organization that related to the handicraft field, such as Rubber Industry Smallholders Development Authority (RISDA) (Portal Jabatan Pertanian Negeru Pahang, n.d.) and Perbadanan Kemajuan Kraftangan Malaysia (Portal Perbadanan Kemajuan Kraftangan Malaysia, n.d.). Uses of rubber leaves as handicraft carried out entirely by the Perkumpulan Wanita Pekebun Kecil (PWPK) (Portal Rasmi Pihak Berkuasa Kemajuan Pekebun Kecil Pulau Pinang, n.d.). Besides, Perbadanan Kemajuan Kraftangan Malaysia also is the authority which manages the development of the handicraft field in Malaysia. In addition, handicraft businessman can share their success stories and promote their products at their own profiling at portal. Various type of handicraft product profile will be updated by administration. Inside the process making of handicraft product profile will explain the detail steps for making process (photo or video), for example how to design batik. Members can share their techniques on how to make a handicraft there. Administration can remove the outdated information that share at portal and reject the irrelevant information that created by members. Besides, administration can upload the documentation about handicraft field to the portal, for example news, journal, and papers about the specific products. In the portal will have discussion forum where members can hold conversation in the form of posted

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message. They can read the forum without login. But users need to log in order to post messages at the forum to make sure they are the members of this portal. Marketing strategies (information of suppliers, e-commerce and others) will be share at the portal. There is an opportunity for those are first time contributing to handicraft field.

1.2 Problem Statement and Motivation

There are many limitation of the existing portal especially in sharing user's knowledge and their experiences on specific handicraft products. This cause new generation lack of handicraft knowledge and less interesting on the handicraft field. Besides, without proper techniques and good marketing strategies, many problems will occur on the handicraft business, especially those are new to handicraft field. However, not many suitable platforms for those are interested in handicraft field to voice their problems with peer besides the government authority. To this, Knowledge Portal for Handicraft Products is proposed to solve the problems.

1.3 Objectives

The project embarks the following objectives:

i. Develop Knowledge Portal for Handicraft Products (KPHP).

ii. Apply knowledge management concept for the portal in the part of create, store, use and share information and knowledge and implement it in web based system.

iii. Enhance the platform for two ways communication between experts and the handicraft businessman. Handicraft experts, businessman, and people who are interesting /involved in the handicraft field may create store or share their knowledge and experiences to help each others in the forum. It also provide success story of handicraft businessman to encourage freshman contribute in handicraft field and provide handicraft product information and the general step to make it.

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1.4 Scopes

The scopes are consists of system scopes and user scopes.

1.4.1 System scopes

The scopes of this system are:

i. Develop specially for handicraft field in Pahang state and discovers the handicraft field in worldwide to share with users.

ii. The system will equipped features as below:

   a. Knowledge bank, such as articles in journal, conference proceeding, magazine, book, newspaper and etc.
   b. Forum
   c. News
   d. Tips how to be a success handicraft businessman
   e. Yellow pages that include the supplier profile and handicraft businessman profile.

iii. Communication platform for:

   a. Expert profiling to share their research on handicraft.
   b. Handicraft businessman profiling to share their success story and promote their products.
   c. Handicraft product profiling to store general information on handicraft product.

1.4.2 User scopes

The user scopes in this project are:

i. Jabatan Pertanian Negeri Pahang

ii. Handicraft Expert

iii. Handicraft businessman

iv. People who are interesting on the handicraft.

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1.5 Contribution to the Handicraft field

The contribution this thesis to the handicraft field is this proposed knowledge portal can collect the knowledge from human by allow us create, store and share the handicraft knowledge at the Knowledge Portal for Handicraft Products. This also enhance the communication between experts and users who interesting on handicraft field. It becomes a medium to share and solve problem on handicraft together.

1.6 Project Thesis Organization

This thesis consists of six chapters. Before Chapter 1, abstract will be written on the beginning of this thesis as the thesis summary to help the reader quickly understand this project's purpose. Chapter 1 will discuss the introduction on the project that will be developed later. Chapter 2 will explain about the reviews for the project. All references will be listed clearly in the references' list to keep the originality of the thesis. Chapter 3, methodology, it is describes the approach and framework of the project. The explanations about the method, technique or approach that will be used while designing and implementing this project are included in Chapter 3. Besides, the detailed design of the Handicraft knowledge portal will be describes at the Chapter 4. Chapter 4 also will explain the result and data analysis that had been acquired. This chapter also will state the testing techniques, project limitation and our suggestion on enhance usability of this project. Finally, Chapter 5 is briefly summarized about this developed project. Appendices will be added after the last chapter of this project. There will be consists of Gantt chart, user manual, and other relevant document.

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CHAPTER 2

LITERATURE REVIEW

This chapter make conclusion on the review of existing systems and its applied techniques related with Knowledge Portal for Handicraft Products that will be developed later. It is comprised two sections which are the first section discussing the comprehensive review on existing related systems, while the second section is explain the review on techniques, web technologies, tools and software development models previously used in the same domain with this project.

2.1 Existing System Review

This section is used to review the current system and the existing portal that related to handicraft products.

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2.1.1 Official Website of the Pahang Agriculture Department (Laman Web Rasmi Jabatan Pertanian Negeri Pahang)

In this official websites, there is lack of information about handicraft product that made by rattan, bamboo or any farm handicraft product. Although there have update information about Industri Asas Tani businessman information but there is lack of platform to allow farmers and users sharing their problems or knowledge on the handicraft product (Laman Web Rasmi Jabatan Pertanian Negeri Pahang, n.d.). Refer to the Figure 2-1 and 2-2. Figure 2-1 is the picture about the activities held for Official Website of the Pahang Agriculture Department. Figure 2-2 is the view of the kraftani fields' success story for Official Website of the Pahang Agriculture Department

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Figure 2-1: Activity

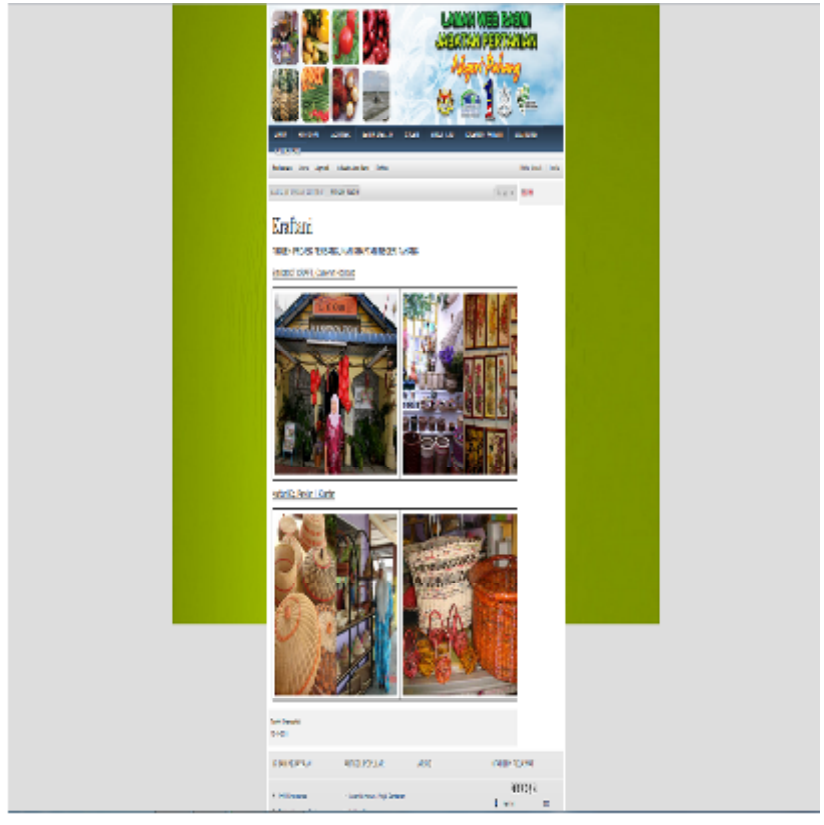

Figure 2-2: Success story

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2.1.2 Official Portal of Malaysian Handicraft Development Corporation (Portal Rasmi Perbadanan Kemajuan Kraftangan Malaysia)

Official Portal of Malaysian Handicraft Development Corporation is a portal that provides information of handicraft product in Malaysia. It is act as a help desk from government especially for people who interesting on handicraft products (Portal Rasmi Perbadanan Kemajuan Kraftangan Malaysia, n.d.). Refer to Figure 2-3 and Figure 2-4.

Figure 2-3: Homepages

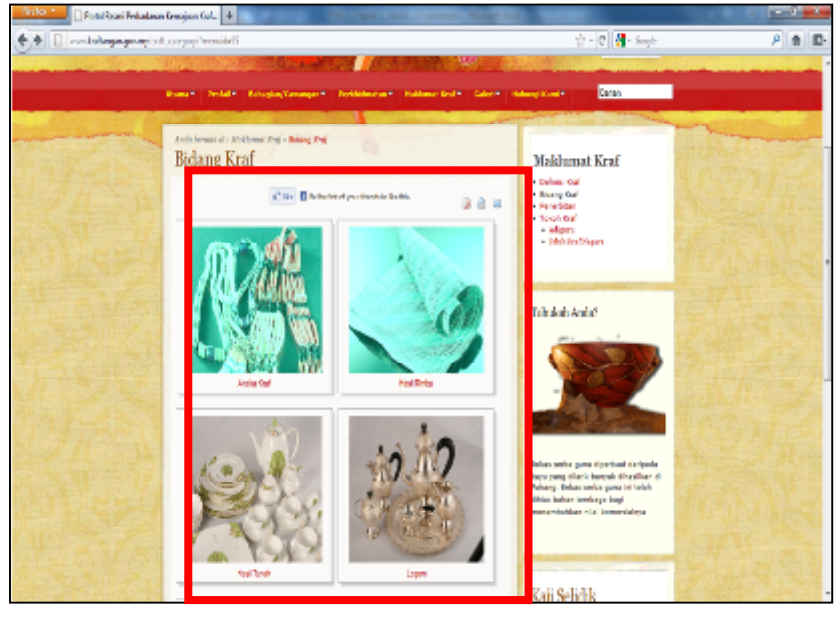

Figure 2-4: Handicraft field

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2.1.3 Portal of World Handicraft Organization

The fundamental aim of the Portal of World Handicrafts Organization is provide the traditions and potential of handicrafts for the service of the world community. It will strive for the preservation, support and development of folk traditions (Portal of World Handicraft Organization, n.d.). Refer to Figure 2-5. The latest activity or activity show at the Press Center site in Portal of World Handicrafts Organization

Figure 2-5: Latest activity

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2.1.4 Yemen Handicraft Website

Yemen's handicraft products are the essence of local wisdom and experience handed down from generation to generation. They build an important part of the heritage created by many civilizations during centuries of history. (Yemen Handicraft, n.d.). Refer to Figure 2- 6 and Figure 2-7.

Figure 2-6: Homepages

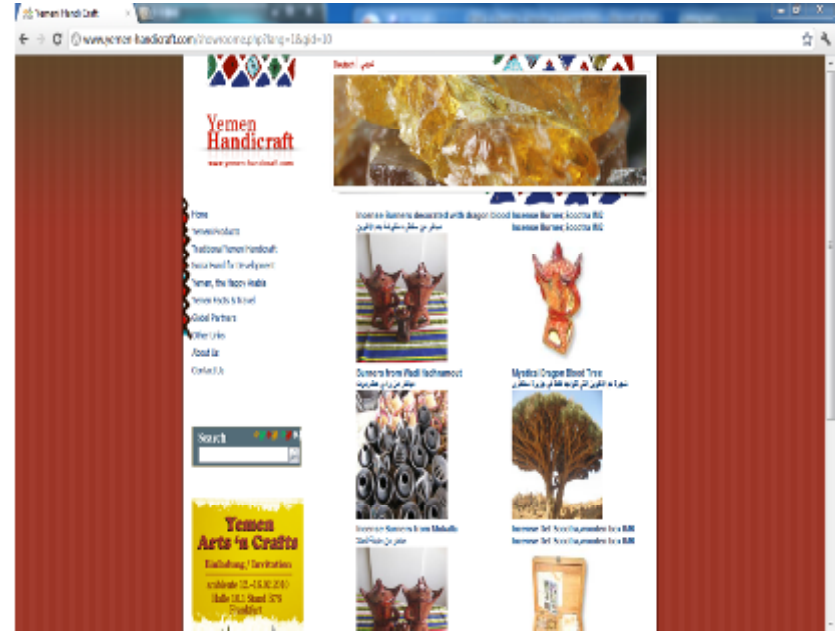

Figure 2-7: Various Handicraft Products

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2.1.5 Comparison between Existing Systems

(Official Website of the Pahang Agriculture Department, Official Portal of Malaysian Handicraft Development Corporation, Portal of World Handicraft Organization and Website of the Yemen Handicraft)

Official Website of the Pahang Agriculture Department are mostly discuss on the farmer's field while the handicraft product is just one of the subfield which is lack of information and promote on it. In this portal, there are provide the information of the successful handicraft businessman in Industri Asas Tani (IAT).

In the portal of Official Portal of Malaysian Handicraft Development Corporation, there is provide the basis information about some handicraft in Malaysia and as a help desk for handicraft business man to register as a member of Malaysian Handicraft Development Corporation. When they have any question about the handicraft field, they can request information by send to the authority email address. But in this portal, it is lack of information about handicraft, especially handicraft product in Malaysia. There is haven't provide an alternative way to user who view the portal to know more about the process of making handicraft. There are haven't a forum to allow users sharing their knowledge in handicraft field.

In the Portal of World Handicraft Organization, there have the Press Center which shows the latest event and information for worldwide handicraft. The research part was not updated. It has provided the latest news about handicraft products. Users are allows to register as a partnership with the Portal of World Handicraft Organization.

Website of Yemen Handicraft has almost ten small modules on it: Home, Yemeni Products, Traditional Handicraft, Social Fund for Development, Travel, Partners, Contact Us and others. All the modules only provide the information while there is no platform for users to share their knowledge and discussion.

The details comparison between the four existing systems will show at Table 2-1.

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Table 2-1: Comparison between Existing Systems

(Official Portal of Malaysian Handicraft Development Corporation, Portal of World Handicraft Organization , Official Website of the Pahang Agriculture Department and Website of the Yemen Handicraft)

No.	Features	Official Website of the Pahang Agriculture Department	Official Portal of Malaysian Handicraft Development Corporation	Portal of World Handicraft Organization	Website of the Yemen Handicraft
1.	**Handicraft product profiling**	Handicraft product profiling is not available.	There are listed five main handicraft product fields. Refer to Figure 2-4. The different fields are linked to their own product profile. But in the specific product profile, there is lack of information because only the basis information provided.	Handicraft product profiling is not available.	Available. But not detail on it. Refer to Figure 2-7.
2.	**Handicraft businessman profiling**	The directories for the Industri Asas Tani (IAT) handicraft business are provided. Users who are	Handicraft businessman profiling is not available.	The people who are interesting on partnership with this organization, they can register.	Handicraft businessman profiling is not available.

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		not registered as member also can view it.			
3.	**Handicraft expert profiling**	Expert profiling are not available.	The Adiguru and Tokoh of handicraft Malaysia are listed. Besides, there is a link for access to the Adiguru or Tokoh profile to view their personal information on specific handicraft product. The list was organized based on state.	Expert profiling are not available.	Expert profiling are not available.
4.	**Process of making handicraft**	The process of making handicraft is not available.	The details for process of making handicraft products are not available.	Process of making handicraft is not available.	Process of making handicraft is not available.
5.	**Risk as a handicraft businessman**	Risk as a handicraft businessman is not available.	Risk as a handicraft businessman is not available.	Risk as a handicraft businessman is not available.	Risk as a handicraft businessman is not available.
6.	**Success stories from some**	The successful handicraft businessmen were shown	The success stories from Adiguru and Tokoh.	Success story are not available.	Success story are not available.

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	businessman	the company name and the photo of the shop only. The details are available. Refer to Figure 2-2.			
7.	**Suppliers and customers**	Suppliers and customers profiles are not available.	There is providing application as a handicraft supplier. Users need to download the files and fill in.	Suppliers and customers profiles are not available.	Suppliers and customers profiles are not available.
8.	**Marketing strategies**	Marketing strategies are not available.	Marketing strategies are not available.	Marketing strategies are not available.	Marketing strategies are not available.
9.	**Product Pricing**	Product pricing are not available.	Product pricing are not available.	Product pricing are not available.	Product pricing are not available.
10.	**Journal/papers about the handicraft products**	Not available. But there is update latest news about handicraft field in Malaysia.	There are no journal/papers about the handicraft products. But there is update latest news about handicraft field in Malaysia.	Not available. But there is update latest news about handicraft field in Malaysia.	Journal/papers about the handicraft products are not available.

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11.	**Picture gallery**	The picture about the activities held, not only the handicraft product. Refer to Figure 2-1.	The activity of handicraft field was recorded are posted at the Gallery part. The activity was recorded by photo, video or audio.	The picture gallery is not available in this portal.	Yes. It is show the handicraft products pictures.
12	**Activity gallery**	Activities are show and promote at the homepages.	The latest activity or coming soon activity will show at the homepages. Refer to Figure 2-3.	The latest activity or activity show at the Press Center site. Refer to Figure 2-5.	Activity gallery is not available.
13.	**Collaboration tools (forum, news, knowledge bank, tips and experience)**	The news about farmer (included handicraft) will be updated. Users are allowed to email officer for advanced information. But currently forum is not available at this official website.	SAHABAT KRAF (received information about discount on handicraft sales and activities handicraft Malaysia through email, short message or letter). But there are haven't forum to let users discuss and sharing their knowledge.	Collaboration tools are not available.	The latest news is show at the Homepages. Refer to Figure 2-6.

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