

CHAPTER V

SUMMARY DISCUSSION AND RECOMMENDATIONS

5.1. Introduction

This chapter begins with a summary and a discussion of the study. Next, some implications are suggested. Finally, some recommendations for further study are also included.

5.2. Summary of the Study

The study aims to develop self-instructional materials to enhance English listening skills for student. The primary objective is to investigate English listening skills needed for student nurses. To do so, a process of needs analysis was conducted based on a questionnaire survey. The next objective is to develop self-instructional materials to enhance English listening skills for them. The results of the needs analysis were used to scope a specification of both academic and physical aspects of the materials. At this point, a framework and principles for developing instructional materials were proposed and used as a guideline for designing self-instructional materials. Another objective is to examine the effectiveness of the developed self-instructional materials against the set criteria. To do so, the standard criteria of efficiency at $E_1/E_2 = 80/80$ was employed. The last objective is to examine the attitude of the student nurses towards the developed self-instructional materials.

There are three main parts in the study – needs analysis, materials development, and materials implementation/evaluation.

1. Needs Analysis

In order to develop self-instructional materials, needs analysis was conducted via a questionnaire survey with 300 student nurses at School of Nursing, Faculty of Medicine, Ramathibodi Hospital, Bangkok.

2. Materials Development

The needed English listening skills for student nurses were examined via both content analysis and needs analysis. The Six T's Approach by Stoller and Grabe (1997) and principles of materials development by Tomlinson (2003) were the underlying principles in designing self-instructional materials. After a package of self-instructional materials was developed, it was validated and evaluated by panel of experts. Three experts were invited to validate and evaluate the listening comprehension test, other three experts were invited to validate and evaluate the academic and physical contents of the self-instructional materials and other three experts were invited to validate and evaluate a materials evaluation form. Next, all mentioned instruments were adjusted according to the experts' suggestions. Then one lesson unit of the developed self-instructional was piloted with ten participants who share similar characteristic with the participants of the implementation/evaluation phase. At the end, the ten participants during this pilot study were asked to complete a materials evaluation form for the sample unit. The information obtained from the pilot study was used to adjust the materials as appropriate later on.

3. Materials Implementation and Evaluation

A package of the developed self-instructional materials was implemented with 30 student nurses (first-year to fourth-year student nurses of School of Nursing, Faculty of Medicine, Ramathibodi Hospital, Bangkok) for eight weeks during June 8, - August 8, 2012. The process of evaluating the developed self-instructional materials was conducted both before and after the materials implementation in order to evaluate the effectiveness against the set criteria. The instruments used and their timing are summarized in Table 5.1 below.

Table 5.1: The timing and the research instruments used for materials evaluation

The timing of the evaluation process	The instruments used	Types of the gathered data
Before the materials implementation	1. The checklist for the experts to validate the sample lesson unit of the self-instructional materials	Quantitative data
	2. The checklist for the experts to validate the English listening comprehension test	Quantitative data
	3. The English listening comprehension test (pretest)	Quantitative data
	4. A materials evaluation form for the sample unit (pilot study)	Quantitative data
After the materials implementation	1. The English listening comprehension test (posttest)	Quantitative data
	2. A materials evaluation form.	Quantitative data

Three criteria adapted from the framework of evaluating the effectiveness of the course by Pattanapichet (2009: 225) were set to examine the effectiveness of the developed self-instructional materials. The criteria are listed in Table 5.2 below.

Table 5.2: Three criteria used to evaluate the developed self-instructional materials

Criterion number	Timing of the evaluation	Descriptions of each criterion
Criterion no.1	After the materials implementation	<ul style="list-style-type: none"> - Comparing student nurses' scores on English listening comprehension test before and after the implementation. - The student nurses' scores of the posttest are significantly higher than the scores from the pretest according to t-test.
Criterion no.2	After the materials implementation	<ul style="list-style-type: none"> - Comparing the efficiency of the developed materials with student nurses' efficiency of learning. - The standard criteria of efficiency at $E_1/E_2 = 80/80$ is employed to verify the hypothesis of the developed self-instructional materials are at a standard criteria 80:80.
Criterion no.3	After the materials implementation	<ul style="list-style-type: none"> - Study the student nurses' opinions towards the developed self-instructional materials in terms of their academic and physical aspects through the use of a materials evaluation form. - The overall results from a materials evaluation form are $\bar{x} > 3.50$ to indicate positive attitudes towards the self-instructional materials.

5.3. Findings

1. In response to the research question 1: What are the needs of English listening skills for student nurses?, information from the needs analysis by means of a questionnaire survey has been collected and analyzed.

The questionnaire asked the participants to indicate their degree of needs in academic aspects and physical aspects of self-instructional materials and the results revealed that the participants regarded almost every academic and physical aspects as much needed.

2. In response to the research question 2: How can self-instructional materials to enhance English listening skills for student nurses be developed?, the information

obtained from the needs analysis along with synthesis of ESP literature provided the pathway of developing the self-instructional materials.

In addition, two frameworks were used during the process of developing self-instructional materials i.e. the principles of materials development by Tomlinson (2003) and the Six T's Approach by Stoller and Grabe (1997) as they share quite similar attitudes towards language learning in the way that learning will occur when students are provided with appropriate learning materials and act out correspondingly.

3. In response to the research question 3: How effective are the developed self-instructional materials?, the result of 84.61/88.40 against the standard criteria of efficiency at $E_1/E_2 = 80/80$ indicated that the developed self-instructional materials were effective (Promwong, 2520). In terms of the participants' English listening skills as observed from their pre-and posttest scores, the value of 0.00 from t-test indicated that the participants achieved higher scores at a significance level ($p \leq 0.05$). All these results indicate significant improvements in the participants' English listening skills, and thus, demonstrate that the developed self-instructional materials successfully met the needs of these participating student nurses.

4. In response to the research question 4: What is the attitude of student nurses towards the developed self-instructional materials?, the result of $\bar{x} > 3.50$ in all aspects from a materials evaluation form indicated that the satisfaction level of the participants was at a positive level.

In response to all findings mentioned above, results from the examination of the effectiveness of the self-instructional materials can be put against three criteria adapted from the framework for evaluating the effectiveness of the course by Pattanapichet (2009) as follows:

Table 5.3: The results of examining the effectiveness of the developed self-instructional materials

Criterion number	Timing of the evaluation	Descriptions of each criterion	The results
Criterion no.1	After the materials implementation	<ul style="list-style-type: none"> - Comparing student nurses' scores on English listening comprehension test before and after the implementation. - The student nurses' scores of the posttest are significantly higher than the scores from the pretest according to t-test 	The results of 5.23 from t-test indicated that student nurses had higher scores in the posttest at a significance level ($p \leq 0.05$). (see Table 4.13)
Criterion no.2	After the materials implementation	<ul style="list-style-type: none"> - Comparing the efficiency of the developed materials with student nurses' efficiency of learning. - The standard criteria of efficiency at $E_1/E_2 = 80/80$ is employed to verify the hypothesis of the developed self-instructional materials are at a standard criteria 80:80 	The result of 84.61/88.40 from the standard criteria of efficiency at $E_1/E_2 = 80/80$ indicated that a package of developed self-instructional materials was effective and appropriate to use as self-instructional materials to enhance English listening skills for student nurses. (see Table 4.11)
Criterion no.3	After the materials implementation	<ul style="list-style-type: none"> - Study the student nurses' opinions towards the developed self-instructional materials in terms of their academic and physical satisfaction through the use of questionnaire. - The results of the materials evaluation form are $\bar{x} > 3.50$ which indicates positive attitudes towards the overall self-instructional materials. 	The overall result of $\bar{x} > 3.50$ in both academic aspects and physical aspects from the questionnaire indicated that student nurses had positive attitudes towards the developed self-instructional materials. (see Table 4.14)

In conclusion, all above quantitative data indicate that there was an improvement in student nurses' English listening skills and the student nurses were satisfied with the developed self-instructional materials. All of the evidence indicates the effectiveness of the developed self-instructional materials.

5.4. Discussion

The findings of the needs analysis

The ELDC and the CELBAN list of skills of listening in English provide useful information and a handy basis for scoping the listening skills needed for the student nurses and a group of experts in the field of ESP and materials design as mentioned in chapter II suggests some useful frameworks for developing self-instructional materials. However, as the study deals with developing the self-instructional materials for the student nurses, the exact needs from the student nurses must be identified as there might be some slight differences between the stakeholders' needs and the student nurses' needs. For example, the quality of sound recording in CD is physical priority of the self-instructional materials for the student nurses. Therefore, it is necessary to investigate on this aspect.

The information obtained from the needs analysis indicates that student nurses need self-instructional learning materials to practice their English listening skills as all aspects were rated as much needed/very important ($\bar{x} = 3.51 - 4.50$). This means that the student nurses are willing to learn and acquire the needed English listening skills. Moreover, since the results of types of materials used to practice English listening indicate that the most used materials are self-study books with CDs, self-instructional materials coming in a package of a handbook with CD and emphasizing on practicing the needed English listening skills are, therefore, a perfect solution to the problem.

Self-Instruction

The self-instructional materials were developed for the student nurses as one of the channels through which they were able to possess better listening skills in English when they were ready. In addition, in five units of the developed self-

instructional materials, the student nurses had the freedom to set their learning schedule according to their preferences; to choose when to study, what to study, and how to study to suit their individual needs. These features were in line with Gardner & Miller (1999)'s ideas of specially produced self-instructional materials mentioning that they can effectively bridge the gap of different needs between teachers' and those of students' and result in students feeling a greater commitment to their study and enabling them to move further towards their goals of learning. Similarly, in the study of Detaramani (1999), 585 students of City University of Hong Kong were reported to possess stronger skills of both speaking and listening in English after attending more self-study center.

Means for regulating the self-study – Learner Contract and Facebook

Learner contract

Self-instruction is a personal learning that is planned and carried out by an individual. This kind of learning has the purpose to improve one's competence on a particular issue such as on a job or in a profession. Therefore, materials developers should take needs and expectations of learners into account when developing any self-instructional materials.

Knowles (1975) mentioned that a learner contract or a "binding agreement" could provide some mechanism for learners to determined needs as they carry out their learning. Besides, it was a vehicle for making the planning of learning a mutual undertaking between the learners and the teachers. Therefore, the researcher has applied the learner contract as it was an actual document that articulated a clear goal, objectives, and measures and to which the student nurses would hold themselves accountable. Literally, it served as a means for negotiating a reconciliation between

the researchers' needs and the student nurses' needs in terms of what learning objectives should be worked toward, how (and when) to use resources inside the developed materials, and how the learning objectives would be evaluated.

Facebook

Social Media such as Facebook has changed how people communicate and has become an essential part of student life for most college students; it serves not only as a primary tool of communication but also electronic socialization (Golder, Wilkinson, & Huberman, 2007) (cited in Towner and Muñoz, 2011: 33).

For the student nurses, they could share ideas about their homework and assignments while the researcher could communicate and get the feedback from them during and after their study. Facebook, therefore, was an effective extrinsic motivation to facilitate the learning in English and enhance the characteristic of self-directed learning or self-study among the student nurses. This feature seems to agree with Detaramani (1999)'s study about the achievement of language learning in the self-access center mentioning that 585 students from City University of Hong Kong value all multimedia and facilities focusing on listening skills as the strong extrinsic motivation to improve their English listening skills.

Effectiveness of the developed self-instructional materials

Based on the findings from the posttest, it appears that the student nurses' listening skills of English significantly improved. The reasons are the fact that the self-instructional materials were tailor-made to serve the very specific needs of these students and this motivates them and enable them to concentrate on their learning in order to achieve the needed listening skills. To assure such matter, the standard criterion of efficiency at $E_1/E_2 = 80/80$ plays a vital role. E_1 means the efficiency of

the developed materials. By allowing the student nurses to complete all activities, their scores would be collected and analyzed in percentage to compare with the scores of the post-test and finally reflected their learning progression. On the other hand, E_2 means the overall learning performance of the student nurses which reflects the skills of listening English after using a package of the developed self-instructional materials. The posttest scores were used to compare with the scores of five units' activities to reflect the effectiveness of the developed self-instructional materials. Therefore, the result of 84.61/88.40 after the implementation of the self-instructional materials against the standard criteria of efficiency at $E_1/E_2 = 80/80$ can perfectly indicate that the developed self-instructional materials can enhance the listening skills of the student nurses.

After the implementation of the self-instructional materials, the result of 84.61/88.40 against the standard criteria of efficiency at $E_1/E_2 = 80/80$ indicated that the developed self-instructional materials were effective in terms of enhancing English listening skills of the student nurses (Promwong, 2520). Besides, the value of 0.00 from t-test indicated that the participants achieved higher scores at a significance level ($p \leq 0.05$). The results from a materials evaluation form also help indicate the effectiveness of the developed materials. Positive attitudes ($\bar{x} > 3.50$) towards all aspects helped the researcher specify that the developed self-instructional materials could potentially enhance student nurses' level of English listening skills. This may be because the researcher used appropriate language and vocabulary and tallied them into the contents keeping in view of students' background knowledge and experiences and from easy to difficult. Moreover, each unit included a series of activities where student nurses were expected to listen and internalize the concepts and skills

necessary and were asked to answer questions that require them to think more deeply about the concepts and skills related to their language needs and learning situation. These activities were designed to encourage them reflect more critically on their learning practices and be more autonomous. This process of designing the self-instructional materials was accordingly consistent with Workman (1991)'s idea of writing instructional materials mentioning that giving prior suggestions that listeners have some background knowledge will enable them to fully understand what is being uttered and help them reflect more critically during their learning.

5.5. Implications

The present study provides a complete picture of how ESP self-instructional materials could be designed and implemented. The researcher would like to recommend as follows.

1. Basturkmen (2003:57) (cited in Vasavakul, 2006) described that it is rather difficult to get access to the target groups to investigate their language use. Especially in the study on self-directed learning, the researcher could not know how much time and efforts were put during the study period. So, such a study is usually time-consuming and probably very few ESP practitioners have enough available time to do so. In addition, the efforts used are very rewarding both in terms of academic knowledge and opportunity for the practitioners to provide English listening materials that truly meet their students' needs. Once the materials prove successful in enhancing the students' English listening skills, they will express more willingness to continue study on their own.

2. In English for Specific Purposes, the teacher or the practitioner should be very opened-minded in listening and learning from their students. Students'

experiences are essential resources that bring about a significant contribution to their English listening skills in different contexts.

5.6. Recommendations for further study

Based on the results and information from the study, the recommendations for further research are as follows.

1. The findings show that participants achieved improvements in their English listening skills after using the developed self-instructional materials. This may be due to the nature of the materials which is much focused and tailored to particular group of students' needs together with participants' motivation to learn as previously discussed. However, due to the time and financial constraints, it was impossible to have student nurses from more than one school of nursing. As a result, all participants in the pilot study and main study were from the same school of nursing. Similar self-instructional materials, therefore, may need to be conducted in other schools of nursing for generalizability of the study.

2. Movies are rated as the second type of materials used most to practice English listening. If the situation permits, in the future research, an alternative method listening like movies may be worth developing and investigate their impact on English listening skills of the student nurses.

3. There should still be a great demand for other tailor-made English listening materials in other schools of nursing. However, lots of time and financial supports are required in developing such materials; yet, it is very much worth the effort. This study, therefore, can be the pathway for developing such kind of materials for teachers and practitioners who are interested.