

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

This study is research and development using a mixed approach--the qualitative and the quantitative. Then the details regarding population and samples are reported. Next, research instruments are described as to how they were constructed, validated, tested, and revised. Finally, data collection, data analysis as well as the pilot study and its results are reported.

3.2 Research Design

This study incorporates a mixed research design, both the qualitative and the quantitative approaches. There are three main reasons for this. Firstly, the quantitative data alone may not be enough to justify the trustworthiness of the study. This is due to some factors. For example the length of study (intensive course) may be too short to expect significant gains, language proficiency takes time to improve, and language learning involves several aspects, such as cognitive and affective. Secondly, qualitative data provides in-depth information that can add insights and understanding that might be missed when only one method is used. Thirdly, a mixed research design can provide more complete answers to a range of research questions that a single research design cannot. (Johnson & Onwuegbuzie, 2004)

3.3 Population and Samples

3.3.1 Population

All Buddhist missionary monks enrolled in this program are included in the population. There have been twelve batches of monks enrolled in this program since 1995, identified as Buddhist missionary monk Class 1, Class 2, etc. This research focuses on the batch enrolled in the year 2006, or Class 12, while the pilot study was conducted with Class 11, enrolled in the year 2005. The number of monks in each

group is varied, as shown in the following table (Mahachulalongkornrajavidyalaya University of, 2005: 63).

Table 3.1 Number of Monks Enrolled in the Training Program

Class	Year	No. of monks
1	1995	49
2	1996	75
3	1997	72
4	1998	53
5	1999	57
6	2000	62
7	2001	73
8	2002	65
9	2003	69
10	2004	67
11	2005	75
12	2006	77
Total		794

At present the majority of these monks have been sent to their missions at various temples around the world. This study hopes to find a way to implement an intensive English course that can best develop the monks to their highest potential and prepare them to be Buddhist missionary monks who can use English to communicate effectively.

3.3.2 Samples

The samples in this study include 30 monks who were trained in the preparatory program for overseas missions. They were selected using systematic sampling. Key informants were 20 monks selected from the samples according to their proficiency levels to represent high-ability and low-ability groups.

The 77 monks in Class 12 were given a pre-test to assess their English listening and speaking skills before the course started. The pre-test consisted of two parts. The first part was taken from the listening section of the CULI test, while the second part, based on the syllabus to be used, was created by the researcher. Seventy seven monks' names were listed according to the length of their monkhood, and then the researcher called out every third number from the list, such as numbers 3, 7, 11,

15, 19 and so on until thirty students were selected to be the samples of the whole group. Then the students from this sample group were ranked according to their scores and categorized into two groups: top ten students were members of a high ability group and bottom ten students were in a low ability group. The members of each group were the key informants to be interviewed and asked to write a student's log after each day of instruction. As this study made use of both quantitative and qualitative data, all the samples were used to arrive at the quantitative data, with the key informants providing the qualitative data.

3.4 Stages of Research

The academic training of this program is usually held in April and May each year. To ensure that the samples of the pilot study and the main study had equivalent characteristics, the pilot study had to be arranged one year in advance of the main study. The study was divided into four phases as follows.

3.4.1 Phase I: Needs Analysis

In this phase the researcher divided tasks into four stages. The first stage concerned planning and preparation. The researcher reviewed related literature and created a needs survey questionnaire and interview questions and had them validated by experts. Then she interviewed stakeholders. Finally the needs survey questionnaire was distributed to former students who are now missionary monks on duty abroad, as well as the monk students who participated in the present study.

3.4.2 Phase II: Development of Task-Based Instruction

The second phase concerned development of instruction. There were three stages in this phase. First, the researcher wrote the objectives and the content of the lessons. Then she developed the course syllabus, lesson plans, teaching materials, and all other research instruments, including interview questions and guidelines for the student's log. She finally had the instruments validated by experts. The second stage was piloting the study. At the last stage, the instruments were modified.

3.4.3 Phase III: Implementation of the Instruction

There were two stages in this phase: pre-test and implementation. Before the instruction, the pre-test was administered and the needs survey questionnaire was distributed to students. Then, during the implementation stage, the materials were taught according to the lesson plans developed, the teacher kept her diary, and the students made their log entries.

3.4.4 Phase IV: Evaluation

At the last phase, the post-test was administered and the key informants were interviewed. To enrich the worthiness of the study, a few months after the graduates left Thailand for their mission abroad, a questionnaire was sent to them via e-mail to follow up on how they used English acquired from the course to perform their daily activities as missionary monks in their temples abroad, and to find out if they had any suggestions about the lessons or the course for future implementation.

3.5 Research Instruments

During the preparation, the needs survey questionnaire and semi-structured interview questions for stakeholders were used. Then the pre-test was administered before the instruction. During the instruction period, lesson plans, the teacher's diary, and students' logs were used. As soon as the course ended, the interview questions, together with the post-test, were administered. A few months after the course, a questionnaire was sent to former students who were working abroad to get their feedback on the course. Since the study was divided into stages, the instruments are described according to their use in each stage of the study.

3.5.1 Needs Survey Questionnaire

This instrument served the first objective of the research: to investigate the needs of the learners (Graves, 2000; Richards, 2001). This questionnaire was used to collect data both from former students who were then working abroad and from students enrolled in the preparatory program. As students enrolled in the program may

not really know what they would face once abroad, and indeed may never have been abroad, it was essential to administer the questionnaire to both groups (see Appendices A and B). The content of the questionnaire was based on findings by Chimroylarp (1998) and on data from personal conversation with the missionary monks in the Thai temples collected when the researcher went to the United States of America in 2004. There were two sets of questions on the questionnaire. The first elicited the respondents' personal information; and the second focused on their opinions on functions of English needed to perform the duties of Buddhist missionary monks abroad. The respondents were asked to rank their needs on the Likert scale. The content of this instrument was validated by three experts who suggested minor changes that the researcher incorporated in a revised questionnaire to be used with the monk students Class 11 in 2005 as a pilot study. Cronbach Alpha coefficient was used to measure the instruments' internal consistency reliability.

The Cronbach Alpha coefficient of the questionnaire for monk students was 0.82 and those of missionary monks on duty were 0.92 which is considered acceptable.

3.5.2 Semi-structured Interview Questions for Stakeholders

Administrators, teachers, and students who have graduated from this program and are now working in the United States are the main stakeholders. They provided ideas useful for evaluating the program and gave suggestions or opinions concerning the course that was to be developed. The questions were listed according to the following topics: syllabus, needs, classroom instruction, and materials and content, as well as evaluation. This instrument also served the first research objective. It allowed the researcher to obtain information with broader or deeper dimensions regarding the stated topics that the questionnaire alone cannot. The data from this instrument could provide in-depth information for the selection of tasks as well as the topics that interest students. This instrument was used prior to the course (see Appendix C).

3.5.3 Open-ended Interview Questions for Key Informants

The interview questions were designed to elicit the key informants' ideas about the lesson, the methodology, and the materials. This data was analyzed qualitatively. The interview questions were validated by experts. Some suggestions made by the experts were inclusion of every variable to confirm that the 'key' position of the informants is necessary, and tape-recorder or video-cam should be used for clarity. This instrument was used after the course ended (see Appendix K).

3.5.4 Pre-Test and Post-Test

This pre-test, which was used to measure students' English proficiency, was administered before the course started. In this study the test focused on listening and speaking skills. Therefore, the test consisted of two parts. The first part was the listening section taken from the CULI test which consisted of five different parts: photographs, question-response, news and announcements, short conversations, and short talks. Each part had ten questions, and each question weighed one point, so the total scores of the listening test were 50. The validation of the listening test was not conducted because it was an institutional standardized test constructed and undergone validation by CULI professors.

The second part was developed by the researcher to assess students' speaking skills. In the speaking section each student was given a role card, which assigns a role by which the students must respond verbally to two observers who rated his performance according to the rubric set. The second part of the test was validated by three experts. At the end of the course, a post-test, which was the same form as the pre-test, was administered.

At first, the speaking test was designed to administer with two test-takers at a time by assigning them to choose their roles and make three conversations in three particular situations based on the tasks missionary monks were to accomplish. But the experts suggested that the instrument needed to undergo the process of standardization through a trial test, analysis, and improvement before its actual use in the main study. So a trial test was first done at Wat Phrachetuphonwimonmangkalam with three pairs of monks. The results showed that the process was inappropriate

when an advanced proficiency level test-taker paired with a low proficiency level test-taker because the latter might not be able to say anything and the former would not be able to make a conversation even if he had the ability. So the process was redesigned to administer the speaking test to one person at a time. The test-taker speaking to the rater who was to respond to every test-taker in a prescribed way each time. A pilot study was arranged with ten students from the real population to prove the test qualities and to test the new role card and instruction. It was found that students spent too much time trying to read the situation card out loud, as they had incorrectly understood that they were supposed to read the cards. Some students understood the directions but they had difficulty interpreting the English instruction and the role on the card. Therefore, to lessen the time spent on directions, the raters gave the directions in Thai and described the situations, and translated the role card into Thai so that the test-taker could immediately spend time on creating the conversation. In the main study, the Thai version was written on the back of each role card and the raters told the test-takers they could read Thai if they wished. The rubric was another aspect that the experts commented on. The experts advised that each score should be defined as accurately and specifically as possible. The scoring form and the role card for the speaking test were adjusted accordingly. The total scores of the speaking part were 225 from three different tasks, each task consisted of five components, and each component was to be ranked from 0-15 (see Appendix E for detail of speaking test scores and Appendix F for sample speaking tests). This resulted from the needs analysis which was transferred into the course objectives. It revealed that speaking skills were needed more than listening skills, thereby receiving more weight in the test. The ratio of speaking and listening was 4:1.

3.5.5 Student's Log

To obtain in-depth information regarding content area, teaching method, feedback, lessons, and the teacher, the key informants were asked to write their opinion on the lesson content, teaching methodology, materials, pace, and evaluation after the end of each day of instruction. This data was analyzed with regard to students' attitudes towards TBI. The data revealed how students' needs could be satisfied, and whether the students were motivated studying with TBI. To ensure that the students would write their opinions to cover each particular topic, guided

questions and topics were provided. They were validated by the same experts as in 3.5.3. Most of the questions were accepted. Minor changes on categorizing questions and use of particular words in sentences were adjusted as suggested by the experts (see Appendix I).

3.5.6 Teacher's Diary

The purpose of this instrument was to obtain in-depth information regarding teacher's attitude to lessons taught, the students' participation, teaching method, and classroom management. The teacher made notes reflecting on her own teaching after each class. She recorded how she felt about the lessons taught, and the students' participation in class activities, what she did and its consequence and what she should have done but failed to do. The teacher was supposed to reflect on relevant questions on each topic of the student's log (see Appendix J).

3.5.7 Questionnaire for the Buddhist Missionary Monks on Duty

This instrument was added following the suggestions made by one of the experts to answer the third research question: 'How can TBI be made effective in the intensive English course for Buddhist missionary monks?' The questionnaire included two parts: respondent information and opinions regarding the lessons studied during the program. Its purpose was to obtain in-depth information regarding missionary monks on duty's attitude to the lesson taught, teaching method, classroom management, and other suggestions if any. These monks were also asked to evaluate the efficiency of their English communication in real situations after being abroad (see Appendix D).

3.5.8 Lesson Plan and Teaching Materials

The main study was conducted in a classroom; therefore, lesson plans and teaching materials were the most important part of it. Each lesson was planned based on the needs assessment using task-based instruction, and the materials were either compiled from commercial texts or created by the researcher. There were a total of nine units, each divided into pre-task, task-cycle, and language focus according to

Willis (1996). All of them were commented on first by the researcher's advisors and subsequently adjusted or changed. Besides the advisors, they were validated by five other experts. Some of the experts' comments were as follows: in the pre-task, the sample sentences to be used should be introduced so that the students can have language to speak during the task cycle. A video or tape should be presented to students; then during the task cycle they could be assigned to work on authentic tasks. Role play is quite a good idea to use for practice and evaluation, but the teacher must understand the principles of role play method. The teacher should let students know what she wants to evaluate. Supplementary materials can be displayed at the back of the class so that the students can use them in their free time. Besides the lesson plan, the materials were commented on in terms of unclear instructions, vocabulary errors, tasks that were not authentic, reading materials retrieved from the Internet that may be too difficult. The researcher then adjusted the plans and materials accordingly (see a complete sample lesson plan in Appendix G).

3.6 Data Collection

As this study was an ESP course design and an evaluation of the course, the data has been collected in two parts. First, needs analysis was conducted to answer the first research question: "What are the language needs of Buddhist missionary monks?" and then after the needs were translated into the course and implemented, they were collected again for course evaluation. Quantitative and qualitative data were collected to answer the second and third research questions: "Is task-based instruction workable in an English course for Buddhist missionary monks?"; "How can TBI be made effective in the intensive English course for Buddhist missionary monks?"

3.6.1 Data Collection for Needs Analysis

During May 2004, interviews were conducted with some missionary monks in Thai temples in the United States of America. The researcher traveled to and stayed in Thai temples, in California, Nevada and Arizona, for a week to observe the needs of English in various situations. A questionnaire was developed based on these interviews and research done by Chimroylarp (1998). At the end of April 2005, 75

copies of the questionnaire were distributed and collected from the monk students who participated in the Buddhist missionary monk training program. At the same time 20 copies of the questionnaire were distributed to the missionary monks on duty in the USA and the UK, eleven of which were returned.

3.6.2 Data Collection for Course Evaluation

Both the quantitative and the qualitative data have been collected to evaluate the intensive English for Buddhist missionary monk course.

The quantitative data was collected by using the pre- and post-test. The pre-test was administered on April 29, 2006 and the post-test on May 17, 2006. The listening part was conducted in the classroom with all 77 students by an official from CULI. The problem was that the classroom was not designed for the purpose of testing listening and the tape recorder may not have been as good as the one at CULI. With these restrictions, the listening scores turned out to be not very high. There were two reasons why all 77 students took the listening test together. First, it was because of the program constraint. There was only one classroom and it was the time when all the students were scheduled to study English. If only 30 subjects had been separated to take the test in the classroom, the rest would not have had a place to study. Second, as the teacher who took responsibility for this class, the researcher wanted to know how all the students performed before and after the course. After that, the speaking part was conducted with 30 subjects. A test-taker was called out one by one while the rest studied with a substitute teacher. Both tests have been tape-recorded for analysis. Two raters who rated the scores for both tests were the same persons so as to ensure reliability of the rating. Each subject picked up a role card, read it and made a conversation with the researcher until three role cards were completed. The raters scored each role according to the rubric provided in the scoring sheet (see Appendices E and F). The pre-test and post-test scores would answer the first part of the second research question: "To what extent does TBI increase learning outcome?"

The qualitative data was collected via the teacher's diary, students' logs, and the interview to answer the second part of the second research question: "What are the views of monk students on TBI?" They were combined with the last instrument, the open-ended part of the questionnaire sent to the missionary monks on duty to answer

the third research question: "How can TBI be made effective in the English for Buddhist missionary monk course?"

Teacher and students recorded their views about each lesson every day of the course. There were ten teacher's diary entries (as she wrote after each instruction) and 92 log entries from the high and the low ability groups. The entire logs provided additional views to support the findings.

3.7 Data Analysis

Data from needs survey and course evaluation were analyzed as follows.

3.7.1 Data Analysis for Needs Analysis

The quantitative data from the needs survey questionnaires were analyzed by descriptive statistics (mean, percentage, and standard deviation), while the qualitative data from the interview was analyzed by content analysis (summing up the idea and recheck with the key informants whether the data was what they wanted to tell and if they had anything else to add or adjust).

3.7.2 Data Analysis for Course Evaluation

For the quantitative data, the pre-test and post-test scores were analyzed by Wilcoxon-z to compare the means scores of the listening and speaking skills before and after the course. Wilcoxon-z test was a non parametric statistic to be used in case the sample size is small and is not normally distributed. The significant level was set at 0.01 to verify the reliability. In order to measure the magnitude of a treatment effect Cohen's d was used to see the effect size. The effect size was defined by Cohen (1988:25) as 0.2 = small, 0.5 = medium, 0.8 = large.

The qualitative data, such as the student's log, the interview, the teacher's diary, and the open-ended part of the questionnaire were analyzed by content analysis (coding and grouping emerging themes). Details about each of the research instruments are shown in the table below.

Table 3.2 List of the Research Instruments

Instrument	Purpose	Time of distribution	Validation	Means of analysis
Needs survey questionnaire	To obtain information about education needs	Before the course	By experts and Cronbach's Coefficient Alpha (≥ 0.8)	Descriptive Statistics (mean, S.D., percentage)
Semi-structured interview questions for stakeholders	To obtain in-depth information regarding the syllabus, the needs, the classroom instruction, materials and content, and the evaluation of the program	Before the course	By experts	Content analysis: categorize, grouping, counting frequency
Open-ended interview questions for key informants	To obtain in-depth information regarding content, atmosphere, teaching methods, feedback, etc.	After the course	By experts	Content analysis: categorize, grouping, counting frequency
Pre-test and post-test	To measure students' English proficiency concerning their listening and speaking skills	Before and after the course	By experts and inter-rater reliability at *0.82 for speaking pre-test and *0.83 for speaking post-test	Descriptive statistics and Wilcoxon-z
Student's log	To obtain in-depth information regarding content area teaching method, feedback, lessons, teacher's attention to students, students' attitude etc.	At the end of each day of instruction.	By experts	Content analysis: coding, grouping emerging theme
Teacher's diary	To obtain in-depth information regarding teacher's attitude to the lessons taught, the students' participation, teaching method, classroom management, etc.	At the end of each unit	By experts	Content analysis: coding, grouping emerging theme
Follow-up Questionnaire	To obtain in-depth information regarding missionary monks on duty's attitude to the lessons taught, teaching method, classroom management, etc.	A few months after the course ended and the graduate left for their mission abroad	By experts	Descriptive statistics and content analysis: grouping and counting frequency

3.8 Pilot Study

The pilot study was aimed at ensuring that the lessons and classroom materials were appropriate for use. In case there were errors or inappropriate activities in the lessons, they could be adjusted prior to the main study. The main instruments of focus were the needs survey questionnaire, the speaking test, the lesson plan, and classroom materials.

The students to be used for the pilot study were missionary monks who had the same characteristics and qualifications as the students in the main study. However,

this class took place only once a year, so the pilot study was conducted one year earlier. The pilot study was done from April – May 2005 with 75 monk students in the Buddhist missionary monk training program Class 11. The findings of the pilot study were described as follows.

The needs survey questionnaire was distributed to both the students in class and the Buddhist missionary monks on duty. The findings are presented in Table 3.3 below.

Table 3.3 Comparing Needs of Students and Missionary Monks on Duty

Most Selected Language tasks by monk students (reliability = 0.8243)*	Most Selected Language tasks by monks on duty (reliability = 0.9200)*
<ol style="list-style-type: none"> 1. Filling forms and document required 2. Explaining Buddhism and its importance 3. Teaching meditation 4. Listening to instructions or announcements and responding properly 5. Explaining monk's role and duties in Thai society 6. Listening and responding to the phone call 7. Reading instructions, schedule, signs and maps and responding or following directions properly 8. Discussing the significance of daily chanting 9. Asking for directions when lost 10. Talking about Thai culture and belief 11. Asking and answering questions 12. Requesting information and assistance* 12. Talking about monk's role and outfit* 14. Explaining and discussing Dhamma issues 15. Reporting emergency 16. Having the prescription filled 17. Telling tales 18. Making a small talk and keep conversation 	<ol style="list-style-type: none"> 1. Listening and responding to the phone call 2. Listening to congregations' problems and answering based on Buddhist way of life 3. Asking and answering questions 4. Talking about monk's role and outfit 5. Explaining monk's role and duties in Thai society ** 5. Discussing Dhamma issues** 7. Listening to instructions or announcements and responding properly** 7. Discussing with other people about issue of interest** 9. Expressing, describing and answering questions about own illness** 9. Discussing the significance of daily chanting** 9. Reading instructions, schedule, announcement and responding properly** 9. Filling forms and documents required** 13. Talking about Thai culture and belief** 13. Reading signs and maps and following **

<p>flow</p> <p>19. Expressing, describing and answering questions about own illness**</p> <p>19. Taking foreigners to tour around the temple**</p> <p>21. Listening to congregations' problems and answering base on Buddhist way of life**</p> <p>21. Discussing with other people about issue of interest**</p> <p>23. contacting government offices</p>	<p>directions properly</p> <p>15. Making an appointment on the phone**</p> <p>15. Reporting problems or requesting ** assistance about health and belongings</p> <p>17. Describing things</p> <p>18. Asking for permission**</p> <p>18. Requesting information and assistance**</p> <p>18. Reporting emergency**</p> <p>18. Having the prescription filled**</p> <p>18. Telling tales**</p> <p>22. Describing places</p> <p>24. Asking for price/ Bargaining**</p> <p>24. Making a small talk and keeping conversation flow**</p>
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* These language tasks are arranged in the order of their preferences.

** Some of these tasks receive equal ratings.

The needs were first surveyed in terms of the language tasks expected to be used in the daily life of missionary monks. Moreover, in order to prepare the students for task-based instruction, the needs survey questionnaire was then adjusted to ask about the English skills they need to perform tasks in their daily routine and in their work.

From the above table students and missionary monks on duty share some ideas in ten most favorable preferences. They both needed to explain monk's role and duties in Thai society (number 5 of both groups). They also needed to discuss the significance of daily chanting (number 8 on students' list and 9 on missionary monks' list). So they both needed language to talk about work-related issues. They also selected listening to phone calls (number 6 on students' list and 1 on missionary monks'), listening to announcements and respond properly (number 4 on students' list and 7 on missionary monks), filling out forms and documents (1 on students' and 9 on missionary monks'). All these language tasks were to be included in the lesson content. It is also interesting to note that they expressed conflicting needs for some language tasks. For example, making small talk and keeping conversation flow came last on missionary monks' list while it received higher ratings by monk students. The needs that appeared only on one list, such as contacting government offices and those

that received low ranking were excluded. Due to the limited time allotted to the program, only the needs viewed necessary by both groups were translated into lessons.

The lesson plan and materials were created according to the lesson outline. They were then sent to the experts for validation, comments and suggestions. After several discussions with the experts, handouts for students were created and used in the pilot study. Some improvements were made; for instance, the instructions in the handouts were made clearer, tasks were adjusted to make them less complex, resources where students could find more information were added, and reading materials were simplified and used in the main study.

The speaking part of the pre-test was created and validated by the experts. Then it was used first with a group of monks at Wat Phrachetuponwimonmangkalaram (Wat Pho). Results led to an adjustment. Instead of having a test-taker doing role play with another test-taker, he was asked to make a conversation with the researcher, who also acted as a rater. It was used as a pilot test with ten monk students from the real population before the course started. The reliability between two raters was found at 0.80. After the pilot test, Thai translations were added to the role cards before it was used in the main study to make sure that the test-taker understood the situation and that his speaking proficiency, not his reading skills, was being evaluated.

3.9 Summary

The research was conducted using both quantitative and qualitative design to answer three research questions. The first question concerned the needs of the students and the missionary monks on duty. The instrument used to find out the answer to this question were the needs survey questionnaire for the students and the monks on duty abroad, together with the semi-structure interview questions with the program administrators. Then the needs were translated into nine lessons and classroom materials using task-based instruction. The detail about this is presented in Chapter IV.

The lessons were used with a population of 75 missionary monk students from April-May 2005 in a pilot study. Some lessons and materials were adjusted for the main study in April-May 2006. The course evaluation was done in the class of 77 monk students of Buddhist missionary monk training program to answer the second

research question, which asked if and to what extent task-based instruction was appropriate for this group of students, and how the students viewed the instruction. A pre-test and post-test were the instruments used for collecting quantitative data to answer this question. The Wilcoxon-z was used to analyze mean scores of the test. Thirty samples were systematically selected from the population to provide quantitative data. After that these samples' pre-test scores were used to place the top-ten into a high ability group and the bottom-ten into a low ability group, the members of these two groups were to provide more precise, in-depth information regarding the instruction. The student's log and the teacher's diary, as well as the interview, were used as triangulation instruments to collect the qualitative data to answer questions about the views of the monk students towards the course.

The last research question asked how to implement task-based instruction effectively in this course and the answer was collected partly from the students' logs and interviews as well as the teacher's diary and partly from the follow-up questionnaire sent to the missionary monks on duty who have graduated from the program and started their real mission in temples abroad.