Chapter III
Research Methodology

The purpose of this chapter is to describe a methodology design concept for a case study of the English Program (EP) at Montfort College, Secondary Section, Private School, Chiang Mai Province.

This research presents the construction of methodology approach in terms of a qualitative case study (Creswell, 1998). To accomplish the research objectives and research questions of this case study, the research methodology is designed to yield an overview of investigation, which consisted of six main topics: 1) design concept of methodology, 2) stakeholder analysis, 3) Initial investigation year project, 4) qualifying samples, and 5) research design, and 6) report. The research also includes sub-topics that are comprised of: 5.1) design a case study, 5.2) proposition of research structure, 5.3) method design, 5.4) data collection and data analysis, 5.5) research experiment 5.6) result and analysis, discussion, and conclusion, 5.7) quality control.
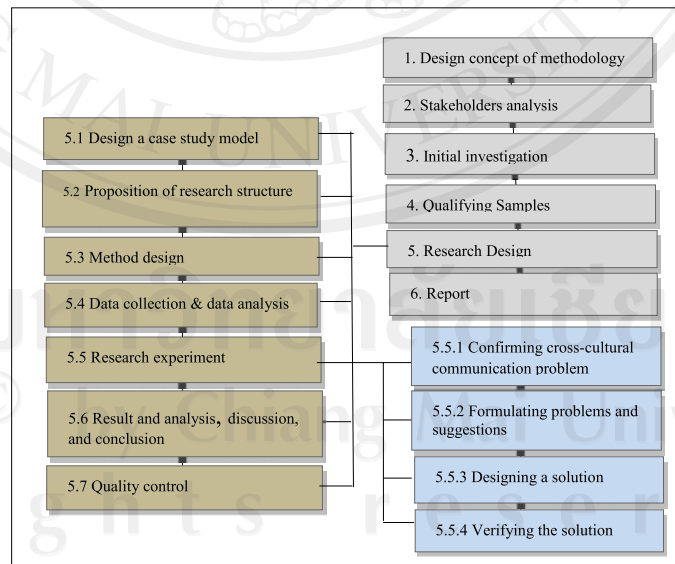

Figure 3.1 Research Methodology

To solve the EP management problems, the implemented research investigation is focused on 5.5.1 confirming cross-cultural communication problem, 5.5.2 formulating problems and suggestions 5.5.3 designing a solution: co-creating in terms of building shared vision, 5.5.4 verifying the solution as shown in Table 3.1. Thus, this case study will be conducted research methodology as follows:

3.1 Design concept of methodology

The design concept is related to problems of EP management, for which the objectives are 1) to confirm key problems in terms of cross-cultural communication; 2) to formulate problems and suggestions, 3) to design a solution; and 4) to verify the solution. This involves the informed planning, action, and also a brief overview of an approach for developing a comprehensive response to a complex situation. Thus, this research will follow a design-based approach, which is justified by the desire to increase the practical relevance of research. It can be positioned as a research approach aims at answering a particular type of the research problem as "a case study model" (Creswell, 1998, p. 65, 67) by integrating the applied KM tools and techniques.

New design approaches are researched and advanced in *confirming cross-cultural workforce management problem*s based on a preliminary study. The study also presents *formulating problems and suggestion*s as the expressed ideas between Western staff: individualist and Eastern staff: collectivist nationalities (Hofstede, 2001) of teaching staff; and administrative staff in terms of suggestions and problems. This case study also bestows *the designed solution as shared vision in terms of co-creating* (Senge *et. al.,* 1994), which can answer the research questions and is especially useful for solving complex problems of Western staff, Eastern staff, and administrative staff in the workplace. Importantly, the study exhibits *validation and reliability approaches* knowledge engineering methods in terms of the applied CommonKADS model (Schreiber *et. al.,* 2000), are described.

Therefore, the specified and identified problem of this case study may be successfully approached, via the field of KM as the designed concepts methodology. Selected concepts and KM tools and techniques improving cross-cultural problem management of the EP are presented; they aim at confirming problems; formulating

problems and suggestions; designing a solution; and verifying the solution as the validation and reliability of this case study.

3.1.1 Overview design concept of methodology

According to preliminary study of this case study, a design concept methodology will be created based on a case study theory (Creswell, 1998). The concept is derived as a set of paradigm, procedures, framework, KM tools and techniques, which provide and simplify the process of conceptual design. To obtain the conceptual design of methodology more declarative, reliable, and valid, the study is divided it into four phases (see Table 3.1). The following design concept represents the overview methodology of this case study.

Phase1: *Confirming cross-cultural communication problems* is to investigate for specifying and identifying problems for this case study. The literature reviews in terms of diverse workforce management provides as a focal direction. This phase utilizes in-depth interview questions as tools and techniques for interviewing all the EP staff to delineate the root causes of problems.

Phase 2: *Formulating problems and suggestions* is designed to clarify very complex tasks, which are drawn from the expressed ideas of concerning problems and from suggestions made by the staff based on the specified and identified problem. The theories of this phase for supporting the formulation are individualism vs. collectivism (Hofstede, 2001) and type of *ba*; originating *ba* and dialoguing *ba* as a physical environment (Nonaka *et al.,* 2000). To be applied to the EP management problems in term of cross-cultural communication, tools and techniques in this phase will use focus group and brainstorming for capturing the data from a group of representative teaching staff with Western and Eastern participants; and a group of five administrators. The findings of this phase will provide ideas of problems and suggestions from representative teaching staff and administrators.

Phase 3*: Designing a solution based on building shared vision* is to create a coherent strategy as collaboration. The designed method of this phase for supporting the solution is building shared vision: co-creating (Senge *et al.,* 2004) by starting with a personal vision from all the EP staff. Then, the analyzed personal vision will be refined to be the collective vision as a team vision by using a brainstorming within

each group nationality of teaching staff and a group administrative staff. Finally, the collective vision statement will be also synthesized and refined as the organizational vision statement by utilizing focus group and a representative of each nationality of teaching staffs: Western and Eastern staffs and administrative staff.

Thus, this phase will obtain the completed EP vision, which is the refined statement of organizational vision to become an inter-group vision.

Phase 4: *Verifying the solution*: is to analyze the EP vision statement in the form of issues/topic. Then, each topic based on organization vision statement will be validated as the requirement in terms of principle and essences, which are the core level of disciplines (Senge, 1990).

The proposed methodology is the applied CommonKADS knowledge engineering methodology using OM-1, OM-5 and OTAM-1 worksheets, which are strong and supported the analyzed organizational vision statement. OM-5 (Organization Model- 5): describing the organizational aspects will be affected by the chosen, which is: Business Feasibility, Technical Feasibility, and Project Feasibility. It is a detailed explanation or justification about the knowledge of organization and intends to indicate the feasibility of potential solutions to perceived organizational problems. To check organization feasibility of the suggested solutions to the knowledge problems/opportunities: Organization Task Agent Models (OTAM-1), in terms of Impact on the organization, Impact on workloads and worker, and improvements and suggestions (Schreiber *et al.*, 2000).

In this study worksheets will be analyzed and validated by five administrative staff because they are the department's managers, who are responsible for running the whole of organization. Next, the findings based on the ideas of administrative staff from OM-5 and OTAM-1 worksheets will be analyzed in terms of principles and essences. Finally, the analyzed vision in terms of essences will be explained as the rationale by the researcher who in this case study is presented with the EP as a reality situation.

Thus, the EP will gain new knowledge from the completed essences vision statement based on knowledge management.

To conduct the research of this case study, the study will be run step by step as shown in Table 3.1.

Table 3.1: The design concepts of methodology

Phase	Framework	Tools and Techniques	Rationale	Expected Findings
1.Confirming cross-cultural problem management based on preliminary Study	Review literatures: Diverse workforce management	In-depth Interview-questions (interview all Staffs with 7 national of teaching staff and 5 administrators	To prove the EP management problems in terms of cross-cultural communication	The specified and identified problem in terms of cross- cultural communication
2. Formulating suggestion	-Individualism vs. collectivism theory -The applied KM tool and technique As knowledge sharing and type of *ba*: - Originating *ba* –Dialoguing *ba* as cross-cultural environment -Individualism vs. collectivism and	-Focus group, -Brainstorming - Sampling group: representative of 7- nationality of teaching staff group an a group of administrators -Transcription: words words by using video record, MP 3	Participation (non participation Observation)	The overlapped ideas of suggestions and problems among individualist and collectivist staffs; and administrators
3. Designing a solution	-Building shared vision theory: -Co-creating: *Practice level:* 1) Personal vision 2) Team vision -*Principle level:* 1) Inter-team vision 2) The refined vision	-Focus discussion -Knowledge sharing -Brainstorm	-Reduce cross-cultural workforce Relationship problem	Vision statement: -Personal vision, -Collective vision, -Organizational vision

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(Cont.) Table 3.1: The design concepts of methodology

Phase	Framework	Tools and Techniques	Rationale	Expected Findings
	-*Essences:* 1) The EP vision			
4. Verifying the solution	-To test system requirements: Co-creating as shared vision process in terms of Core level of disciplines: *practice, practical and essences level* -CommonKADS knowledge engineering methodology: OM-1, OM-5, and OTAM-1	-CommonKADS know engineering Methodology: OM-1 OM-5 and OTAM-1 worksheet: open-ended questions -Data collection: 5 administrative staff.	-Strong supports analyzing of organization vision statement	-The EP vision statement based on principle and essences as the core level of disciplines.

Therefore, the design concept methodology provides: 1) confirming cross-cultural communication problems; 2) formulating problems and suggestions; 3) designing a solution as a shared vision in terms of co-creating; and 4) verifying the solution; including theories, literature reviews, and the concerned information such as secondary data, which will be used as guideline and directions to investigate the next steps.

3.2 Stakeholders Analysis

The reason for selecting the English Program at Montfort College, Secondary Section as a case study of this research is due to various problems from different sources, which have been unable to be solved and, which have accumulated since 2004. The problems do not occur just individual problem (from each staff and administrator), but also, collective individual problems (member of group: Western staff, Eastern staff, and a group of administrative staff). Thus, the problems that

occur at the EP are related to personnel management, which impacts on students and parents' needs and expectation (See Figure 3.2).

The objectives of stakeholder analysis are to study stakeholder's roles and stakeholders' needs as shown in Table 3.2.
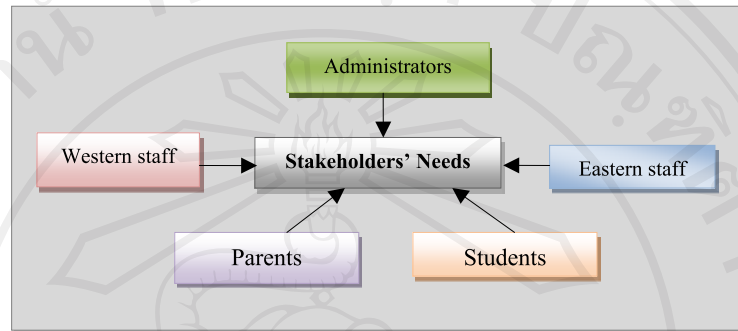

Figure 3.2: Stakeholders' Needs

Stakeholder analysis is one of the techniques that this study will use to identify and assess the importance of key people: Western staff; Eastern staff; administrators; students; and parents that have high influence and importance to the EP's success. The stakeholders may include any person or organization, whose interest may be positively or negatively affected (Riege, & Lindsay, 2006). Thus, the stakeholders are very important to manage the EP.

The analyzed stakeholders will be presented as stakeholders' needs, which are based on the study of secondary data: Respondents at administrative staff's meetings, Minutes of the meetings of various groups of school staff; The EP parents; Petitioning letters of teaching staff; parents; and students.

The researcher will analyze the needs of stakeholders, which are divided into five groups: 1) Western staff; 2) Eastern staff; 3) administrators; 4) parents; and 5) students.

Thus, stakeholder analysis is important for this study because it is relevant to the EP management problem. In addition, it is related to the differences of stakeholders' characteristics, backgrounds based on their education, social and racial origins, financial status, and type of work experiences that cause problems of cross-cultural workforce management as shown in Table 3.2.

Table 3.2: The analyzed stakeholders' needs

Stakeholders/ role's EP staff	Needs	Rationale
-Teaching staff: Western and Eastern staff	- Professional administrators.	-The selected teaching staff as administrators by the directors without qualifying
	- Administrators have knowledge and experiences in administration	-Most of them finish bachelors degree in specific subject
	Administrators are fluently in English communicative skills	- Most administrative staff are not qualified in English teaching as a major subject.
	-Administrators comprehend school's history, culture, regulation and name list of teachers	-Most of them are teaching staff because there is rotation of work at least two years, some positions rotate per year.
	-To be able to answer enquiries and make decisions immediately	-Some administrators cannot answer because most of them are teaching staff who are selected to be as administrators by school directors without qualifying.
	-Administrators facilitate foreign teachers as school's partners	-Never ask or invite foreign teachers to join school' meeting as Thai staff do. So, foreign staff does not know about school's news, particularly propose ideas or give some suggestions.
	-Fair treatment between Western staff and Eastern staff teachers	-There are three different rates of staff' salary: Western staff: native speaking teachers, Eastern staff, and Thai staff.
Parents	-Administrators should examine or follow up teachers' teaching and the used teaching material,	-Some students do not understand teacher's teaching styles
	-Need good manners and behaves, particularly during in	- They cannot control their feelings, when they get angry with one

Cont.) Table 3.2: The analyzed stakeholders' needs

Stakeholders/ role's EP staff	Needs	Rationale
	class teaching.	naughty student. It is unfair for the other students.
	Need teachers use text book for teaching.	Parent spends money to buy an expensive textbook, which is not worth in
	-Need up-date school' information	-Lack of communication between parents and teachers, especially students' activities.
Students	-Need both foreign and teachers integrate content of subject and teaching together.	-There are two teachers teaching together in one subject, but in reality they separate from both preparing content and teaching. This causes students have plenty of assignments.
	-Need Thai teachers facilitate students, while foreign teacher are teaching.	-Some teachers are not together in class teaching. So, weak students still need Thai teachers supporting as facilitators to explain students, when they do not understand.
Administrators	-Need teaching staff's collaboration in school's activities.	-It always occurs that most foreign do not take part school activities.
	-Need foreign teachers behave or do as school regulation or teachers' duty as Thai staff does.	-Most foreign teacher hardly look after students as classroom teacher.
	- Foreign teaching styles should be based on school's curriculum	- Prefer to teach as individual styles based on their countries.
	-Need The EP staff have more interaction with each other, especially, discuss about lesson plan, preparing student's learning activities.	- Some Thai and foreign teachers seldom discuss about teaching, looking after students together.
	-Need the EP staff spend time to look after or facilitate for student 'needs such as homework, students' behavior problems, and soon.	-Some staff do not pay attention to students' behavior problems.

As shown in Table 3.2, different groups have different needs. This may impact on one another's needs. Therefore, stakeholders are relevant to the problems based on their characteristics in a workplace, which are a communication gap among administrators, Western staff, and Eastern staff. The problems of the EP staff are also associated with misunderstanding, different rates of salary between Western and Eastern staff, job duties and responsibilities, extra jobs, management as a hierarchy, job description, and ineffective communication (see Figure 3.3).
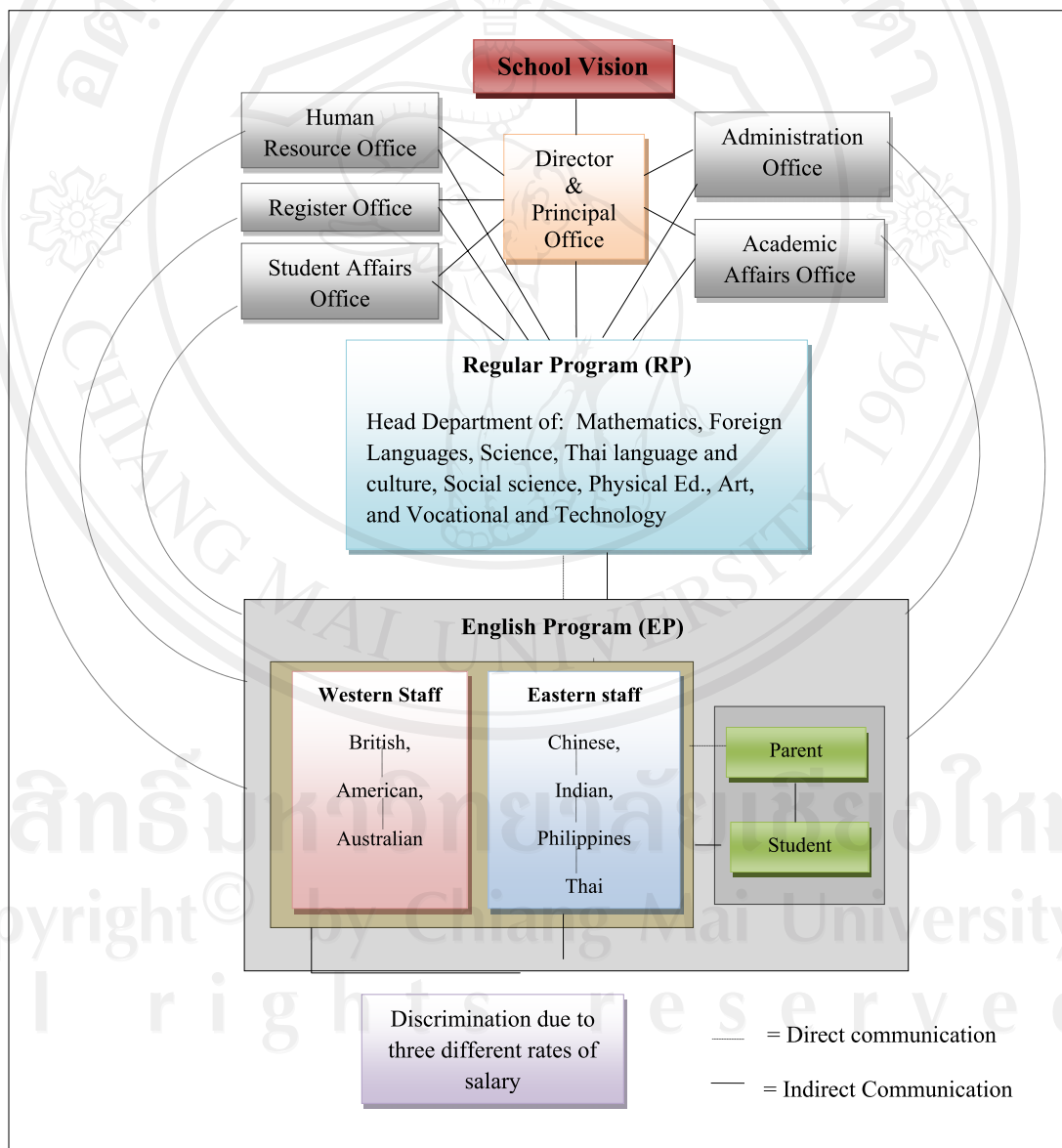

Figure 3.3: The overview of EP management problems

Moreover, these problems are related to a complex organizational structure, which is a mixed structure of the Regular Program (RP) and EP. This means the EP program does not have its own structure, so the EP strategic plans are dependent on the Regular Program. Importantly, the EP does not have *its own vision,* so the staff does not know the EP's strategic plans and directions, which is most important for their mission and the EP's goal.

All problems as exhibit in Table 3.2, 3.3 and Figure 3.3 are the cause of work relationship problems among EP staff, including problems between staff of the RP and EP.

3.3 Initial investigation

The investigation is divided into two steps: *the first step* starts with studying various problems in a real existing situation and environment, which are related to barriers of diverse workforce management of the EP at Montfort College. Then, *the second step* continues the further investigation of the main problems, which are based on the results of the first step by conducting the research at three English Program Schools in Chiang Mai Province.

Thus, the following steps are the designed methods for investigating the key problem of English Program management at Montfort College, Secondary Section, as a case study.

The EP at Montfort College is opened rapidly and with a short-term plan without a professional or consultant in this field. In addition, it was opened simultaneously in four stages: the first stage: Prathom 1-3; the second stage: Prathom 4-6; the third stage: Mattayom 1-3; and the fourth stage: Mattayom 4-6, which are Prathom1, Prathom 4, Mattayom 1, and Mattyom 4. More importantly, the preparation for the program has not been completed, especially in the area of human resources for both teaching and running of the program, including the arrangement in terms of academic fields, particularly the clarification of EP curriculum. Thus, initial investigation starts with studying various problems of the EP in this school.

3.3.1 Plan of how to delineate the EP problems

The method used in this process, the data will be collected at the EP using various qualitative techniques (Creswell, 1988). The researcher starts with studying secondary data, which is collected by attending several meetings of the administrative staff in real situations; analyzing meetings' minutes of various groups of stakeholders such as the teachers, parents and students' delegates; and analyzing petition letters of the teaching staff submitted to the administrators.

Next, primary data *is to search the related barriers of diverse workforce management in the EP management* at the EP at Montfort, Secondary Section as a case study. The study is divided into four tasks, which is the method for specifying the EP's problems as follows:

The first step: To study the barriers of diverse workforce management in the English Program at Montfort College, Secondary Section, as a case study, which is divided into four tasks as follows:

Task 1: Study the secondary data: several meetings of the administrative staff in real situation; analyzing meetings' minutes of various groups of stakeholders such as the teachers, parents and students' delegates.

Task 2: Analyze the secondary data

Task 3: Search the concerned journals and review literature

Task 4: Study methodology: qualitative approach

4.1) Construct interview questions, which are guided by an expertise

4.2) Study techniques and tools: informal interview by using a random non probability technique in the form of accidental sampling.

4.3) Design techniques, population/samples, data collection, data analysis, and expected outputs.

Primary data is collected by conducting the informal interview because it is suitable for conversation between interviewer and interviewee in an informal context in order to obtain various data. In addition, an informal interview can be used for a preliminary investigation in a problem setting (Bell, 1966). The questions are developed based on secondary data, which are validated and reliable as an academic standard. The guideline questions were:

1. As the teaching staff of the EP at this school is comprised of diverse nationalities, what do you think about this?

2. According to the first question, in your opinions what are the problems of the EP management?

The informal interviews were conducted individually with three administrators (2 males and 1 female), four Thai teachers (2 males and 2 females), and eight foreign teachers (5 males and 3 females), who are all EP staff (9 males and 6 females: 15 participants in total). According to the EP management, there has been over 6 leadership member changes of the EP and 9 foreign teaching staff, especially English native-speakers (such as some Canadian, American, Australian, British teachers) resigned or have not had their contracts renewed in the first four years alone. There were new teachers coming year in and year out to replace those who left. Some of them left without mentioning the reason why. Thus, the researcher willed randomly sampling of foreign teaching staff, Thai teaching staff, and the administrators, who played the major roles in the EP; otherwise the data collection was not accurate. The interview data were analyzed and categorized in terms of dimensions as shown in Table 1, 2 (Appendix A).

The second step: This step aimed to further investigate the major problems based on the results from the first step that was conducted during the 14th of December 2006 to the 29th January, 2007 period. The data were collected from three-selected EP schools in Chiang Mai Province with approximately 300 students.

The researcher plans to design for further investigation by dividing into four tasks, which as follows:

Task 1: Study the findings from *step1*

Task 2: Search the relevant related journals and review the literature

Task 3: Explore methodology: qualitative approach

3.1) Construct interview questions, which are proved by an expertise

3.2) Study techniques and tools: data collection via semi-structured questions through both interviews and questionnaires by using purposive samplings.

3.3) Design techniques, population/samples, data collection, data analysis, and expected outputs.

This step was to further investigate the root causes of the barriers based on the results from the first phase (the categorized and prioritized data found that cross-cultural communication is the key barrier of diverse workforce management of the EP). In order to access this information, a semi-structured interviews and questionnaires were used. The data were collected from three selected EP schools in Chiang Mai with approximately 300 students. These schools offer six grade levels from grade 7 to grade 12. The sampling was conducted at an individual level. Using purposive samplings, data were collected from different staff: administrators, Thai teachers and foreign teachers. The samplings comprised of 26 persons (15 male and 11 female). Data were collected by using semi-structured questions through both interviews and questionnaires.

The questions were in regard to the key problems relating to cross-cultural communication. The questions guideline was:

1. As your organization is comprised of different nationalities and diverse cultures of staff, what do you see the problems of English Program management to be?

2. According to the open-ended questions form; please tell or write the problematic issues regarding the interaction among the EP staff. Please provide examples related to the problem raised.

Next, the interview and questionnaire data were transcribed, analyzed and categorized using content analysis. The analysis of content is supported by categorizing thematic patterns emerging in joint problem solving (Kaartinen & Kumpulainen, 2002) as show in Table 3, 4 (Appendix A).

The first step and the second step was the initial investigation (Kongtawelert *et. al.,* (2008), which was published in The International Journal of Knowledge, culture & change management, vol. 8, number 8, was about "Related barriers of diverse workforce management in English Program schools."

The following is the qualifying samples for research experiment: Phase 1, confirming cross-cultural communication; Phase 2, formulating problems and suggestions; Phase 3, designing a solution; and Phase 4, verifying the solution.

3.4 Qualifying Samples

      The research objectives and the characteristics population/samples (such as size and diversity) will be determined, which and how many people to select. The research, population/sampling group as qualitative approach will be people with similar experiences of career, context, or organization if possible, job duties and responsibility so that they can express ideas, or give data accurately and also feel comfortable talking with one another.

      This research is a qualitative case study, which is concerned with diverse workforce of staff: Western staff; Eastern staff; and administrators. So, the study will collect data by utilizing both population and sampling groups that it depends on each method and the objective of each phase as follows:

      Phase 1: *Confirming cross-cultural communication problem* will use in-depth interviews as a technique for specifying and indentifying problems. It can obtain detailed information about persons' thinking and behaviors, also explores new issues in depth. In addition, it is often used to provide context to other data (such as outcome data), offering a more complete picture of existing program. This phase will collect the data from all the EP staffs with total of 25 participants. The population is comprised of: Western staff: 2 British, 2 Americans, 1 Australian; Eastern staff: 1 Chinese, 1 Indian, 6 Philippines and 7 Thai; and 5 administrative staffs: Head of the EP, Head of Academic Affairs, Head of Students Affairs, Assistant of Head Academe Affairs, and Assistant Head of Students Affairs, who all are participants for investigating the root cause problems of this study.

      Phase 2: *Formulating problems and suggestions* is to be clear, concise, complete and agreeable to analysis; turn out to a very complex task, to express the ideas and suggestions concerning problems among individualist and collectivist staff; and administrative staff based on the specified and identified problem (Phase 1). Thus, this phase will use focus group interviews as a tool for data collection, and select purposive sampling as samples for investigation. The reason for utilizing purposive sampling is this case study; the researcher selects the representative of each nationality as a purposive sample, with 7 participants, including 5 administrators, which is matched focus group interview's method. In addition, the selected participants are considered that have a lot of experience and

insights into the research topic, know about the EP's problems in depth, and have sense of belonging to the organization. They also have a lot of enthusiasm for particular concern in the EP problems and the willingness to brave unpleasant or conditions.

The participants' characteristics for which purposive sample is generally used in case study research explain the sampling procedures and case selection, and the defining characteristics and typicality of the case, such as a critical case, a convenience case, a politically significant case, and so on (Creswell, 1998).

Phase 3: *Designing a solution as co-creating based on building shared vision* is to create a coherent strategy as collaboration. The framework of this phase for supporting the solution is building shared vision: co-creating (Senge *et al.,* 2004). This phase will start with studying **system requirements**, which are required for operating the system. This is related to the required viewpoints of building shared vision as co-creating type, which explains about steps of operation

Step 1: Create a personal vision from all staff; this will use the entire population for data collection.

Step 2: Build collective visions from each group nationality of staff; this will use the entire population. This means each nationality of staff will work together in groups.

Step 3: Create organization vision from a representative of each group nationality of staff; this will use purposive sampling (the same participant of phase 2: formulating problems and suggestions) as a focus group discussion. This phase represents that the participants will work together as an inter-group.

Phase 4: *Verifying the solution*: is to test the analyzed organization vision in terms of issues as topics. Then, each topic based on the organization vision statement, which is the system requirements in terms of shared vision process: practical, principle and essences level as the core level of disciplines will be validated (Senge *et.al.,* 1994) by the conceptual design. **Conceptual design** represents the characteristic of KM, which aims to design the detailed process of solution. It also involves system requirements, which are used for verifying the solution. KM tools and techniques of this phase are focused on the core of the

CommonKADS knowledge engineering methodology: OM-1, OM-5, OTAM-1 worksheets to justify the designed solution phase (Schreiber *et. al.,* 2000).

Solutions will be confirmed by group administrators because they are all in the EP management. Knowledge Management as CommonKADS methodology: OM-1, OM-5 and OATM-1 worksheet as questionnaires and open-ended question will be utilized to evaluate the topics and issues of statement of the EP vision for searching organizational vision feasibility and management.

The above are all the reason why the qualifying sampling in this study will be planned to select as the sample population for this research investigation.

3.5 Research Design

A case study of the EP is one in which the researcher explores in depth a program, an event, an activity, a process or one or more individual staff. To complete the research, the author divides this study into 7 parts: 1) design a case study model; 2) proposition of research structure; 3) method design; 4); data collection and data analysis 5) research experiment; 6) result and analysis, discussion and conclusions; and 7) quality control.
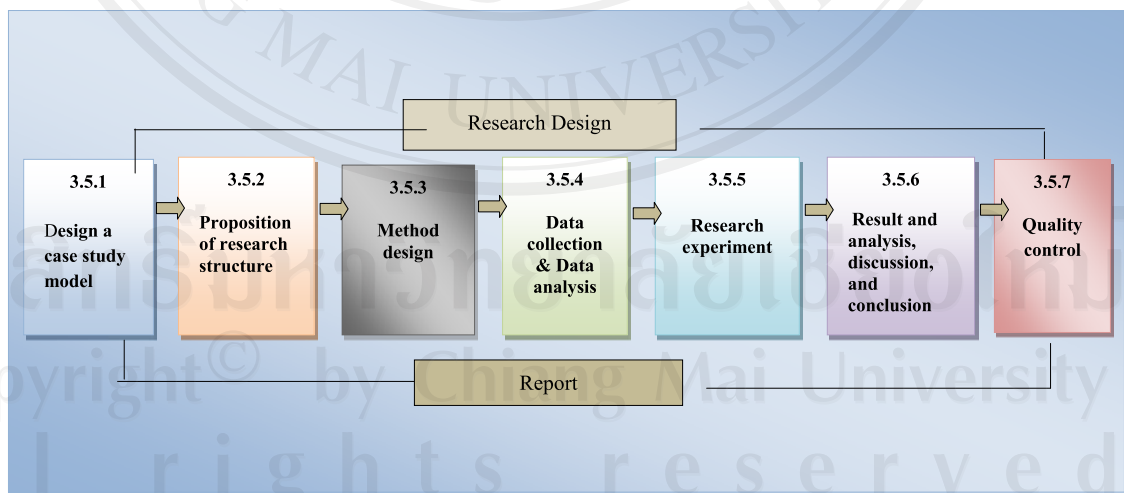

Figure 3.4: Research design of the EP as a case study

3.5.1 Design a case study model

Having emphasized the problems, the author studies then theories of methodology and performs literature reviews, and then searches for appropriate techniques, tools, and methods for the investigation. As the explored methodology, the significance of a qualitative approach is based on the advantages that it is exploratory and is useful when the researcher does not know the important variables to examine (Creswell, 1998). It is also a methodology that provides tools for researcher to study unclear boundaries between contexts and complex phenomena (Creswell, 1998). From the studied theories and literature reviews, the principle of qualitative case study by Creswell is suitable for the EP's problems. It is an approach to research that facilitates exploration of phenomena using a variety of data sources (Baxter & Jack, 2008). Thus, the author focuses on qualitative case study and applies this concept of the research as single case study.

This case study is designed for setting concepts or specialized contexts concerning a phenomenon. It supports the conducted research in such a way of this case study that it will discover the solution. In addition, it not only contributes to developing valid and reliable general knowledge, but also solves specific problems.

For solving unsatisfactory events, this research will utilize a qualitative case study. The principle of qualitative case study as a research design is "1) *Entry vignette* (a short description of acting which expresses very clear and neatly the typical characteristics of the thing that it represents) 2) *Description of the case and its context* 3) *Introduction* (problems, questions, case study, data collection, analysis, outcomes 4) *Development of issues* 5) *Details about selected issues* 6) *Assertions* (a fact or belief) 7) *Closing vignette*" (Creswell, 1998, p. 65, 67).

The following is a case study model of the EP based on Creswell's theory. This model is exhibited step by step for the EP (see Table 3.3).

Table 3.3: A case study model of the EP (Creswell, 1998)

Qualitative case study Theory (Creswell, 1998)		A case study model of the EP	
A case study model	Concept	The EP model	Concept
1) Entry vignette	- A short description of acting which expresses very clear and neatly the typical	1) About EP at Montfort College, Secondary, Chiang Mai Province: Research project	-Study history of organization, general events, various problems in a real situation
2) Description of the case and its context	-Characteristics of the thing that it represents. -Information of case study and its context: multiple sources, including documents, archival records, interviews, observation.	2) Study and plan how to investigate: a case study based on information of step 1	-A case study - Secondary data: Information of case study and its context: multiple sources, including documents, archival records, interviews, observation
3) Introduction	-Problems, questions, case study, data collection, analysis, outcomes	3) –Initial investigation - Initial findings (see Appendix A)	-Informal interview, semi-structure interview data collection, analysis, Outcomes: Variety of problems, main problems, and sub-issues of main problems
4) Development of issues	Research findings: -Theme	4) Research findings: *Phase 1: Confirming problem:* -Individualism vs. collectivism	Research methodology: -In-depth interview Research findings -Specify and identify problem/Root cause of problem
		Phase 2: Formulating suggestion: -The applied type of *ba* -Individualism vs. collectivism.	Research methodology: -Focus group interview Research Findings: -Issues: suggestions and problems
		Phase 3: Designing a solution phase: **System requirements**: shared	Research methodology: -Focus group discussion -Brainstorming Research Findings:

(Cont.) Table 3.3: A case study model of the EP (Creswell, 1998)

Qualitative case study Theory (Creswell, 1988)		A case study model of the EP	
A case study model	Concept	The EP model	Concept
		vision process in term of co-creating: practice level, principle level, and essences level	-Personal vision -Team vision -Inter-team vision -The refined statement of EP vision
5)Assertions (a fact or belief)"	-Confirmation	*Phase 4: Verifying solution:* **Conceptual design:** KM tools and Techniques to test the solution - OM-1: problem & opportunities - OM-5: possibility - OTAM-1: impact & usage	Conceptual design: CommonKADS methodology: OM-1, OM-5, OTAM-1 will be tested the refined statement of the EP vision in terms of system requirements 1) Practice level 2) Principle level 3) Essences level
6) Closing vignette	-Summary	5) Conclusion	-Novelty -Research limitation
	-Report	6) Report	- Generalization

3.5.2. Proposition of research structure

The aim of this research is to develop and test a solution for managing cross-cultural workforce relationship in the EP at this school. In order to meet the research objectives, answer the research questions, and obtain the essence of the applied qualitative case study for the EP, the research structure consisted of study will divide the core research into four phases:1) Confirming cross-cultural communication phase, which is based on initial investigation (preliminary study); 2) Formulating problems and suggestion phase, 3) Design a solution phase; and 4) Verifying the solution phase, which are based (Creswell, 1998) as shown in Figure 3.5.

An overview of the structure of EP as a qualitative case study is shown in Chapter 1, Table 3.4, and Figure 3.5.

3.5.3 Method design

To improve the EP management, this research will be designed to solve the key problems and validate the solution. To complete the investigation, this study will further be divided into four phases: 1) confirming cross-cultural communication problem; 2) formulating problems and suggestions; 3) designing a solution: shared vision in terms of co-creating; and 4) verifying the solution as the following:

3.5.3.1 Phase1: Confirming cross-cultural communication problem: This is to confirm the problems of the EP management by using in-depth interview as knowledge capture. The data will be collected from all the EP staff as population with 25 participants. It will identify the root cause of problems considered in this study.

3.5.3.2 Phase2: Formulating problems and suggestions: This is to explore the implementation, which will begin with the results of the confirming the problem phase. The study uses the applied originating *ba* and dialoguing *ba* to create a positive work environment. This phase is provided with data collection that illustrates a design suitable the use of KM tools and techniques for the effective management in terms of problems and suggestions, which uses focus group interviews for explicit knowledge of Western staff; Eastern staff, and administrator based on their knowledge and experiences.

3.5.3.3 Phase3: Designing a solution by building shared vision: co-creating theory based on the research questions and the problems and suggestions obtained by the shared ideas, knowledge, and experience of the Western staff, Eastern staff, and administrative staff. The solution will begin with a personal vision and move step by step as co-creating theory (Senge *et al.,* 2004). The findings will be based on: 1) data collection and data analysis will be aimed toward a personal vision statement; 2) collective vision statement, and 3) organization vision statement. The organization vision statement will be refined and integrated by brainstorming of mutual agreement in terms of focus group discussion with nine participants, which are the representatives of seven– nationality of teaching staff and two administrators. Then the refined vision statement will be rechecked by the provided format as agree
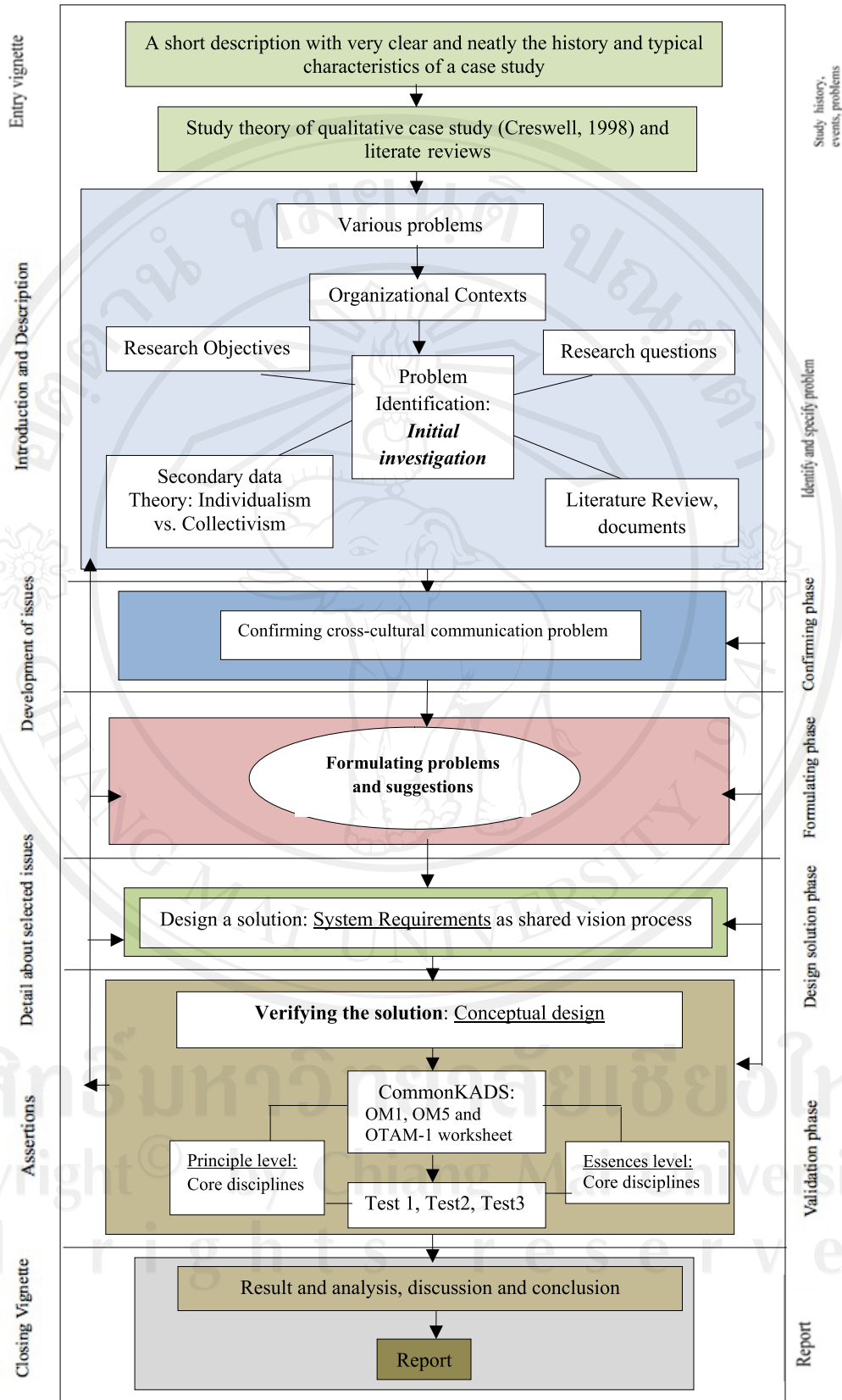
Figure 3.5: Research structure in form of a case study

or disagree column and give some suggestions made by all the members of the EP. Further, the researcher will make appointments with all EP staff for collecting data. Finally, the researcher will analyze the EP statement in terms of topic and issues for testing, which will be conducted on phase 4.

3.5.3.4 Phase 4: Verifying the solution: This is to illustrate how to test the analyzed organization vision statement in terms of topics. This phase will design the tested EP vision statement by applying CommonKADS, which is a knowledge engineering methodology. It can prove the EP vision statement that can be operated in reality in terms of principle level or essences level as the core discipline. The verification will use OM-1, OM-5 and OTAM-1 worksheets as questionnaires and open-ended questions based on CommonKADS methodology. This tool will be used to confirm administrative staff's ideas that organization vision statement can be operated as the feasibility EP vision as shown in Figure 3.6.

3.5.4 Data collection & data analysis

According to this research, it is utilized a qualitative approach as a case study (Creswell, 1998), which is a typical methods that produce a lot of detailed data about a small number of this case study, and provide a depth of detail through direct quotation, precise description of situation and observation. This study attempts to depict the fullness of experience in a meaning of comprehensive way. Qualitative methods for data collection typically include non participant observation, in-depth interviews, focus group, and questionnaire with open-ended and, qualitative content analysis of documents has been acknowledged widely among the world of academic (Denzin & Lincoln, 2000).

3.5.4.1 Data collection

Interview questions have been developed based on each phase of research investigation:

Phase 1: *Confirming phase*. The purpose of this phase is to confirm cross-cultural communication problem. The study will use in-depth interview, which is a method for structuring an interview and collecting data from all the EP staff with 25 participants as population. This phase selects in-depth interview as a technique. It is one-to-one research technique in which a respondent answers a researcher question
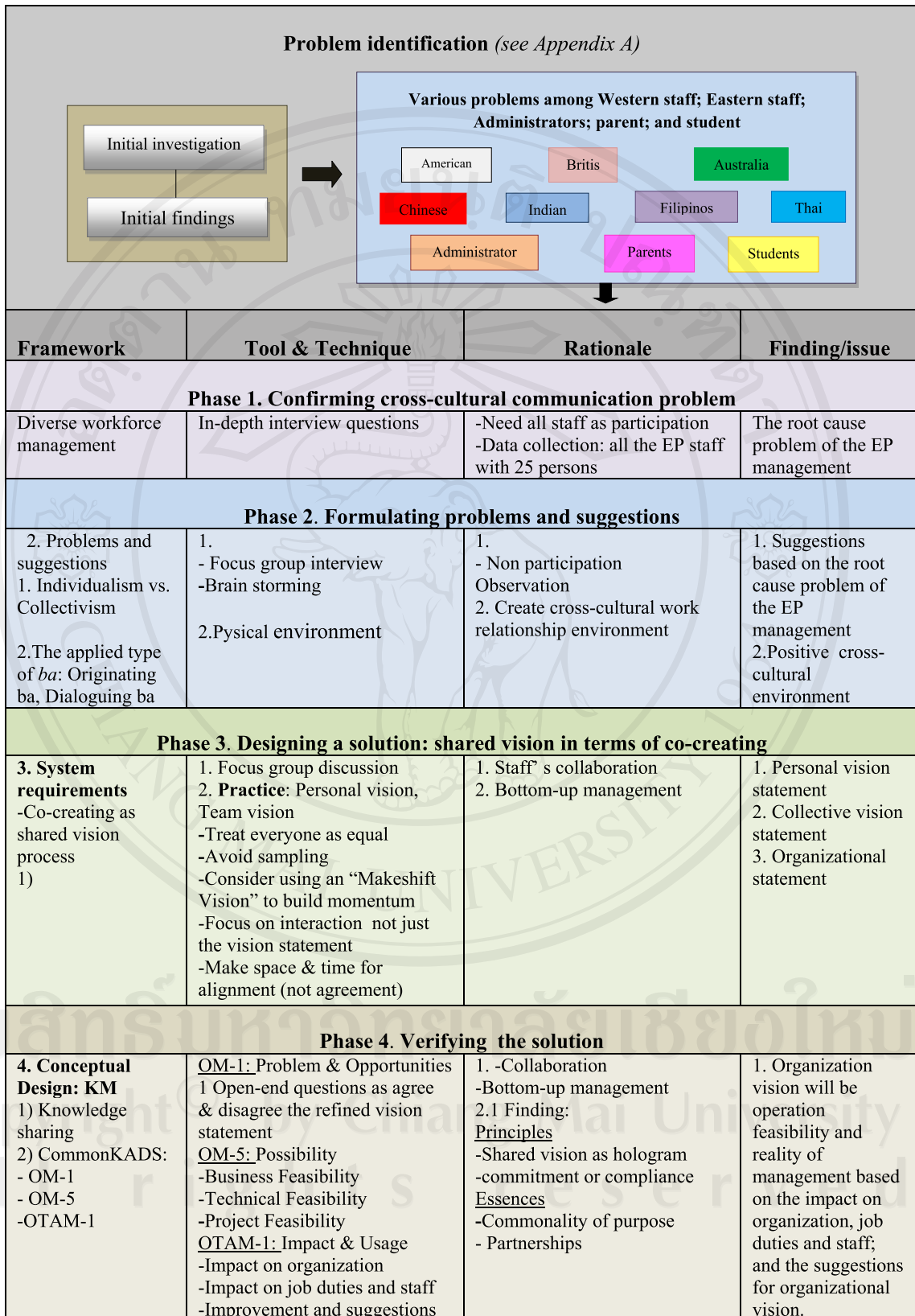
Problem identification *(see Appendix A)*

Initial investigation

Initial findings

Various problems among Western staff; Eastern staff; Administrators; parent; and student

American | Britis | Australia
Chinese | Indian | Filipinos | Thai
Administrator | Parents | Students

Framework	Tool & Technique	Rationale	Finding/issue
Phase 1. Confirming cross-cultural communication problem			
Diverse workforce management	In-depth interview questions	-Need all staff as participation -Data collection: all the EP staff with 25 persons	The root cause problem of the EP management
Phase 2. Formulating problems and suggestions			
2. Problems and suggestions 1. Individualism vs. Collectivism 2.The applied type of *ba*: Originating ba, Dialoguing ba	1. - Focus group interview -Brain storming 2.Pysical environment	1. - Non participation Observation 2. Create cross-cultural work relationship environment	1. Suggestions based on the root cause problem of the EP management 2.Positive cross-cultural environment
Phase 3. Designing a solution: shared vision in terms of co-creating			
3. System requirements -Co-creating as shared vision process 1)	1. Focus group discussion 2. **Practice**: Personal vision, Team vision -Treat everyone as equal -Avoid sampling -Consider using an "Makeshift Vision" to build momentum -Focus on interaction not just the vision statement -Make space & time for alignment (not agreement)	1. Staff' s collaboration 2. Bottom-up management	1. Personal vision statement 2. Collective vision statement 3. Organizational statement
Phase 4. Verifying the solution			
4. Conceptual Design: KM 1) Knowledge sharing 2) CommonKADS: - OM-1 - OM-5 -OTAM-1	OM-1: Problem & Opportunities 1 Open-end questions as agree & disagree the refined vision statement OM-5: Possibility -Business Feasibility -Technical Feasibility -Project Feasibility OTAM-1: Impact & Usage -Impact on organization -Impact on job duties and staff -Improvement and suggestions	1. -Collaboration -Bottom-up management 2.1 Finding: Principles -Shared vision as hologram -commitment or compliance Essences -Commonality of purpose - Partnerships	1. Organization vision will be operation feasibility and reality of management based on the impact on organization, job duties and staff; and the suggestions for organizational vision.

Figure 3.6: Methods design based on a case study

(Powell & Single, 1996). So, in-depth interview appropriates in confirming for a key problem in terms of cross-cultural communication because it involves conducting intensive individual interviews with a small number of respondents to explore their perspectives on particular ideas in the EP's situation problems. These techniques are also useful for collecting detailed information about a person's thoughts and behaviors or want to explore new issues in depth (Boyce & Neale, 2006).

Phase 2: *Formulating suggestion.* The purpose of this phase is to formulate ideas when representative staff interact and express their opinions based on the root causes of problems (Confirming phase). Therefore, the study will use focus group interviews because it is a technique for exploring what individuals believe or feel as well as why they behave in the way they do. It also provides information about a range of ideas and feelings that individuals have about certain issues, as well as illuminating differences in perspective between groups of individuals (Rabiee, 2004). In addition, this phase needs to receive high quality data in a social context where a group of representative Western and Eastern staff and a group of administrators as purposive sampling. They can consider their own views in the context of views of others. Importantly, focus group interviews are done with a small group on a specific topic and also support very specific ideas of the representative staff regarding useful and trustworthy data collection.

Focus groups, together with the other qualitative methods, however, provide researchers with additional means of acquiring rich, experiential feedback from service users. Moreover, the supportive, congenial, non-judge mental setting offered by the focus group enhances the likelihood of collecting the diverse and spontaneous opinions that elude the in-depth interview and the nominal group technique. The focus group interview is also conducted with different 'participants, so theme and patterns in perceptions can be identified (Powell & Single, 1996).

Phase 3: D*esign solution phase: building shared vision in terms of co-creating.* The purposes of this phase are to obtain staff's ideas for building the EP for future. Thus, this phase will use focus on group discussion to explore opinions, knowledge, experience, and perception of 9 participants as representative staff concerning the EP vision. The main characteristic of a focus group discussion is the interaction between the moderator and the group, as well as the interaction between

group participants. It is conducted using a discussion guide, which allows for consistency in data collection. It is employed by a moderator conduct about 60 to 90 minutes of discussion on the topic to be explored. The role of the moderator is to keep the discussion within designed specification without making an effort a strong influence on the discussion content (Wong, 2008).

The probing questions in the discussion guide will proceed logically from one topic to another, and flow from the general to the specific. In a particular topic of discussion, the initial question is based on *the results of designing a solution phase*. Then discussion continues, and the questions will become more specific and focused. The focus group will allow as comfortable atmosphere and flexibility to pursue issues that may be generated during the discussion.

Phase 4: *Verifying solution phase.* The purpose of this phase is to test the completed version of the EP vision as the refined statement, which is analyzed in the form of topics. This phase will use questionnaires as open-ended questions in terms of the CommonKADS methodology: OM-1, OM-5 and OTAM-1 worksheets to collect data from 5 administrators for testing the EP vision. The CommonKADS methodology is selected because the idea underlying the CommonKADS organization model is to take the relevant elements and experience from various sources - including organization theory, business process analysis, information management - and to integrate them into a coherent and comprehensive piece targeted at knowledge orientation in the organization. Importantly, it strongly supports the analyzing of organization requirements and knowledge modeling, especially is utilized for content analysis (Schreibe *et. al.,* 2000). The analyzed worksheets are shown in Appendix C.

3.5.4.2 Data analysis

According to research investigation, the collected data will be obtained from participants of three phases: Phase 1: Confirming problem uses *in-depth interview* technique; Phase 2: Formulating problem utilizes *focus group interview*, which will be recorded by digital record and video recorder; Phase 3: Designing a solution uses *focus group* discussion technique; and Phase 4: Verifying the solution use the CommonKADs methodology in form of open-ended questions. Then, the obtained

data from individual interviews as in-depth interviews, focus group interview, focus group discussion, and open-ended questions will be transcribed. Finally, relevant fragment of the transcripts, which match the research's questions and content are translated for further analysis.

Analysis is the process of arranging, classifying, and grouping data in order to use as subordinate units of meaning in primary analysis and defining. Once these sub-units have been processed through classifying and grouping, the outcome will be clusters of meanings with which the researcher can explore their relationship and relevancy. From the interaction within clusters of meanings, which is normally the result from the interpretation stage in the inductive approach, the explanation of incidents and the answer from the study can be revealed.

Content analysis is a technique for dealing with objective, systematic interpretation of the manifest content of opinions or communication. It also identifies special characteristics of messages, which is selected for this study (Graneheim &Lundman, 2003). Content analysis is suitable for obtaining results from in-depth interview analysis, focus group interviews, focus group discussion, and open-ended questions. It is a research tool used to determine the presence of certain words or concepts within texts. Data are distributed into frequency counts, for example commonly used words and phrases, putting together of similar ideas and arranging certain responses into specific categories. In addition, the frequency counts will be presented as numbers and percentages that can be applied for the result in the same way as conventional analysis (Berg, 2004).

Coding data and indexing categories is the process of generating concepts or significant content by categorizing, such as labeling and filing, data. This stage provides convenience in searching, grouping, relating, and interpreting data into information. Therefore, coding and indexing is the first stage of a management information system (Denzin &Lincoln, 2000).

3.5.5 Research experiment

The research experiment is directly connected to the problem of the EP, research objectives and research questions. It is consisted of the design of the main components: 1) Confirming cross-cultural communication problem with the applied

type of *ba*: Originating <u>*ba*</u> and Dialoging *ba* as cross-cultural environment, knowledge sharing; 2) Formulating problems and suggestions; 3) Designing a solution: building shared vision by selecting co-creating mode in terms of system requirements; and 4) Verifying the solution in terms of conceptual design.

3.5.5.1 Confirming cross-cultural communication problems

This phase will begin with studying information take from the English Program at Montfort College Secondary Section (a case study), including the information from Office of Education Council, Ministry of Education Kingdom of Thailand, Office of the Basic Education Commission, Chiang Mai Educational Office Area 1. In addition, the problems are concerned with the EP staff: Western staff; Eastern staff, and administrators, so individualism vs. collectivism theory (Hofstede, 2001), as well as, the review of literatures in terms of diverse workforce management is required for this phase.

3.5.5.2 Formulating problems and suggestions

The purpose of this phase is to formulate problems and suggestions based on the findings of confirming cross-cultural communication problem and research questions. It also focuses on the created cross-cultural environment in the workplace of the EP at Montfort College. Thus, the researcher will apply KM tool and technique for positive and effective environment by the applied originating *ba and* dialoguing *ba* SECI, *Ba* leadership: a Unified Model of Dynamic Knowledge Creation (Nonaka *et. al.,* 2000).This phase also addressed on management of individualist and collectivist in terms of relationships (Hofstede, 2001).

This study will use purposive sampling because the selected participants are familiar with the EP and realize the EP's problems. In addition, their characteristics include the courage to express their opinions. Many have already expressed complaints of the EP management. However, the sampling of this study is limited because nine foreign teachers have been replaced and six Head of the EP have rotated in the first four years. Purposive sampling is often employed as strategy to enhance understandings of selected individuals or groups' experience(s) for developing concepts. Therefore, a purposive sampling technique will be used to select the participants in this study.

This phase will be conducted during [...]

December, 2008 period. The investigation is cons[...]

Task 1, setting purposive samplings, which is s[...]

group of teaching staff and the other is a group of adm[...]

group is consisted of Western staff: British, American, Austra[...]

Chinese, Indian, Filipino, and Thai, who are the representative of s[...]

In order to obtain unbiased data, this group will be facilitated by an Ita[...]

who has no concern with the EP. *The second group* is the administrators, wh[...]

associated with the EP one way or another; they are the Head of the EP departm[...]

the Head of Academic Affairs, the Assistant Head of Academic Affairs, and two[...]
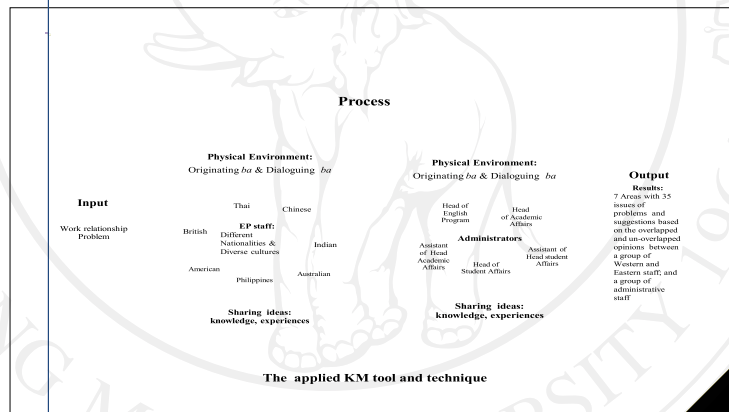
Assistant Heads of Student Affairs.

Figure 3.7: The implementation of confirming cross-cult[...]

The latter group will be run by the resea[...]

position as administrators.

Task 2, the researcher creates a rel[...]

first meeting of representative of Wes[...]

The originating *ba* is applied in t[...]

where the diverse cultur[...]

dels, and so o[...]

a 1: G[...]

introduce the objectives of the focus group interview.

Agenda 2: The facilitator will sympathize about the EP problems as the results of the indentifying phase and share feelings, emotions and mental models, which are related to the sense of belonging to the EP.

Task 3, the researcher creates focus group interviews to capture knowledge from the participants of each group. Then, she allows them to express their ideas, experiences, and knowledge as to suggestions based on the root causes of fundamental problem. Thus suggestions and problems in common are categorized into groups of main concept. The dialoguing *ba* will be applied in this step, *via* face to face conversation. A role of facilitator will pave the way as follows:

Agenda 1: Stimulate them to realize the EP's problems.

Agenda 2: Encourage them to give suggestions together; meanwhile, make them feel full of ideas and enthusiasm.

Agenda 3: Control a situation by using the guideline questions

Agenda 4: The dialoguing *ba* will be run as informal face-to face interaction of participants in terms of discussion and brainstorms to share problems and suggestions for developing the EP management as shown in Figure 3.7.

In this process, all data will be collected by using video record. The content analysis and the thematic extraction are used to analyze the transcripts, relating the data from two non participations' observations. These qualitative methods provide an identification of key different cultures of Western staff; Eastern staff; and administrative staff. The content analysis, thematic extraction, and comparison analysis of these participants' problems and suggestions are analyzed, categorized, and prioritized for design a solution in the next step.

3.5.5.3 Designing a solution

In this phase, the researcher plans to design solutions based confirming the problem (Phase 2), which is *"need to build shared vision"* by using knowledge: building shared vision (Senge *et al*., 1994). It is also investigated for answering the research question: *How is the EP vision developed? What is the type of shared vision technique for effectively managing work relationships in a cross-cultural environment?*

The following illustrates how the researcher creates and implements the designed solution. In this phase, the researcher investigates by designing a solution: 1) system requirements; 2) conceptual design as follows:

3.5.5.3.1 System requirements

System requirements are related to building shared vision theory in terms of co-creating. To obtain an organizational vision, steps of operation play a key role in showing the ways that things should be. The steps of operation are co-creating (Senge *et al.*, 1994), as the shared vision process is integrated with new skills and capabilities of the diverse members' visions in order to create the EP vision for solving the EP's management problems. System requirements begin with building mutual learning and understanding by all members of the organization. Thus, they are also able to apply the shared vision as an organizational vision for their own jobs in which the shared vision makes it possible to help every member of the organization build on the organization's success.

The system requirements based on the applied concept of co-creating for developing the EP vision, consist of three levels as follows: 1) Practice level: personal vision and team vision; 2) Principle level: inter-team vision; 3) Essences level: the completed EP vision for use in a real situation. The researcher focuses on building shared vision theory in terms of co-creating (Senge *et al.*, 1994), which is integrated with three distinct levels: "*Practice*: what you do; *Principle*: guide ideas and insights; *Essences*: state of being of those with high levels of mastery in the discipline" (Senge, 1995, p. 373).

Before implementing, the researcher also designed a plan, which was used for the investigation as a guideline, by Firstly: *design articulation of personal vision*, and the activity was handed out the format to the EP staff for writing his vision (Western and Eastern staff and all administrators who are concerned with the EP). Secondly: *evolving from the completed hand out format in terms of shared organization vision* and the activity is integrated the shared vision ideas of each group. Thirdly: *gaining a mutual understanding of current realities* and the activity was representative of each nationality and administrator who presents his vision

ideas. <u>Fourthly</u>**:** *brainstorming by mutual agreement based on the proposed vision of teaching staff and administrators.*

After setting the completed plan, the researcher will implement the system requirements by running the process for building shared vision: co-creating. Therefore, the co-creating is the suitable mode for designing a solution as the EP vision based on the research questions, because 1) it is able to evoke and allow a personal response to a creative orientation; 2) it is able to build a culture of leadership at all levels; 3) it is able to mobilize everyone; and 4) it is able to open multiple interdependent visions (Senge *et al.*, 1994).

3.5.5.4 Verifying the solution

The purpose of this phase is to validate the completed EP vision based on system requirements. In this phase, the researcher creates *conceptual design* by the utilized KM tools and techniques.

3.5.5.4.1 Conceptual design

The conceptual design is related to reality and validity for confirming design the solution in terms of co-creating as shared vision process by the used CommonKADS methodology: OM-1, OM-5, and OTAM-1 worksheets.

To obtain validity and reliability, the study will use the CommonKADS methodology: OM-1 for problems and opportunities in terms of the shared vision process: personal vision, team vision, and inter-team vision, which are validated by all the staff to recheck as agree or disagree with the EP statement. To gain the feasibility of the completed EP vision in terms of principle level, the inter-team vision statement (the analyzed topics) is verified by the OM-5 worksheet. Then, the EP vision in terms of principle levels is also validated by OTAM-1 worksheet for gaining the finalized analysis as the completed EP vision statement. This shared vision process exhibits a direction, which assists to hold the EP staff together to obtain the completed EP vision as the essences level.

This *conceptual design* consists of three steps: the first step is *Test 1*: OM-1, the second step is *Test2:* OM-5 and the third step is *Test 3*: OTAM-1 is shown in Figure 3.8.

First step: <u>Test 1</u>: Shared vision processes of personal vision, team vision, and inter-team vision will be recorded using OM-1 for problems and opportunities, which are then validated by all the staffs to recheck as agree or disagree with the EP statement. This step will be analyzed by utilizing frequencies and percentages. After that the EP vision from the first step will be the refined vision statement, which is investigated in the second step.

Second step: <u>Test 2</u>: This step will apply knowledge engineering, the CommonKADS methodology, to provide the knowledge elicitation based on the EP vision. The reason for the applied CommonKADS is its offering of tools to cater to this need. These tools for organization and task analysis achieve several important goals, which *decide about solutions and their feasibility*:

1) Carry out a feasibility study by using worksheet OM-5, focusing on feasibility in terms of business, technique, and project (Schreiber *et. al.,* 2000). It is important to give consensus to the knowledge project between the knowledge engineer, managers/administrators, and experts. The applied product from the CommonKADS in terms of worksheet OM-5 is the main proposed conclusions and decisions (Schreiber *et al.,* 2000) as follows:

- **Business Feasibility:** Problems and opportunities in the business view
- **Technical Feasibility** Problems and opportunities in the technical view
- **Project Feasibility:** Problems and opportunities in the project view
- **Proposed Actions:** Expected results

In order to verify the EP vision based on *step 1*, the vision will be examined by using worksheet OM-1 for practice level. Thus, the worksheet OM-1 will be integrated and implemented to verify the EP vision in terms of agreeing or disagreeing with the EP vision statement. Then, the results from OM-1 (test 1) will be further validated by the OM-5 worksheet as follows:

Firstly, the researcher plans to analyze the completed vision statement based on Test 1 in the form of key concepts as topics.

Secondary, the researcher plans to apply CommonKADS by using the OM-5 worksheet.

Thirdly, the researcher plans to capture knowledge by using the worksheet of OM-5 as open-ended questionnaires from five administrators

The third step: <u>Test 3:</u> The research plans to conduct this step in order to test the completed vision that enables the EP to implement at level of essences mode for commonality of purpose or partnerships in a real situation. Test 3 will be carried out as an impact and improvements study for the selected target solution by using worksheet OTAM-1, which focus on impact on the organization, task and staff-specific impact, and improvements and suggestions.

- **Impact in organization:** Structure, business process, staff, budget, knowledge and information technology, culture and power.

- **Task and staff-specific impact:** Changes in task processes, task condition, task quality, task competences, staffing, position and responsibility of staff, knowledge and competences, and communication.

- **Improvements and suggestions:** Capability in change management, support in task, knowledge and information technology, capability in developing tasks in the future, budget reduction, time reduction, more benefits, opportunity to change administrators' minds.

Thus, the OTAM-1 worksheet will be integrated and implemented to verify the EP vision.

Firstly, the researcher plans to analyze the completed vision statement in terms of key issues as topics based on Test 1.

Secondary, the researcher plans to apply the CommonKADS by using OTAM-1 worksheet.

Thirdly, the researcher plans to capture knowledge by using the worksheet of OTAM-1 as open-ended questionnaires from five administrators.

In this phase the sample group of administrators is used: Head of Academic Affairs department, Head of the EP department, Head of students Affairs department, Assistant Head of Academic Affairs department, and Assistant Head of Students Affairs department because they are all the same person in developing phase as focus group interview. In addition, they are experts on the EP management and know very well the history and situation of the EP. Thus, EP vision will be validated as the conceptual design by conducting a step by step process as shown in Figure 3.8.
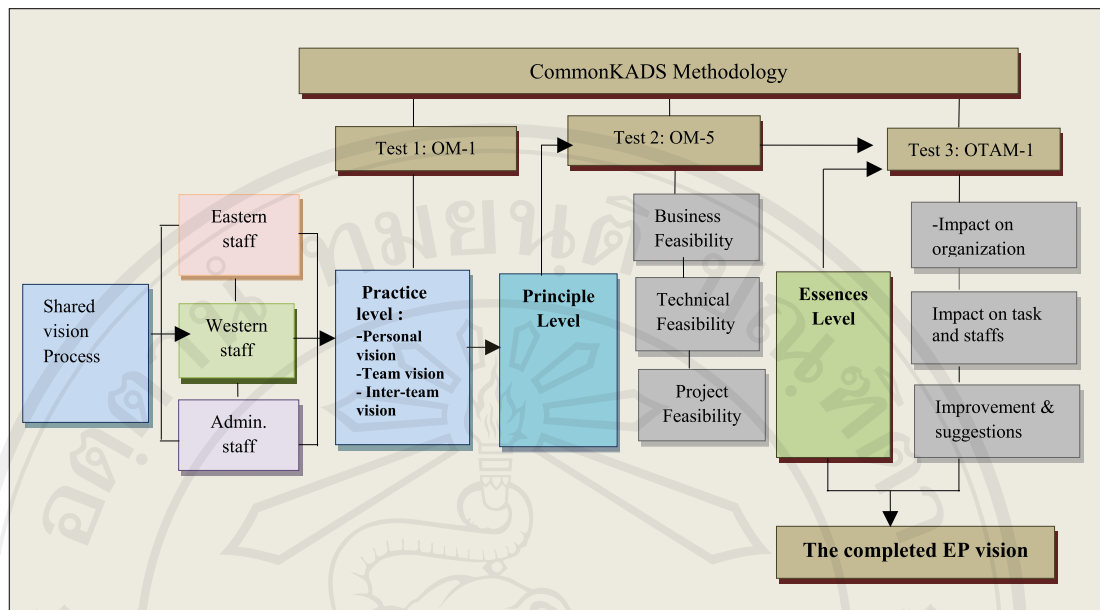
Figure 3.8: Conceptual design: CommonKADS; OM-1, OM-5, OTAM-1

The following are worksheets of OM-5 and OTAM-1:

-Table 3.4: No. 1 Worksheet OM-5 Business Feasibility: Valuation of Money

-Table 3.5: No. 2 Worksheet OM-5 Technical Feasibility: Not too difficult to operate

-Table 3.6: No. 3: Worksheet OM-5 Project Feasibility

-Table 3.7: No. 4 Worksheet OTAM-1: Impact on the organization

-Table 3.8: No. 5 Worksheet OTAM-1: Impact on work load and worker

-Table 3.9: No.6: Worksheet OTAM-1 Improvement and Suggestions

Table 3.4: No. 1 Worksheet OM-5 Business Feasibility: Valuation of Money

investment (ลงทุนได้ผลตอบแทนคุ้ม)

Knowledge topic _____

ความคุ้มค่าทางธุรกิจในการจัดการความรู้ **Valuable of Knowledge management**	High-iest	High	Medium	Low	Very low	Do not know	**Explain and give some more details**
ประโยชน์ที่เป็นตัวเงิน Money value							
ประโยชน์ที่ไม่เป็นตัวเงิน Non-Money value							
การสร้างมูลค่าเพิ่ม Value added							
ค่าใช้จ่ายในการทำ KM KM operating cost							
จำเป็นต้องปรับองค์กร Organization adjustment							
ความเสี่ยงต่อความคุ้มค่า Risk / value ratio							

สรุป: คุ้มค่า หรือ ไม่อย่างไร

Conclusion: whether or not this operation valuable

…………………………………………………………………………………………

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………………………………………………………………………………………………

Table 3.5: No. 2 Worksheet OM-5 Technical Feasibility: Not too difficult to operate
(ทางเทคนิคไม่ยากเกินไปพอปฏิบัติได้)

หัวข้อความรู้ Knowledge topic _____

ความเป็นไปได้ทางเทคนิค ในการจัดการความรู้ **Technical Feasibility in KM**	High-iest	High	Medium	Low	Very low	Do not know	คำอธิบาย รายละเอียดเพิ่มเติม **Additional information**
ความซับซ้อนของตัวความรู้ Complexity of body knowledge							
ความวิกฤติต่อองค์กร Critical to the organization							
ความชัดเจนในการวัดผล Clarity of evaluation							
ความซับซ้อนในการใช้งาน Complexity of use							
ความเสี่ยงต่อความสำเร็จ Risk / success ration							

สรุป ยากเกินไปที่คนในองค์กรสามารถทำได้หรือเปล่า

Summary: Is it too difficult for people in organization to do the job?

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Table 3.6: No. 3: Worksheet OM-5 Project Feasibility องค์กรสามารถให้ทรัพยากรได้ คน เงิน เวลา

หัวข้อความรู้ Knowledge topic _____

ความเป็นไปได้ในการบริหารโครงการจัดการความรู้ **The possibility in KM project**	High-iest	High	Medium	Low	Very low	Do not know	คำอธิบาย รายละเอียดเพิ่มเติม **Additional information**
ความมุ่งมั่นของผู้บริหารที่เกี่ยวข้อง Attention of administrator in management							
ความมุ่งมั่นของผู้ปฏิบัติที่เกี่ยวข้อง Attention of related workers							
ความสามารถในการจัดทรัพยากรลงโครงการ Capability in project management							
ความสำคัญต่อความสามารถแข่งขันขององค์ก Important / the competitiveness ratio							
ความคาดหวังถึงผลสำเร็จ Expected to the successful							
การสื่อสารของผู้เกี่ยวข้องในโครงการ Communication of related person in the project							
ความเสี่ยงในการยกเลิกโครงการ โดยองค์กร Risk of project failure by organization							

สรุป องค์กรสามารถให้ทรัพยากร ดำเนินโครงการ ได้หรือไม่

Summary: Can organization provide and operate the project ?

…………………………………………………………………………………………………

…………………………………………………………………………………………………..

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…………………………………………………………………………………………………

Table 3.7: No. 4 Worksheet OTAM-1: Impact on the organization

หัวข้อความรู้ Knowledge topic _____

ผลกระทบ **Impact**	High-iest	High	Medium	Low	Very low	Do not know	คำอธิบาย รายละเอียดเพิ่มเติม **Additional information**
โครงสร้างองค์กร Organization structure							
ขบวนการธุรกิจ Business process							
คน Human resource							
งบประมาณ Budget							
ความรู้ สารสนเทศ ข้อมูล Knowledge, information, Data							
วัฒนธรรม และการบังคับบัญชา Culture and Commendation							

สรุป การเปลี่ยนแปลงมีผลกระทบงานปัจจุบัน มากเกินไปหรือไม่ สามารถบริหารจัดการได้หรือไม่

Summary: Are there too much of changes impact on work load? Can it be managed ?

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Table 3.8: No. 5 Worksheet OTAM-1: Impact on work load and worker

หัวข้อความรู้ Knowledge Item_____

ผลกระทบ **Impact**	High-iest	High	Medi um	Low	Very low	Do not know	คำอธิบาย รายละเอียดเพิ่มเติม **Additional information**
Work							
การเปลี่ยนแปลงวิธี และขั้นตอนการทำงาน Changes in method and working step							
เงื่อนไขในการทำงาน Conditioned work							
คุณภาพในการทำงาน Quality in work							
สมรรถนะในการทำงาน Work performance							
กำลังคนในการทำงาน Human resource							
Worker							
ตำแหน่งงาน ความรับผิดชอบ ของผู้ทำงาน Position and responsibility of worker							
ความรู้ ความสามารถของผู้ทำงาน Knowledge and capbility of worker							
การสื่อสารของผู้ทำงาน Communication of worker							

สรุป การเปลี่ยนแปลงมีผลกระทบผู้ปฏิบัติงานปัจจุบัน มากเกินไปหรือไม่ สามารถบริหารจัดการได้หรือไม่

Summary: Is it too much for the changing, which impact to the worker? Can it be managed ?

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Table 3.9: No.6: Worksheet OTAM-1 Improvement and Suggestions

หัวข้อความรู้ Knowledge Item _____

การปรับปรุงที่เกิดขึ้น จาก **KM** **Improvement from KM**	High-iest	High	Medi um	Low	Very low	Do not know	ข้อเสนอแนะ **Suggestions**
ความสามารถใน การจัดการการเปลี่ยนแปลง Capacity in management of changing							
การสนับสนุนการทำงานทั้งความรู้ สารสนเทศและข้อมูล Support work in knowledge and information							
ความสามารถ ในการพัฒนางานในอนาคต Capacity in work development in the future							
ค่าใช้จ่ายที่ลดลง Decline of payment							
เวลาที่ลดลง Decline of time use							
ผลลัพธ์ ประโยชน์ ที่เพิ่มขึ้น Increase in result and advantage							
โอกาสในการเปลี่ยนใจของผู้บริหาร Opportunity in administrator change their mind							

ควรดำเนินการ ตามวิสัยทัศน์ หรือไม่

Should operate according to the vision or not?

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3.5.6. Result, Analysis, Discussion, and conclusion

The research has been accomplished in applying the integrated steps of the reseach methodology, which consisted of six main parts: 1) design concept of methodology; 2) stakeholder analysis; 3) initial investigation; 4) qualifying samples; and 5) research design; and 6) report. The research design also has seven sub-main topics that are comprised of: 5.1) design a case study model; 5.2) proposition of research structure; 5.3) method design; 5.4); data collection and data analysis 5.5) research experiment; 5.6) result and analysis, discussion and conclusions; and 5.7) quality control.

The documentary research, the content analysis in terms of thematic pattern, the investigated organizational vision feasibility in terms of practice level, principle level, and essences level, are directed by the utilized KM tools and techniques. The KM approach is based on different phases of the research experiment, which are 5.5.1 confirming cross-cultural communication problem, 5.5.2 formulating problems and suggestions 5.5.3 design a solution: co-creating in terms of building shared vision, 5.5.4 verifying the solution. These process steps will be used the EP at Montfort College as a case study. The research experiment will be implemented in Chapter 4.

To investigate this exploratory research completely, the researcher analyzes and discusses the results step by step. The results and analysis are discussed and concluded in Chapter 5.

Thus, the results of this case study (Creswell, 1998) are analyzed, discussed, and concluded in regards to the Knowledge Management approach in terms co-creating type based on building shared vision (Senge *et al.*, 1994, the applied originating *ba* and dialoging *ba*, as a cross-cultural environment (Nonaka *et al.*, 2000), the CommonKADS methodology (Schreiber *et al.*, 2000). This Knowledge Management is the main tools and techniques, which are strong

effect on solving problems of this case study.

3.5.7 Quality Control

The analytic hierarchy process for solving complex decision problems requires a specific consistency check of the decision makers' pair wise comparisons

with participants and video recorder to ensure that the data are valid and reliable as a consistency check. In addition, the results in each step are presented and questioned by the research supervisors and audience in the PhD conference. The initial investigation is also written as academic papers in order to submit and present in international conferences to verify the quality of the research. The term 'Reliability' is a concept used for testing or evaluating quantitative research, the idea is most often used in all kinds of research. If we see the idea of testing as a way of information elicitation then the most important test of any qualitative study is its quality (Golafshani, 2003).

Conclusion

This chapter shows the way to obtain results of the investigation. The identified and specified problems of this study are investigated as mentioned in initial investigation. Then, the studied framework (secondary data, the concerned theory and literature reviews) will be integrated with: confirming the key problems of cross-cultural communication in managing the EP; formulating problems and suggestions; design a solution; and verifying the solution.

Phase 1: Confirming cross-cultural communication problem: Data collection is used in depth interview and capture knowledge from all members of the EP with 25 participants.

Phase 2: Formulating problems and suggestions: is to formulate ideas and opinions about the details of the root causes of problem (Phase1) from a representative of each nationality of Western and Eastern staff: a group of teaching staff and a group of administrative staff. This phase uses focus group interview as a tool, originating *ba* and dialoging *ba* as cross-cultural environment, and knowledge sharing as technique for capturing knowledge.

Phase 3: Design a solution: is to design *system requirements*, which is building shared vision by selecting co-creating theory: practice level, principle level and essences level based on the research questions. This phase is focused on focus group discussion, and brainstorming by a group, inter-group of different nationalities and administrators as participants.

Phase 4: Verifying the solution is to confirm design a solution as *conceptual design*, which is divided into three tests:

Test 1 is to validate the refined vision statement, which is based on shared vision processes of personal vision, team vision, and inter-team vision. OM-1 worksheet will be used for problems and opportunities, which are validated by all the staffs to recheck by using open-end interview questions as agree or disagree with the refined vision statement.

Test 2 is to test the validated statement of EP vision in terms of concepts of topics based on the analyzed statement of visions (*from Test 1*) by using OM-5 worksheet as open-ended questionnaires from five administrators. The OM-5 worksheet focuses on feasibility in terms of business, technique, and project.

Test 3 is to carry out as an impact and improvements study for the selected target solution by using worksheet OTAM-1 as open-ended questionnaires from five administrators. It focuses on impact on the organization, task and staff-specific impact, and improvements and suggestions, which verifies the completed vision that enables the EP to implement at level of essences mode for commonality of purpose or partnerships in a real situation.

All these are KM tools and techniques: knowledge sharing, the applied originating *ba* and dialoguing *ba*; CommonKADS methodology will be implemented to investigate this case study in terms of individualism vs. collectivism and building shared vision: co-creating type. The expected outcome may help the EP both to solve problems and develop the EP as an effective cross-cultural workforce relationship management.