CHAPTER 3

METHODOLOGY

As we can see, the education institute is isolated from the tourism industry; it's not easy to share the knowledge in the direct way between education institute and tourism industry. This situation obstructs knowledge sharing, which will decelerate the e-Tourism curriculum development. Hence, the indirect method was used to overcome this obstacle. Educational institute used the advantages of technology to facilitate networking, and sharing information with tourism industry. The Knowledge Management System (KMS) is considered as a solution for enabling the knowledge flow and managing the knowledge of e-Tourism industry.

The methodology of this research is proposed as follows:

1. Scope of research
2. Focus group
3. Data collection
4. Study area
5. Research time
6. Research steps

3.1 Scope of Research

The tourism industry is facing the new breed of tourism consumers directly and knows the nearest tourism information including new products and destinations.

Curriculum should be specified in advance what we are seeking to achieve and how we are to go about it. Tourism industry is a knowledge supplier to the academic when tourism related curriculum is designed. Right now the universities still use traditional tourism concepts in their curriculum design. And the tourism lecturers are reluctant to update new tourism knowledge and skills. Under this condition, students who are studying tourism related courses in the universities and interested in working in tourism industry after graduate cannot meet the requirements of new tourism industry and contribute to the organization as a knowledge worker. So there is a need to build up a communication bridge between the tourism industry and academic to shorten the gap and make the knowledge supply chain freely flowing. A knowledge management system is proposed to build up.

Since e-tourism has never been set up as a major in Thai Universities, in 2009, College of Arts, Media and Technology of Chiang Mai University, Thailand planed a cooperative education program for e-Tourism. Students from Department of Modern Management Information Technology (MMIT) have e-Tourism major electives. This research is based on the e-tourism electives which including e-tourism lecturers, e-tourism students and curriculum designers and cooperative industry partners. And at the same time, Chengdu University in China built up an International e-Tourism Research Center to do e-Tourism research. This research also gets information from this research center about e-Tourism developing trends and some educational curriculum development.

3.2 Sample Groups

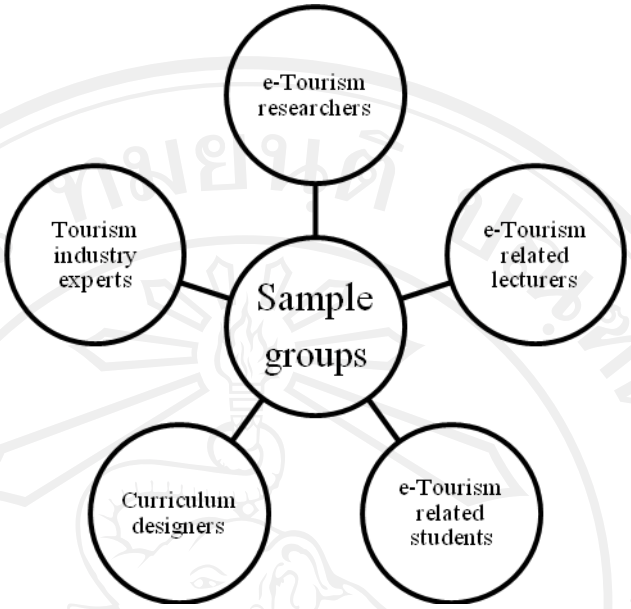

Figure 3.1 Focus groups of this research

In general, curriculum development is a complicated work which comprises various stakeholders in the process. And every stakeholder has different objectives and requirements. To develop KMS for e-Tourism curriculum development that meets all users' requirements is difficult task. Instead, selecting focus groups that represent all types of stakeholders gives more chances of system success especially during the step of knowledge elicitation. So focus groups in e-Tourism curriculum development are including: e-Tourism researchers, e-Tourism related lecturers, e-Tourism related students, curriculum designers and tourism industry experts.

3.3 Data collection

3.3.1 Data

The **primary data** of this research is divided into three parts:

1) Data from knowledge experts about e-Tourism curriculum development to set up a knowledge management system

2) Data from system users about KMS requirements

3) Data of KMS users feedback

The **secondary data** of this research is from literature reviews totally about:

1) Tourism reports

2) Tourism curriculum research papers

3) E-Tourism related websites

4) Knowledge management theories and implementation

5) Knowledge management system research papers

3.3.2 Data collection

The data collection in this research is including two ways: semi-structured interviews and questionnaires

1) Semi-structure interviews

2) Questionnaires

3.4 Research area

This research area is mainly in College of Arts, Media and Technology, Chiang Mai University, Thailand, while e-Tourism research center in Chengdu University, China is also studied as a joint part in this research.

3.5 Research steps

Table 3.1 Research steps

Steps	**Tools and Techniques**	**Expected Results**
1.Knowledge analysis and synthesis (capture, analysis and validation)	Semi-structured interviews adaption from CommonKADS	Knowledge pack
2.KMS design and development	User requirements ISO12207	Standardized KMS
3.KMS evaluation	Questionnaire	User's feedback and suggestion

3.5.1 Semi-structure interview

The first step of methodology will adopt semi-structured interview adaption from CommonKADS to capture, analyze, validate and model knowledge from expert who possesses valued experience on e-Tourism curriculum development. A semi-structured interview is flexible, allowing new questions to be brought up during the interview as a result of what the interviewee says. The interviewer in a semi-structured interview generally has a framework of themes to be explored.

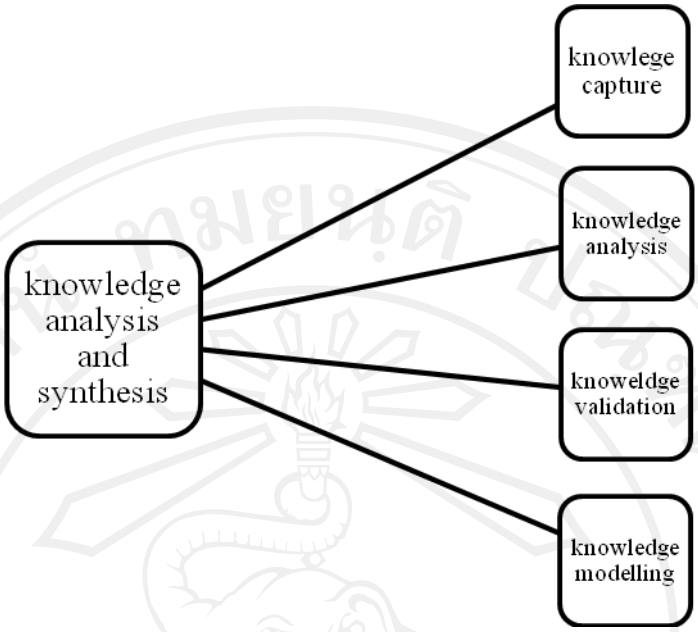

Figure 3.2 knowledge analysis and synthesis structure

Table 3.2 Semi-structured interview

Steps	**Methods and Tools**	**Expected Results**	**Some Guidelines for Interview**
Knowledge capture	Structured Interview (knowledge capture meeting, case study meeting)	● Scripts ● Sound recording	1.With Voice Recorder (avoid taking note, should focus on conversation by using prompt/probe)

Table 3.2 Semi-structured interview (Continued)

Steps	**Methods and Tools**	**Expected Results**	**Some Guidelines for Interview**
Knowledge Analysis	CommonKADS	● Ontology ● Task Knowledge ● Knowledge Base: Who Document Information	2.Meeting should be less than 30 minutes
Knowledge Validation	Structured Interview (Validation meeting)	● Validate Transcript/Knowledge Model ● Absent Knowledge Base associated with the Case Who Document Information	3.Agenda should be simple and early sent to the interviewee
Knowledge modeling	CommonKADS	● Task knowledge ● Inference knowledge ● Domain Knowledge ● Knowledge base	4.Prepare Hidden Agenda for asking question

3.5.2 KMS design and development

The KMS design and development process, users' requirements are collected to better meet their needs. Users are selected from e-Tourism researchers, e-Tourism

related students, e-Tourism related lecturers, curriculum designers and tourism industry experts.

Table 3.3 Questionnaire design for user requirements

Question	Sample 1	Sample 2	Sample 3	Sample…	Sample N
Q1.What features do you want the KMS to have?					
Q2.Who would you want to invite to join this KMS?					
Q3.What would you recommend this KMS to work on?					
Q4.Others? (Suggestions for KMS development)					

During the KMS design and development process, ISO12207 are adapted to apply process reference model on KMS design and development. The final step is to demonstrate KMS to users and get feedback and suggestions for sustainable KMS development.

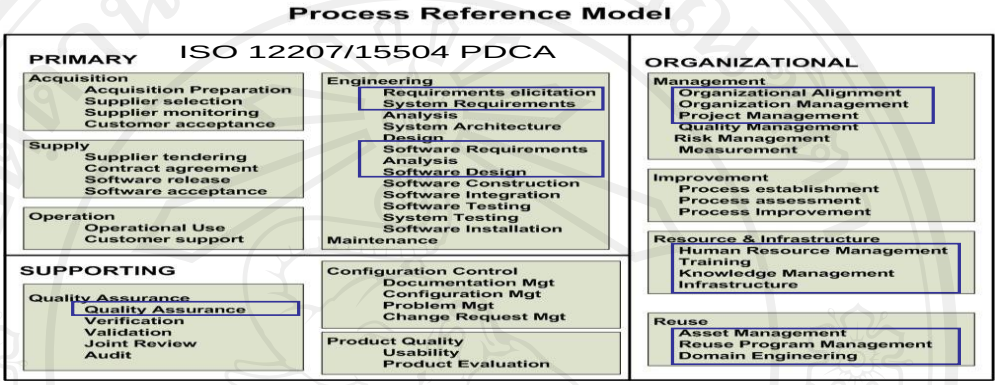

Figure 3.3 ISO12207 Process Reference model

Table3.4 ISO12207 process reference model for KMS design

Process	Process Objective	Activity
ENG.1 Requirement elicitation	To directly elicit and manage the customer's requirements	Structured Interview
ENG.2 System Requirements Analysis		Analyzing system requirements
ENG.4 Software Requirements Analysis		Specifying software requirements
ENG.5 Software Design		Describing software architecture
SUP.1 Quality	To the success and	Doing Verification Report

Assurance	quality of the software project	

Table3.4 ISO12207 process reference model for KMS design (Continued)

Process	Process Objective	Activity
MAN.1 Organizational Alignment	To manage any type of project or process within a software life cycle	Develop a strategic vision
MAN.2 Organizational Management		Identify management infrastructure
MAN.3 Project Management		Planning
RIN.1 Human Resource Management	To provide adequate human resource and necessary infrastructure as required	Identify needed skills and competencies
RIN.2 Training		Training KMS users
RIN.3 Knowledge Management		Establish a KMS; Create the network of knowledge contributors; capture knowledge; disseminate knowledge assets; improve knowledge assets
RIN.4 Infrastructure		Identify infrastructure scope; define infrastructure requirements and establish infrastructure
REU.1 Asset Management	To systematically exploit reuse opportunities in the organization's reuse programs	Identify reusable assets
REU.2 Reuse Program Management		Define reuse strategy
REU.3 Domain Engineering		Define domain models

3.5.3 KMS evaluation by user satisfaction

A Likert Scale, the most widely used approach to scaling responses in survey research is employed in this questionnaire design.

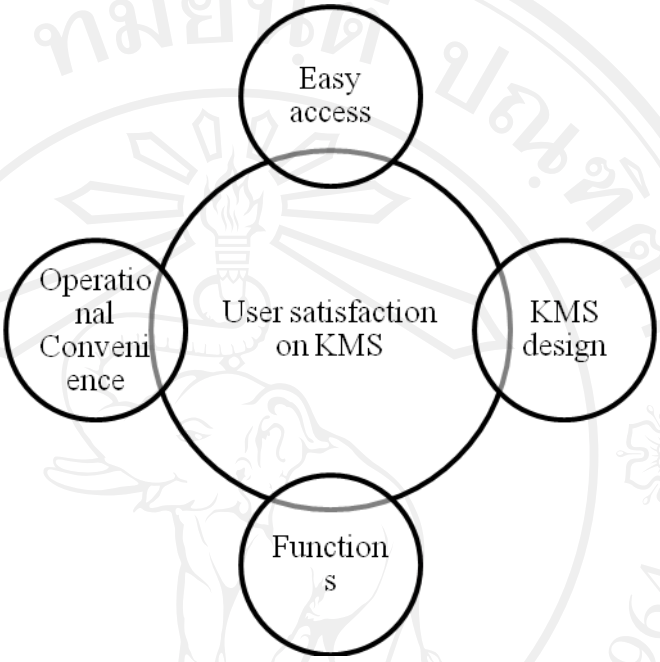

Figure3.4 User satisfaction on four aspects of KMS

Users responded to questions about KMS quality using a five-point Likert scale (1=Very poor to 5= Excellent). Questionnaire of this research is designed by Likert Scale as follows.

Table3.5 five-point Likert scale

Answer	Point	Average value	Meaning
Excellent	5	4.50-5.00	The result is excellent
Good	4	3.50-4.49	The result is good
Average	3	2.50-3.49	The result is average
Poor	2	1.50-2.49	The result is poor
Very poor	1	0-1.49	The result is very poor

Since we need to obtain the user satisfactions from survey, a questionnaire is designed in terms of access; design; function and operational convenience of KMS (see Table 3.6).

Table3.6 Questionnaire about user satisfaction

Questions	**Excellent**	**Good**	**Average**	**Poor**	**Very poor**
Is it easy to access into the website?					
How do you think about the website design?					
How do you think about the function of the website?					
Is it convenience for you to operate this website?					

3.6 Research time

Oct. 2010-Aug.2011