

**THE EFFECTS OF WEB-BASED LISTENING STRATEGY
TRAINING ON THAI HIGH SCHOOL EFL STUDENTS'
LISTENING COMPREHENSION**

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ผลของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ที่มีต่อความเข้าใจ
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การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษา (1) ประสิทธิภาพของการใช้โปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีการฟัง (Computer Assisted Listening Strategy Training Software: CLSTS) ที่มีต่อการพัฒนาความสามารถในการใช้กลวิธีการฟัง 4 กลวิธี (การเชื่อมโยงความรู้เดิม การฟังเพื่อจับใจความสำคัญ การฟังเพื่อเก็บรายละเอียด และการคาดเดาอย่างมีหลักการ) เพื่อส่งเสริมความเข้าใจในการฟังภาษาอังกฤษของนักเรียนไทยระดับมัธยมศึกษาชั้นปีที่ 4 ที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ และ (2) ความคิดเห็นของนักเรียนดังกล่าวที่มีต่อโปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีการฟัง และการนำโปรแกรมไปใช้จริง การวิจัยนี้ประกอบด้วยผู้ร่วมกลุ่มวิจัย 2 กลุ่ม กลุ่มทดลองประกอบด้วยนักเรียนจำนวน 27 คน และกลุ่มควบคุมประกอบด้วยนักเรียนจำนวน 30 คน เครื่องมือที่ใช้ในการเก็บข้อมูลมี 5 ชนิด ได้แก่ (1) แบบสอบถามข้อมูลส่วนตัวและข้อมูลด้านการเรียน (2) แบบทดสอบความเข้าใจในการฟัง ก่อนและหลังการฝึกอบรมกลวิธีการฟังด้วยโปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีฟัง (3) แบบสอบถามหลังการฝึกกลวิธีการฟังแต่ละกลวิธี (4) แบบสอบถามหลังการเข้ารับการฝึกอบรมกลวิธีการฟังด้วยโปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีฟัง และ (5) การสัมภาษณ์การวิจัยนี้ใช้วิธีการวิเคราะห์ข้อมูลทั้งเชิงปริมาณและเชิงคุณภาพ

ในแง่ของประสิทธิภาพของโปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีการฟังที่มีต่อการพัฒนาความสามารถของนักเรียนในการใช้กลวิธีการฟังเพื่อส่งเสริมความเข้าใจในการฟัง ผลการวิจัยแสดงว่า โปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีการฟังมีประสิทธิภาพอย่างมีนัยสำคัญ เนื่องจากองค์ประกอบหลัก 6 ประการ คือ ประการที่ 1 โปรแกรมดังกล่าวมีกิจกรรมเพื่อ (ก) ฝึกนักเรียนให้คุ้นกับการฟังคำศัพท์และวลี (ข) กระตุ้นความรู้พื้นฐานเกี่ยวกับเรื่องที่นักเรียนจะฟัง และ (ค) เตรียมความรู้ด้านคำศัพท์ ประการที่ 2 ความหลากหลายของสำเนียงในบทฟัง ประการที่ 3 ภาพประกอบรูปภาพ วิดีโอ และชื่อของบทฟังที่ส่งเสริมการเรียนรู้กลวิธีการฟัง ประการที่ 4 การใช้ภาษาไทยในการสอนกลวิธีการฟัง ประการที่ 5 การให้ข้อมูลย้อนกลับเกี่ยวกับการใช้กลวิธีการฟังของนักเรียน ประการที่ 6 ความสามารถของโปรแกรมในการช่วยให้นักเรียนสามารถพิมพ์คำตอบเกี่ยวกับบทความที่ฟังได้ และสามารถพัฒนาระบบการใช้กลวิธีการฟังและระบบการเรียนรู้ด้วยตนเอง

ในแง่ของความคิดเห็นของนักเรียนที่มีต่อโปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีการฟัง และความสามารถในการนำไปใช้ได้จริง ผลการวิจัยแสดงว่า นักเรียนเห็นว่าโปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีการฟังมีประสิทธิภาพด้วยเหตุผล 2 ประการ คือ (1) โปรแกรมดังกล่าวช่วยให้ นักเรียนฝึกกลวิธีการฟัง อันส่งผลให้นักเรียนพัฒนาความสามารถในการใช้กลวิธีการฟังทั้งสี่กลวิธีได้ดี (2) โปรแกรมดังกล่าวเพิ่มความมั่นใจในการฟังภาษาอังกฤษของผู้เรียน

ข้อเสนอแนะด้านการจัดการเรียนการสอนของงานวิจัยนี้คือ ในการพัฒนาโปรแกรมคอมพิวเตอร์ช่วยฝึกกลวิธีการฟังสำหรับนักเรียนที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ ผู้พัฒนาควรคำนึงถึงปัจจัยต่อไปนี้ การเรียนรู้ของแต่ละบุคคล ข้อมูลย้อนกลับเชิงบวกและเชิงลบ การให้ความรู้ทางด้านคำศัพท์ ปริมาณแบบฝึกหัดและปริมาณเวลาเรียนที่มากเพียงพอ

ผลของงานวิจัยชิ้นนี้สนับสนุนผลของงานวิจัยในอดีตที่ว่า การสอนกลวิธีการฟังช่วยให้ผู้เรียนที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศเข้าใจภาษาอังกฤษที่ได้ฟังมากยิ่งขึ้น เพื่อสร้างความเข้าใจให้กระจำชัดยิ่งขึ้นเกี่ยวกับการฝึกกลวิธีการฟัง งานวิจัยในอนาคตควรศึกษาวิธีการฟังอื่นๆที่อาจเป็นประโยชน์กับนักเรียนที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ นอกจากนี้ งานวิจัยในอนาคตควรศึกษาเชิงลึกเกี่ยวกับหลักในการใช้กลวิธีการฟังของนักเรียน



WACHIRAPORN KIJPOONPHOL : THE EFFECTS OF WEB-BASED
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ASSOC. PROF. PANNATHON SANGARUN, Ph.D., 294 PP.

THAI HIGH SCHOOL STUDENTS/ LISTENING COMPREHENSION/
WEB-BASED LISTENING STRATEGY TRAINING

This study investigated: (1) the effects of a Computer-Assisted Listening Strategy Training Software program (CLSTS) on the development of students' ability to use four target listening strategies (i.e., elaboration, listening for main ideas, listening for specific information, and prediction) to enhance their listening comprehension; and (2) the students' opinions towards the CLSTS and its applicability. The study covered two experimental and control groups. There were twenty-seven participants in the experimental group and thirty participants in the control group. The participants were Grade 10 Thai EFL students in a Thai high school in Bangkok, Thailand. Data were collected using five instruments: (1) a personal and academic questionnaire; (2) pre- and post-listening comprehension tests; (3) questionnaires on the strategies trained by the CLSTS; (4) a final questionnaire of the CLSTS; and (5) semi-structured interviews. Data were analyzed quantitatively and qualitatively.

Regarding the effect of the CLSTS on the students' ability to use the target listening strategies to enhance their listening comprehension, it was found that the CLSTS was significantly effective. Eight main aspects of the CLSTS that made it effective were: (1) activities for (a) ear training, (b) activating background knowledge, and (c) providing

relevant vocabulary knowledge; (2) variations and accents within the listening texts; (3) illustrations, pictures, videos and the names of listening texts that helped the students learn the target listening strategies ; (4) the use of L1 in teaching the target listening strategies; (5) feedback on the use of the target listening strategies; (6) the ability of the software to help the students: (a) to produce comprehensible output, (b) to develop individualized listening strategy systems, as well as their learning autonomy.

Concerning the students' opinions towards the CLSTS and its applicability, it was found that the students highly approved of the CLSTS for two reasons. First, it motivated them to practice the target listening strategies and, as a result they developed their ability to use the target listening strategies. Second, it made them more confident in listening to English.

The findings of the present study yielded the following teaching recommendations. Individualized learning, instant positive and negative feedback, knowledge of relevant vocabulary, sufficient exercises and sufficient learning times should be incorporated into the development of listening strategy training software for EFL learners.

The findings of this study support the findings of previous research that teaching listening strategies makes EFL students perform better in their listening comprehension. To gain deeper understanding of listening strategy training, future research should investigate other listening strategies which might also be helpful to EFL students. In addition, more in depth research is needed to explore students' generalizations of their use of listening strategies.

School of English

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TABLE OF CONTENTS

	Page
ABSTRACT (THAI).....	I
ABSTRACT (ENGLISH).....	III
ACKNOWLEDGEMENTS.....	V
TABLE OF CONTENTS.....	VII
LIST OF TABLES	XVII
LIST OF FIGURES.....	XX
 CHAPTER	
1. INTRODUCTION	1
1.1 Statement of the research problem.....	1
1.2 Rationale of the study.....	3
1.3 Significance of the study.....	5
1.4 Research questions.....	6
1.5 Research hypotheses.....	6
1.6 Definition of terms in this study.....	7
2. LITERATURE REVIEW	9
2.1 First and second language listening comprehension processes	10
2.1.1 First and second language listening comprehension processes	10
2.1.2 Factors that cause difficulties in L1 and L2 listening processes	13
2.1.3 Implications for the present study	19
2.2 Models of listening process....	21

TABLE OF CONTENTS (Continued)

	Page
2.2.1 Top-down processing.....	21
2.2.2 Bottom-up processing.....	21
2.2.3 Interactive processing.....	22
2.2.4 Implications for the present study.....	23
2.3 The effects of listening strategies that enable L2 learners to improve their listening comprehension	24
2.3.1 Listening strategy categories.....	24
2.3.2 Listening strategies used by second/foreign language learners.....	32
2.3.3 Factors influencing L2 learners' choice of listening strategies.....	40
2.3.4 Implications for the present study.....	41
2.4 How to train L2 learners to use listening strategies	50
2.4.1 L2 listening strategy training.....	50
2.4.2 Cautions for training listening strategy to L2 learners.....	62
2.4.3 Implications for the present study.....	63
2.5 The use of L1 in teaching EFL learners.....	65
2.5.1 The use of L1 in teaching EFL learners.....	65
2.5.2 Implications for the present study.....	68
2.6 Computer assisted second language listening comprehension.....	68
2.6.1 Listening comprehension and the value of CALL	70
2.6.2 Review of CALL studies in L2 listening comprehension.....	71
2.6.3 Implications for the present study.....	80

TABLE OF CONTENTS (Continued)

	Page
2.7 Theoretical framework for developing the CLSTS	81
3. METHODOLOGY OF THE STUDY.....	86
3.1 Research design.....	86
3.2 Participant.....	88
3.3 Research instruments.....	88
3.3.1 A personal and academic questionnaire.....	89
3.3.2 Pre- and post- listening comprehension tests	90
3.3.3 Questionnaires on the strategies trained by the CLSTS.....	94
3.3.4 A final questionnaire on the CLSTS	95
3.3.5 A semi-structured interview	97
3.4 Research treatments	98
3.4.1 A computer-assisted listening strategy training program (CLSTS).....	99
3.4.1.1 Model for designing and development of the CLSTS	99
3.4.1.2 Components and sequence of units 1-6 of the CLSTS	104
3.4.2 A computer-assisted listening training program (CLTS)	117
3.4.2.1 Model for designing and development of the CLTS....	117
3.4.2.2 Components and sequence of units 1-8 of the CLTS.....	117
3.5 Data transcribing, coding, and scoring procedures.....	121
3.5.1 A personal and academic questionnaire.....	121
3.5.2 Pre- and post- listening comprehension tests	121

	Page
3.5.3 Questionnaires on the strategies trained by the CLSTS	122
3.5.4 A final questionnaire on the CLSTS	123
3.5.5 A semi-structured interview	123
3.6 Data analysis techniques and hypotheses testing	123
3.6.1 A personal and academic questionnaire.....	123
3.6.2 Pre- and post- listening comprehension tests	124
3.6.3 Questionnaires on the strategies trained by the CLSTS	124
3.6.4 A final questionnaire on the CLSTS	124
3.6.5 A semi-structured interview	124
3.7 Procedures for data collection	126
3.7.1 Selection of a research site and participants	126
3.7.2 Inviting participants to take part in the study	126
3.7.3 Experimental procedures.....	127
3.7.3.1 Experimental procedure for participants who will be assigned to the experimental group.....	127
3.7.3.2 Experimental procedure for participants who will be assigned to the control group.....	129
3.8 The results of a one-to-one implementation.....	130
3.9 The results of a small group implementation.....	131
3.10 The results of a pilot group implementation.....	132

TABLE OF CONTENTS (Continued)

	Page
4. RESULTS	135
4.1 The effects of the CLSTS on promoting the participants' ability to use the target listening strategies.....	135
4.1.1 The participants' ability to use the target listening strategies.....	136
4.1.2 Pre- and post-listening comprehension test results.....	141
4.1.2.1 Pre-listening comprehension test results.....	142
4.1.2.2 Post-listening comprehension test results.....	142
4.1.2.3 Post-listening comprehension test results compared to pre-listening comprehension test results.....	142
4.1.1.4 Difference between experimental and control group pre- and post-listening comprehension tests.....	143
4.1.3 The effectiveness of the software on promoting the participants' ability to use the target listening strategies.....	144
4.1.3.1 The effectiveness of the software in the training of elaboration strategy.....	144
4.1.3.2 The effectiveness of the software in the training of listening for main idea.....	146
4.1.3.3 The effectiveness of the software in the training of listening for specific details.....	147
4.1.3.4 The effectiveness of the software in the training of Prediction strategy.....	149

TABLE OF CONTENTS (Continued)

	Page
4.1.3.5 The effectiveness of the software: Data gained from the final questionnaire.....	150
4.1.3.6 The effectiveness of the software: Data gained from semi-structured interview	155
4.1.3.6.1 The activities in the software help participants learn how to use listening strategies.....	156
4.1.3.6.2 The illustrations, pictures, videos, and the names of listening texts in the CLSTS were effective in strengthening the participants’ listening strategies.....	158
4.1.3.6.3 Feedback by the program to participants’ answers helped the participants refine their listening capabilities by improving how they used the listening strategies.....	159
4.1.3.6.4 The software equips the participants with listening strategies that help the participants feel confident attempting to understand spoken English.....	160
4.1.3.6.5 The software gives the participants considerable autonomy in the way they learn the listening strategies.....	161

TABLE OF CONTENTS (Continued)

	Page
4.1.3.6.6 Teaching listening strategies in L1 helped the participants better apply them when listening to exercises in L2.....	162
4.2 Regarding the participants' opinions towards the applicability and motivating capability of the CLSTS.....	163
4.2.1 The final questionnaire on the CLSTS results.....	163
4.2.2 Participants' opinions towards the applicability of the software.....	165
4.2.2.1 Participants' opinions towards the applicability of the training of elaboration strategy.....	165
4.2.2.2 Participants' opinions towards the applicability of the training of listening for main idea.....	167
4.2.2.3 Participants' opinion towards the applicability of the training of listening for specific details.....	169
4.2.2.4 Participants' opinion towards the applicability of the training of prediction strategy.....	171
4.2.2.5 Participants' opinions towards the applicability of the CLSTS: Data gained from the final questionnaire.....	173
4.2.2.6 Participants' opinions towards the applicability of the CLSTS: Data gained from the semi-structured interview...	175

TABLE OF CONTENTS (Continued)

	Page
4.2.2.6.1 The participants will use the targeted listening strategies in the future.....	175
4.2.2.6.2 The participants used a variety of targeted listening strategies when completing the exercises.....	176
4.2.3 Participants' opinions towards the motivating capability of the CLSTS.....	178
4.2.3.1 Participants' opinions towards the motivating capability of the CLSTS: Data gained from the final questionnaire...	178
4.2.3.2 Participants' opinions towards the motivating capability of the CLSTS: Data gained from the semi-structured interview.....	179
4.3 Shortcoming of the CLSTS.....	180
4.3.1 Criticism that addresses the shortcomings of the software	180
4.3.2 Suggestions for improvement the software	183
5. DISCUSSION AND CONCLUSIONS.....	184
5.1 Discussion.....	185
5.1.1 Aspects of the software that make it effective.....	186
5.1.1.1 The CLSTS provides activities for training the ear to listen to cues that facilitate the understanding of oral passages. The cues accomplish this by activating background	

TABLE OF CONTENTS (Continued)

	Page
knowledge and providing relevant vocabulary	186
5.1.1.2 Variations in the content and accents of the listening texts	188
5.1.1.3 The illustrations, pictures, videos, and the names of listening texts were effective in strengthening the participants' English listening strategies.....	189
5.1.1.4 The use of L1 in the software helped the participants better apply them when listening to exercises in L2.....	191
5.1.1.5 Feedback helps improve the use of listening strategies.....	193
5.1.1.6 The software helps participants produce comprehensible output.....	196
5.1.1.7 The software develops learners' own individualized strategy systems.....	197
5.1.1.8 The software encourages learner to take more responsibility for their own language learning	199
5.1.1.9 The software promotes learner autonomy, self- direction, and self-evaluation	201
5.1.2 Aspects of the software that give it applicability.....	203
5.1.3 Aspects of the software that make it motivating.....	207
5.1.4 Shortcomings of the training software.....	210

TABLE OF CONTENTS (Continued)

	Page
5.2 Conclusion.....	211
5.3 Limitations of the study.....	212
5.4 Pedagogical implications.....	213
5.5 Recommendations for future research.....	216
REFERENCES	218
APPENDICES	239
CURRICULUM VITAE	294



LIST OF TABLES

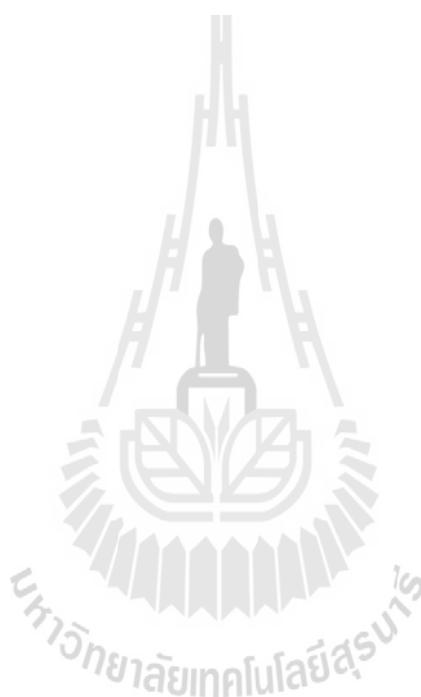
Table	Page
2.1 Summary of listening strategy categories and its sub-categories	30
2.2 Summary of L2 learners' listening strategies	39
2.3 Comparative benefits of using CALL and drawbacks of using traditional tools for developing learners' listening abilities	70
2.4 Theoretical framework for developing the CLSTS	81
3.1 A matrix illustrating how each data set will be used to answer each research question	89
3.2 Flesch-Kincaid Readability Index	102
3.3 Components and sequence of unit 1-6 of the CLSTS	105
3.4 Components and sequence of units 1-6 of the CLTS	118
3.5 Summary of instruments and data analysis techniques	125
3.6 Timetable for the experimental group (Group A)	129
3.7 Timetable for the control group (Group B)	130
4.1 Number and percentage of participant responses and average ratings of the academic questionnaire.....	137
4.2 The descriptive statistics for the experimental and control groups' pre- and post-listening comprehension tests.....	141
4.3 Pre- and post- listening comprehension tests – comparison of groups	143
4.4 Number and percentages of participant responses and average rating on the aspect of effectiveness of elaboration strategy training.....	145

LIST OF TABLES (Continued)

Table	Page
4.5 Number and percentages of participant responses and average rating on the aspect of effectiveness of the listening for main idea training.....	146
4.6 Number of percentages of participant responses and average rating on the aspect of effectiveness of the listening for specific details training.....	148
4.7 Number and percentages of participant responses and average rating on the aspect of effectiveness of prediction strategy training.....	149
4.8 Number and percentage of participant responses to questions related to the effectiveness of the CLSTS.....	151
4.9 Number and percentage of participant responses and average score of a final questionnaire on the CLSTS.....	164
4.10 Number and percentages of participant responses and average rating on the aspect of applicability of elaboration strategy training.....	166
4.11 Number and percentages of participant responses and average rating on the aspect of applicability of listening for main idea training.....	168
4.12 Number and percentages of participant responses and average rating on the aspect of applicability of listening for specific details training.....	170
4.13 Number and percentages of participant responses and average rating on the aspect of applicability of prediction strategies.....	172
4.14 Number and percentage of participant responses to questions related to the applicability of the CLSTS.....	173

LIST OF TABLES (Continued)

Table	Page
4.15 Number and percentage of participant responses to questions related to the motivating of the CLSTS final questionnaire on the CLSTS	179



LIST OF FIGURES

Figure	Page
3.1 Research design of this study	87
3.2 A screenshot of the homepage of the software.....	98
3.3 A screenshot of the introductory page of the CLSTS.....	106
3.4 A screenshot of the activities in the CLSTS.....	107
3.5 A screenshot of introduction to Unit 3 Listening for main ideas.....	107
3.6 A screenshot of practicing listening to sounds of normal spoken English in Unit 3 Listening for main idea.....	108
3.7 A screenshot of vocabulary related to the topic of the CLSTS.....	109
3.8 A screenshot of listening strategy training in Unit 3 of the CLSTS.....	110
3.9 A screenshot of matching exercise in the CLSTS.....	111
3.10 A screenshot of short answer exercise in the CLSTS.....	111
3.11 A screenshot of glossary of terms in the CLSTS.....	112
3.12 A screenshot showing a review of the use of listening for main ideas.....	113
3.13 A screenshot showing a listening exercise in the CLSTS	114
3.14 A screenshot showing negative feedback from Exercise 2 in Unit 4.....	115
3.15 A screenshot of the participant's score profile of the CLSTS.....	116
3.16 A screenshot of the introductory page of the CLTS	118
3.17 A screenshot of the activities in the CLTS	119
3.18 A screenshot of vocabulary study of the CLTS	119
3.19 A screenshot of listening practice featured by the CLTS	120
3.20 A screenshot of self assessment of the CLTS	121

CHAPTER 1

INTRODUCTION

1.1 Statement of the research problem

Most Thai EFL students do not acquire communicative English proficiency even though they study English as a compulsory subject in school for twelve years or more – from primary school to university (Ministry of Education, 1996; Ministry of University Affairs, 1995). The ability to use English effectively is important for Thai EFL students. The momentum of globalization is bringing countries and cultures closer together. In addition, information technology, especially the Internet, is mostly in English. Therefore, the ability to use English is necessary to access new knowledge.

A review of previous research regarding the use of various English language skills used by EFL students indicates that listening skills are weak. This claim is in agreement with the results of studies by Thai researchers (e.g. Sooksripanich (1991), Thanarak (1992), Singhasiri (1994), and Kijpoonphol (2006). These studies show that most Thai EFL students have problems with EFL listening comprehension.

Brown and Yule (1983) assert that listening difficulties come from four sources: ‘the speaker’, which is comprised of the number of participants in the conversation, speech rate, and types of accents; ‘the listener’ which is comprised of the role of the listener, the level of response, and interest in the topic; ‘the content’ which is comprised of vocabulary, grammar, information structure, and background knowledge; and ‘the support’ which is comprised of visual aids to support a text.

However, in real life situations, most sources of difficulty cannot be overcome because the listener cannot control the speaker, the content, and the support. Hence, the only source of difficulty that EFL students can control is 'the listener', or the students themselves.

A review of previous studies concerning EFL listening revealed that one important way to improve learners' listening ability is by teaching students' listening strategies. Listening strategies refer to the thoughts and behaviors such as elaboration, identifying the main idea, identifying specific information, and prediction, which listeners use to help them comprehend, learn, or retain information (O'Malley and Chamot 1990). Previous research (O'Malley, Chamot, Stewner-Manzanares, Russo, and Küpper, 1985b; Sooksripanich, 1991; Thanarak, 1992; Singhasiri, 1994; and Carrier, 2003) indicates that if students can use listening strategies effectively, they will perform better on their L2 listening comprehension.

From the review of literature, it is found that there are five inadequacies of research in L2 listening strategy training.

First, there is very little research on listening strategy training for Thai EFL students. That is, most of the previous studies were conducted with participants that were dissimilar to Thai EFL students.

Second, in the past, research studies on listening strategies (e.g. Sooksripanich, 1991; Thanarak, 1992; Singhasiri, 1994, Carrier, 2003) were classroom-based and paper-based and teachers presented listening texts with audio-video materials, explained how to use listening strategies, and then assessed the learning outcome.

Third, although a number of previous studies conducted both inside and outside Thailand investigated the use of computers and instructional designs to

enhance students' listening comprehension, only a small number of them investigated the use of computers to train listening strategies (e.g. Clement, 2007).

Fourth, while previous small scale studies conducted in Thailand investigated the effects of listening strategy training on Thai university students (e.g. Sooksripanich, 1991; Thanarak, 1992; Singhasiri, 1994), very few research studies investigated the effects of computer-assisted listening strategy training software on Thai high school EFL students.

Lastly, most of the previous research conducted in Thailand and abroad developed only one or two listening strategies.

1.2 Rationale of the study

The rationale for this study is provided for the above discussed five inadequacies in the area of L2 listening strategy training.

First, because there is very little research on listening strategy training for Thai EFL students, the present research will be conducted with Thai participants. The results will give more specific information to guide listening strategy training for Thai EFL students.

Second, due to the fact that previous training used audio and/or video with textbooks in traditional classrooms, the present study aims to determine whether a computer assisted listening strategy training software (CLSTS) can have a significant positive effect on improving Thai high school EFL students' ability to use the four targeted listening strategies. In other words, there is a persuasive theoretical basis for the view that the training of listening strategies delivered through web-based computer software will make significant differences to L2 listening comprehension

and to the students' opinions towards learning with a computer assisted listening strategy training software.

Third, because a small number of previous studies investigated the use of computers to teach listening strategies, the present study develops a computer assisted listening strategy training software for Thai EFL participants.

Fourth, for the reason that a large number of previous studies investigated the effects of listening strategy training on Thai university students, the present study investigates the effects of the training on Thai high school EFL students.

Fifth, for the reason that most of the previous research trained one or two listening strategies, the present study aims at training a set of four listening strategies because combinations of strategies often have more impact on the development of listening comprehension than a single strategy (Oxford, 1994).

There are four reasons why the present study trains the participants in the four listening strategies (i.e. elaboration, listening for main idea, listening for specific information, and prediction). First, most L2/EFL students have some background knowledge (i.e., students' knowledge of topics and literary styles) but usually do not draw on that knowledge that they already know or understand about their world to support their attempts to make sense of what they hear or to fill in missing information. Hence, it is necessary to teach an "elaboration" strategy which can make students think about their prior knowledge from outside the listening text to help fill in the missing information (Chamot, 1995; Vandergrift, 1997). Second, some L2/EFL students tend to focus on what they do not understand rather than partial comprehension. They do not know to which part they need to pay attention or what the gist of the listening text is, they then try to listen to every single word. Therefore,

it is necessary to teach a strategy involving listening for the main idea of a listening text. The students need to have some idea of the overall meaning of what they have heard before they can fully understand the detailed meaning (Richard, 1983; Grenfell and Harris, 1999). Third, most L2 students do not focus on important information such as dates, times, prices, and events. Students may not have the ability to distinguish relevant information from irrelevant information. So, it is necessary to teach a strategy that helps them to identify specific information. Once the listeners know the gist, and as they are following the message, they are also making decisions about what to extract for processing into long term memory (Richard, 1983). Fourth, some students start listening without thinking about the subject or topic. Comprehension improves if they think about what they may hear. So, they should be trained in a “prediction” strategy by which they can anticipate the contents of a listening text from the title and other clues (e.g. photos, maps, charts).

1.3 Significance of the study

Knowledge gained from the present study will not only be beneficial to Thai EFL teachers who are interested in listening strategy training but may also encourage them to incorporate or develop a computer assisted listening strategy training software for Thai EFL students. This study aims to encourage those teachers to develop listening strategy software that incorporate the four fundamental listening skills. The results can be of great help to the teaching of listening to Thai high school EFL students by raising their awareness of strategies and by encouraging them to consciously use listening strategies.

1.4 Research questions

The research questions in this study are:

- 1) To what extent does the CLSTS enable Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension?
- 2) What are the students' opinions towards the CLSTS and its applicability?

1.5 Research hypotheses

The following are the research hypotheses of the present study:

Hypothesis 1: After training with the CLSTS, Thai high school EFL students will be able to use the target listening strategies to enhance their listening comprehension.

This hypothesis is based on the results of studies by Carrier (2003), Johnson (2003), Sooksripanich (1991), Thanarak (1992), and Vandergrift (2002) which show that listening strategy training promoted second language learners' listening comprehension.

Hypothesis 2: Thai high school EFL students will regard the use of the CLSTS as positive, effective, and motivating.

This hypothesis is based on the results of studies by Johnson (2003), Thanarak (1992), and Sooksripanich (1991) which show that students have a positive attitude towards listening strategy training. It is also based on the results of studies by Brett (1997), Clement (2007), and Jones (2003) which found that students regarded the use of multimedia for listening comprehension as positive, effective and motivating.

1.6 Definition of terms in this study

1) Listening comprehension

In this study, listening comprehension is defined as “an active process in which individuals focus on selected aspects of aural input, construct meaning from passages, and relate what they hear to existing knowledge” (O’Malley, Chamot, and Küpper, 1989, p. 418).

2) Listening strategies

Listening strategies is defined as a decision by the listener to make a cognitive or behavior change in order to understand something that is being said” (Rost, 2002, p. 279). In this study, the listening strategies taught are elaboration, listening for the main idea, listening for specific details, and prediction.

3) Elaboration

An elaboration strategy is defined as the act of “using prior knowledge from outside the text or conversational context and relating it to knowledge gained from the listening text or conversation in order to fill in missing information” (Vandergrift, 2003, p. 495).

4) Listening for specific details

A strategy to listen for specific details is defined as “the decision to attend to situational details that assist in understanding or task completion” (Chamot, 1995; Goh, 2002a).

5) Listening for main idea

A strategy to listen for the main idea is defined as “the decision to attend to specific aspects of language input or the general gist of information” (Chamot, 1995; Goh, 2002a).

6) Prediction

A prediction strategy refers to the act of “anticipating contents of a listening text by using general contents and details” (Chamot, 1995; Goh, 2002b).

7) CLSTS (computer assisted listening strategy training software)

In this study, CLSTS refers to computer software developed for listening strategy. It was used to train four listening strategies (i.e. elaboration, listening for main idea, listening for specific information, and prediction) (for full details of the software see section 3.4.1: Computer assisted listening strategy training software in chapter 3). The CLSTS was used with the experimental group.

8) CLTS (computer assisted listening training software)

In this study, CLTS refers to computer software developed for listening practice. This software contains eight sessions (i.e., pre-training, units one to six, and a post-training session). It also has the same listening texts as those in the CLSTS. However, it does not include listening strategy training. The CLTS was used with the control group. (for full details of the CLTS see section 3.4.2: Computer assisted listening training software)

9) Moodle (Modular Object-Oriented Dynamic Learning Environment)

Moodle is a course management system (CMS). It is a free, open source software package designed to help educators create effective online learning communities by using pedagogical principles (Rice, 2006).

10) Listening comprehension ability

In this study the term listening comprehension ability refers to each participant's scores on pre- and post-listening comprehension tests.

CHAPTER 2

LITERATURE REVIEW

Many researchers indicate that listening skill, as important as it is, presents EFL students with a considerable challenge (Anderson and Lynch, 1988; Hastings, 1995; Rost, 1990). It has been said that, if students can use listening strategies effectively, they will perform better on their L2 listening comprehension (Carrier, 2003; O'Malley, Chamot, Stewner-Manzanares, Russo, and Küpper, 1985b; Singhasiri, 1994; Sooksripanich, 1991; Thanarak, 1992).

However, while research suggests a number of strategies for teaching listening, they appear to present no coherent system and, as a result, there is a need for a more systematic and comprehensive approach. It has been proposed that when EFL students are aware that listening strategies can help them with listening, they feel better motivated to use the strategies. This chapter includes studies and discussions of language learning strategies which provide the context for this study. The chapter is divided into eight parts: (1) First and second language listening comprehension processes; (2) Models of the listening process; (3) The effects of listening strategies that improve L2 listeners' listening comprehension; (4) How to train L2 learners to use listening strategies; (5) The use of L1 in teaching EFL learners; (6) Computer-assisted second language listening comprehension; and (7) Theoretical framework for developing the CLSTS.

2.1 First and second language listening comprehension processes

Hasan (2000) pointed out the difference between listening and listening comprehension that “listening” is a process of just listening to the message without interpreting or responding to the text, while “listening comprehension” is a process which includes the meaningful interactive activity to attain an overall understanding of the text. His view of listening comprehension is in agreement with the definition of listening comprehension of O’Malley, Chamot, and Küpper (1989). They regard listening comprehension as an active process in which listeners select information from the auditory and/or visual cues and relate the information to existing knowledge in their long-term memory for better understanding and comprehending of what they hear.

2.1.1 First and second language listening comprehension processes

From the previous study, although the processes of learning to listen in first language (L1) and the process of learning to listen in second language (L2) have some similarities; there remain significant differences. In the L2 learning context, the listening process appears to be more complex. As a result, comprehending the spoken form in the target language is one of the most difficult tasks for L2 listeners.

Anderson (1995) proposed a three-phase cognitive model that explains stages that L1 listener goes through in listening to texts. The stages of the model are: (1) perception; (2) parsing; and (3) utilization. However, each process is overlapping.

- In the perception processing phase, the listeners encode the acoustic message. This phase involves “segmenting phonemes from the continuous speech stream” (Anderson, 1995, p. 37). During this phase, “an individual

attends closely to input and the sounds are retained in echoic memory” (Goh, 2000, p. 57).

- In the parsing phase, words are transformed into a mental representation of the combined meaning of these words. This occurs when an utterance is segmented according to syntactic structures or cues to meaning. These segments are then recombined to generate a meaningful representation of the original sequence. This mental representation is related to existing knowledge and stored in long-term memory as propositions or schemata during the third phase.
- In the utilization phase, the listeners may draw different types of inferences to complete the interpretation and make it more meaningful, or use the mental representation to respond to the speaker.

These three phases represent different levels of processing, with perception being the lowest. All three phases are interrelated and recursive and can happen concurrently during a single listening event. They are “by necessity partially ordered in time; however, they also partly overlap. Listeners can be making inferences from the first part of a sentence while they perceive a later part” (Anderson, 1995, p. 379).

There are many good reasons to believe that the processes of L1 and L2 listening comprehension are similar. O’Malley and Chamot (1990) found the presence of perception, parsing, and utilization in L2 comprehension, while details of some process are slightly different.

L2 listening comprehension process described by O’Malley and Chamot (1990) slightly differs from L1 listening comprehension proposed by Anderson (1995).

In the first language perceptual processing phase, the listeners focus on the acoustic message and then segment phonemes from the speech stream. Speech perception for L1 listeners is largely automatic, fast, and happens effortlessly. In second language acquisition, this step tends not to be as automatic, fast, or effortless as in L1 because L2 listeners focus more on an oral text and contextual factors. However, Gósy (2007) asserted that if L1 listeners have problems in their L1 speech perception, they will have greater problem in their L2 perceptual processing.

In the L1 parsing process phase, words are transformed into a mental representation of the combination of meaning for these words. In L2, listeners use words and phrases to construct meaningful mental representations of text. As a result of decoding, there is a matching between words in short-term memory and a type of dictionary in long-term memory. This process then allows L2 listeners to identify the meanings of individual words, not the meanings as a sequence of text as done in L1.

In the first language utilization process phase, for L1 process, the listeners draw different types of inferences to complete the interpretation and make it more meaningful. A mental representation of the text meaning is related to declarative knowledge in long-term memory, which can be called schemata. L2 listeners are subsequently equipped both with information that they know and information that is entirely new to understand the text (O'Malley and Chamot, 1990). In L2, listeners cannot draw on different types of inferences as seen in L1 learners.

Once L2 listeners have achieved a high level of listening proficiency, processing which is more similar to that of L1 listeners can be realized. Input can be more easily filtered through working memory, appropriate schemata can be activated, and information can be attached to already existing neural networks. However, without

appropriate schemata and cultural knowledge, misunderstanding remains a possibility despite a high level of language proficiency.

2.1.2 Factors that cause difficulties in L1 and L2 listening processes

Anderson and Lynch (1988) proposed four major factors that create difficulties in L1 and L2 listening: (1) information organization; (2) familiarity of topic; (3) explicitness of information; and (4) type of input.

1) Information organization

The most widely investigated feature of information organization is the sequencing of information in simple narrative texts. If events are described in the order they occurred, the story is better understood and more accurately recalled.

2) Familiarity of topic

Listening to a familiar topic is easier than to an unfamiliar topic.

3) Explicitness of information

Three sorts of explicitness of information have been found to influence ease of comprehension: (1) whether the text contains not only the necessary information but redundant facts; (2) whether the speaker provides all the necessary information but no more; and (3) whether the listener is required to recognize alternative expressions referring to the same character.

4) Type of input

The type of input affects the degree of difficulty. Brown and Yule (1983) categorized spoken texts into three broad types: 'static' which means that the relationship between items is likely to be fixed; 'dynamic' which refers to shifts of scene and time; and 'abstract' which focuses on someone's ideas and beliefs. These

three terms refer to the differences in the potential complexity of relationships between things, people, events, and ideas referred to by a speaker.

Brown (1994) defined eight characteristics of **spoken language** which make the L2 listening process difficult. They are:

1) Clustering: Due to memory limitations and predisposition for chunking or clustering, listeners break down speech into smaller groups of words. L2 listeners have to pick manageable clusters of words.

2) Redundancy: In real life situation, speakers do not often use sufficient redundancy which could help L2 listeners to process meaning easier.

3) Reduced forms: Spoken language also has many reduced forms. They can be phonological, morphological, syntactic, or pragmatic. These pose significant difficulties, especially to classroom learners.

4) Performance variables: The distracting performance variables such as hesitations, false starts, pauses, and corrections of L2 may cause difficulties. Listeners should train themselves to listen for meaning while in the middle of all these distracting performance variables.

5) Colloquial language: Listeners may find it difficult to deal with colloquial language such as idioms, slang, reduced forms, and shared cultural knowledge. The extent to which speakers use these language forms has an impact on comprehension (Brown and Yule, 1983).

6) Rate of delivery: Most of L2 listeners believe that native speakers speak too fast for them, and this makes it difficult for L2 listeners to follow the speakers (Brown and Yule, 1983).

7) Stress, rhythm, and intonation: The prosodic features of L2 may cause difficulties. If L2 listeners feel familiar with these prosodic features, they may have fewer difficulties in L2 listening.

8) Interaction: Interaction plays a major role in listening comprehension. When L2 listeners cannot communicate with speakers, they also cannot elicit more information from them. In other words, listeners, who are active participants in a conversation, will get more information from their interlocutors to facilitate understanding of the topic than listeners who are eavesdropping on a conversation (Brown and Yule, 1983).

Rubin (1994) categorized factors that influence L2 listening comprehension into five categories: (1) text type, (2) task, (3) speaker, (4) listener, and (5) listening process. Text type comprises of three features: acoustic features, discourse features, and a clear influence. Task is comprised of output tasks, types of questions (i.e., questions referring to local cues or global cues), the amount of time available for processing information, and the repetition of information. Speaker includes aspects such as accent, fluency, standard or non-standard usage, and speaker gender. Listener is comprised of language proficiency, gender, memory, interest, purpose, prior knowledge, attention, concentration, accuracy of pronunciation, physical and psychological states, knowledge of context, topic familiarity, and established learning habits. Listening process is comprised of top-down process, bottom-up process, combination of both processes, and types of listening strategies.

Chiang and Dunkel (1992) worked on a research based upon Brown & Yule (1983). They focused on three factors (i.e. listener, speaker and the content of the message) affecting L2 listening quality. They investigated EFL listening

comprehension of 388 high-intermediate listening proficiency (HILP) and low-intermediate listening proficiency (LILP) Chinese students. These students listened to a lecture, the discourse of which was (1) familiar-unmodified, (2) familiar-modified, (3) unfamiliar-unmodified, or (4) unfamiliar-modified. After a lecture, EFL students took a multiple-choice exam testing recognition of information presented in the lecture and general knowledge of familiar and unfamiliar topics.

The results of the study showed (1) a significant interaction between speech modification and listening proficiency and (2) a significant interaction between prior knowledge and test type. The first one indicated that the HILP students benefited from speech modification, which entailed elaborations and information redundancies, but the LILP students did not. The second one indicated that, for both HILP and LILP students, prior knowledge had a significant impact on their memory for information contained in the passage-independent test items on the post-lecture comprehension test. EFL students who listened to the familiar-topic lecture had higher passage-independent scores than passage-dependent scores. There was no difference in the performance on the passage-independent and passage-dependent items of those who listened to the lecture on an unfamiliar topic.

From the study of Goh (1997), factors affecting listening comprehension could be separated into person knowledge and task knowledge. For person knowledge, the factors include: (1) limited vocabulary or academic terms; (2) phonological modification; (3) particular types of accent; (4) idiomatic expressions; (5) types of input with an unfamiliar structure; (6) inefficient memory; and (7) fast speech. For task knowledge, the factors are: (1) phonological modifications or prosodic features; (2) unfamiliar vocabulary; (3) different varieties and local accents; (4) speech rate; (5)

types of input; (6) interest in topic and purpose of listening; (7) existing knowledge and experience; (8) physical factors; (9) emotional states; and (10) length and structure of sentences.

When taking a cognitive perspective on learners' L2 listening comprehension, Goh (2000) identified real-time listening difficulties faced by 40 L2 learners who learned English in preparation for undergraduate studies and examined these difficulties by using the three phase model of L1 listening process proposed by Anderson (1995). Data were elicited from learners' self-reports through procedures of weekly diaries, small group interviews and immediate retrospective verbalizations. In the diaries, learners wrote about actual listening events and described how they tried to understand what they heard and the problems they faced.

The data showed ten problems which occurred during the cognitive processing phases of perception, parsing, and utilization. In the perception phase, the five problems were: (1) they did not recognize words they know; (2) they neglected the next part when thinking about meaning; (3) they could not chunk streams of speech; (4) they missed the beginning of texts; and (5) they concentrated too hard or were unable to concentrate. These linked to word recognition and attention failure. In the parsing phase, there were three problems identified: (1) students quickly forgot what was heard; (2) they were unable to form a mental representation from spoken words and (3) they did not understand subsequent parts of the input. In the utilization phase, two problems were identified: (1) learners understood words, but not the intended message and (2) they confused key ideas in the message. All the above factors contributed to inefficient parsing and failure to utilize mental representations of parsed input. A comparison of two groups of learners with different listening problems

showed some similarities. On the other hand, low ability listeners had more problems with low-level processing.

Hasan (2000) studied learners' perceptions of their own listening comprehension problems. The participants were 81 native speakers of Arabic learning English as a foreign language. Research hypotheses were: (1) learners' use of ineffective listening strategies may affect their listening comprehension and (2) learners experience different sorts of listening comprehension problems which may be due to factors relating to the speakers' speech and to the learners' proficiency in listening comprehension. The evidence showed that EFL learners encountered various kinds of listening problems. It was found that EFL learners were in some respects poorly equipped with effective listening strategies, skills, and activities to help them to improve their listening comprehension.

Goh and Taib (2006) studied metacognitive instruction of primary school L2 students. The study involved a series of process-based listening lessons. From the students' self-report and group discussion, Goh and Taib (2006) found twelve features that influenced students' ability to listen well and answer comprehension questions. These twelve features were categorized under four broad factors. The first factor was 'text' i.e. explicitness of information, speech rate, content of listening text, and repetition. The second factor was 'task' i.e. types of question, types of answer option, and test format. The third factor was 'environment' i.e. physical conditions and presence of other listeners. The last factor was 'listener and speaker' i.e. emotional and physical states, attention, and voice clarity.

Chen (2008) studied affective factors on listening performance of English majors in Xinjiang Agricultural University. The purposes of the study were to

investigate the affective factors and provide some suggestions for teachers to help students develop learning strategies. The participants were 30 freshmen. The instruments were interview protocol and questionnaires. The major findings on the affective factors were: (1) subjective factors: anxiety, lack of motivation, fear, frustration, and orientation of achievement and pressure were negatively related to listening performance of students; (2) objective factors: teachers' teaching quality and syllabus design were related to listening performance of students; and (3) syllabus design: listening should go together with other courses at the beginning of English teaching.

2.1.3 Implications for the present study

From section 2.1.1 and 2.1.2, there are difficulties in both L1 and L2 listening comprehension. However, most factors that cause the difficulties are similar. The main problems identified relate to: (1) the listener and his/her interest in topic and prior knowledge (Anderson and Lynch, 1988; Brown and Yule, 1983; Chiang and Dunkel, 1992; Rubin, 1994) and (2) the text type, including speech rate and the content of the text (Brown, 1994; Goh, 1997; Goh, 2000; Hasan, 2000; Rubin, 1994).

Based on the literature review in section 2.1.1, and 2.1.2, in developing the research tools of this study, the researcher will consider “the listener” and “the text type” factors respectively. First, building upon the studies of Chiang and Dunkel (1992), Goh (1997), Goh (2000), and Goh and Taib (2006), students' prior/ existing knowledge and their interest will be focused. Topics which are at the appropriate level of students' knowledge and their level of education, and topics in which the students are interested will be selected. Therefore, topics which are similar to those in textbooks and commercial books for Thai EFL learners will be chosen. This is very important as,

if the gap between what students already know and the materials used is too great, students will struggle and, possibly, lose motivation. At the same time, if the listening texts are not challenging enough, students would become bored and lose motivation as well.

Next, building upon the studies by Brown (1994), Hasan (2000), Goh (1997), Goh (2000) and Rubin (1994), a selection of texts and strategies which consider the factors of clustering, redundancy, reduced forms, performance variables, colloquial language, speech rate, prosodic features, content and vocabulary size, and length will be included.

Research by Chiang and Dunkel (1992), Goh (2000), and Hasan (2000) used students' scores on comprehensive English language tests and English proficiency tests to divide students into groups. A similar selection process will be used in this study. Chiang and Dunkel (1992) discovered that high-intermediate listening proficiency (HILP) students benefited from speech modification which entailed elaboration and redundancy of information, but low-intermediate listening proficiency (LILP) students did not. Goh (2000) found that low ability listeners hardly got beyond the perception or parsing phase because of limited proficiency and inadequate processing capacity. Therefore, in this research study, students with intermediate proficiency level will be selected. As evidenced in literature, (1) these students are a majority (2) higher proficiency level students needed less assistance; and (3) because of time and budget limitation, and the results of previous research (e.g. Chiang and Dunkel, 1992; Goh, 2000), selection of students with low proficiency levels would not be appropriate.

2.2 Models of the listening process

2.2.1 Top-down processing

Rost (2006) defined the term top-down processing in listening as “the use of expectations in order to infer what the speaker may have said or intended to say. Expectations come from pre-packaged patterns of background knowledge which listeners have stored in memory from prior experiences” (p.53).

The term top-down processing carried the meaning of “knowledge driven” (Field, 1999). The top-down process works from higher-level schemata to lower-level schemata, and enables higher-level schemata to infer lower-level. Schemata refer to a representation within the mind of a generic concept or some prior understanding of the subject at hand. Schemata are constantly being created and updated, providing the listener with new outlooks and new bases for interpreting texts (Rost, 2005). In other words, listeners apply their background knowledge, either content schema or textual schema, and expectations of what will follow next in the discourse and then infer what the intentions of the speaker may have been (Helgesen, 2003). Brown (1994) claimed that the activation of schemata, deriving meaning, global understanding and the interpretation of a text are the central mechanisms of top-down processing.

2.2.2 Bottom-up processing

Rost (2006) referred the term bottom-up processing as “a two-pass listening process. The first is to identify the overall phonological shape of the metrical unit that the speaker utters and the second is for segmental decoding or breaking the metrical unit into individual word” (p.57).

The term bottom-up processing carried the meaning of a “data driven” process (Field, 1999). In this process, upon perception of sound, low-level schemata are

activated to form words. Once each word is recognized, higher-level schemata which are used for predicting upcoming words are activated for forming phrases or clauses. In other words, sounds are used to build increasingly larger units of information before the listeners understand an aural input (Goh, 2002a). Peterson (1991) pointed out that in this processing, listeners focus on sounds, words, intonation, grammatical structures, and other components of spoken language. Listeners analyze the various morphosyntactic elements of the discourse from the phonemes of the language to the syllables, words, phrases, and sentences that make up the discourse.

In bottom-up processing, listeners use sound input to guess words, based on matching initial sounds with their lexicon. As more sounds occur, listeners can eliminate more and more possibilities until they arrive at the single, most accurate match to the input sounds. This matching may occur before all of the sounds have been heard because of the elimination process. Wilson (2003) suggested that bottom-up processing focuses listeners' attention on what they may miss in their top-down processing. It will lead to better top-down processing.

2.2.3 Interactive processing

Although both bottom-up and top-down processing are usually discussed as though they were separate processes, they often overlap. Peterson (1991) and Rost (2002) referred this overlap as an interactive processing. It means a combination of form and meaning-driven processing, in which the listeners use both prior knowledge (top-down) and linguistic knowledge (bottom-up) in understanding a message. Both processing are occurred in parallel. One type of processing might sometimes take priority, depending on learners' level of English proficiency. That is, effective listeners need a certain level of linguistic proficiency to manage bottom-up processing

(Peterson, 1991). When learners are faced with input for which they do not have linguistic knowledge, they may rely on their prior knowledge to compensate for the lack of linguistic knowledge (Wilson, 2003).

Field (2004) studied L2 listeners' problems. His research addressed two major questions: (1) If top-down and bottom-up processing are in apparent conflict, which one predominates?; and (2) How do learners deal with new vocabulary in a listening passage? Three experiments were designed to test the extent to which L2 learners were inclined to place their trust in top-down, rather than bottom-up types of processing. Field found that in the early stages of L2 listening, the difficulty was sometimes said to derive from too heavy a reliance on bottom-up information. Less experienced listeners supposedly focused so much attention on identifying sounds and words that they had no time or mental capacity left for building higher-level units of meaning. However, there was contrary evidence which indicated that non-native listeners made considerable use of top-down processes. Field suggested that listening in a foreign language may be assisted by an interactive-compensatory mechanism already available in L1, which compensates for gaps in comprehension. For example, when a salient word is unfamiliar, listeners do not constantly adopt a technique of visualizing the orthographic form of the word, but, instead, they infer its meaning from context. They frequently choose to match what they hear with a known word which sounds similar. In such instances, the match may (a) have little to do with the context or syntax, or (2) may be drawn from top-down expectations.

2.2.4 Implications for the present study

Based on the literature review and research studies in section 2.2.1, 2.2.2, and 2.2.3, in designing software for teaching the four target listening strategies, the

researcher should also consider promoting some bottom-up and top-down processing that are necessary for the learners to learn the listening strategies.

In regard to the top-down process, the researcher includes activities for activating students' prior knowledge or schemata prior to studying the lessons on listening strategies.

In regard to the bottom-up process and details in section 2.2.2, the researcher designs activities to help L2 listeners recognize the exact phonemes and words. This is accomplished by providing exercises for matching sounds with words. In each unit, students listen to a number of sentences and identify the number of words that they will hear. While the task might sound easy, the weak forms in normal connected speech can make it problematic. By comparing their versions with correct sentences, students become more aware of the sounds of spoken English, and how these sounds are different from the written or carefully-spoken forms. This helps them develop the skills of recognizing known words and identifying word divisions in fast, connected speech.

2.3 The effects of listening strategies that enable L2 learners to improve their listening comprehension

2.3.1 Listening strategy categories

Rost (2002) defined “listening strategy as a decision by the listener to make a cognitive or behavior change in order to understand something that is said” (p.279).

Ellis and Sinclair (1989) proposed three cognitive listening strategies. The first type refers to personal strategies which include identifying prior knowledge before listening, using imagination while listening, and planning to listen to selected

information. The second type refers to risk taking strategies which include predicting based on prior knowledge, using linguistic signals and paralinguistic cues, and guessing unknown words from the context. The third refers to using organizing strategies for managing resources, materials, and time.

Brown (1994) identified a number of strategies for effective listening. These include: (1) looking for keywords; (2) looking for nonverbal cues, such as tone, volume, rate, pitch, pausing, and silence; (3) predicting interlocutor's purpose from the context of the spoken discourse; (4) associating information with one's existing cognitive structures; (5) guessing meanings; (6) seeking clarification; and (7) listening for the general gist. Brown also noted that using effective listening strategies can be a highly significant part of listeners' chances for successful listening.

Gabler and Scholnick (1995) suggested eight strategies for L2 listeners to improve their listening comprehension:

- use what they already know to help them prepare for what they may hear.
- scan for background information and think about who and where the speakers are. The way the speakers look and sound can help good listeners to understand what is said even if good listeners do not understand all of their words.
- scan for the main idea. They concentrate on trying to understand their interlocutors' main ideas.
- infer meaning from the situation, the needs of their interlocutors and what is, and is not, said.
- scan for specific pieces of information they need and not worry about anything else.

- use context clues (i.e. the words and the sentences around the new words) to help them understand the meaning.
- use structural and intonation clues. They use what they already know about structure and intonation to help them improve their listening skills.
- revise assumptions. Because people think while they talk, people can change their minds about the things they have already said. Good listeners have to be ready for the changes.

Chamot (1995) mentioned that there are three categories of listening strategies: cognitive, meta-cognitive and social-affective.

The four cognitive strategies are: (1) Inferencing, or filling in missing information, by using contextual clues, using information from familiar content words, drawing on knowledge of the world, applying knowledge about the target language, and using visual clues; (2) Elaboration of, or embellishing, an initial interpretation by drawing on knowledge of the world and about the target language; (3) Predicting the contents of a text by anticipating the general content and details; and (4) Contextualization, or relating new information to a wider context, by placing input in a meaningful context, identifying related information upon hearing a keyword, and relating one part of a text to another.

The six meta-cognitive strategies are: (1) Pre-listening preparation by previewing relevant contents and rehearsing sounds; (2) Selective attention, or noticing specific aspects of input, by listening to words in groups, listening for gist, listening for familiar content words, noticing how information is structured, paying attention to repetition, noticing intonation features, listening to specific parts of the input, and

paying attention to visuals and body language; (3) Directed attention, or avoiding distractions, by concentrating hard and continuing to listen; (4) Monitoring comprehension, or checking understanding while listening, by confirming that comprehension has taken place; (5) Visualization, or forming a mental picture of what is heard, by imaging scenes, events, and objects that are being described, and mentally displaying the spelling of keywords; and (6) Reconstruction, or using words heard to create meaning, by reconstructing meaning from the words that are heard and from one's notes.

Four social-affective strategies are: (1) Cooperation, or asking the speaker for help, by asking for repetition, explanation and clarification, and by using paraphrase to verify interpretation; (2) Confidence building, or encouraging, by telling themselves to relax, by using positive self-talk, identifying words or ideas that are not understood, checking current interpretation with the context of the message, and checking current interpretation with prior knowledge; (3) Real-time assessment of input, or determining the value of specific parts of the input, by evaluating specific parts of the input, assessing the importance of problematic parts that are heard, and determining the potential value of subsequent parts of input; and (4) Comprehension evaluation, or checking interpretation for accuracy, completeness and acceptability, by checking one's interpretation against external sources, prior knowledge, and matching interpretation with the context of the message.

Vandergrift (1996) proposed listening strategies based on O'Malley and Chamot's (1990) learning strategy framework. Nevertheless, he added another kind of strategy: socio-affective strategy. The meta-cognitive listening strategies consist of planning, monitoring, evaluating, and problem identification. The cognitive listening

strategies consist of inferencing, elaboration, summarization, translation, transfer, repetition, resourcing, grouping, note taking, deduction/induction, and substitution. In turn, the socio-affective listening strategies consist of questioning for clarification, cooperation, lowering anxiety, self-encouragement, and taking emotional temperature.

Grenfell and Harris (1999) proposed that effective L2 listeners should use the following strategies:

- 1) Recognizing the type of the text whether it is a conversation, advertisement, or a news program.
- 2) Recognizing the topic by looking for gist.
- 3) Guessing on the basis of the knowledge of the world by using the listener's common sense.
- 4) Using the tone of the interlocutor's voice for clues together with facial gestures
- 5) Identifying cognates.
- 6) Identifying unfamiliar phrases.
- 7) Holding the unfamiliar sounds in the listener's head and saying them over again.
- 8) Trying to break down the stream of the sound into individuals words.
- 9) Trying to write the sounds down and to relate them to written words previously learned.
- 10) Listening out for clues from the tense and word order.

Rost (2002) proposed six listening strategies that can help L2 learners overcome their L2 listening difficulties as follows:

- 1) Predicting: Listeners have to think about what they will hear.
- 2) Inferencing: Listeners have to listen between the lines (Helgesen, 2003).

- 3) Monitoring: Listeners have to notice what they do, and do not understand.
- 4) Clarifying: Listeners have to ask questions, in order to make a fuller interpretation.
- 5) Responding: Listeners have to react to what they hear.
- 6) Evaluating: Listeners have to check how well they have been understood.

Goh (2002a) proposed five key strategies that listeners should have. Goh called them the key listening comprehension skills which are: (1) listening for details or listening for specific information; (2) listening for gist or listening for main ideas; (3) drawing inferences or being able to fill in gaps in the input; (4) listening selectively or listening only to specific parts of the input; and (5) making predictions or anticipating before and during listening.

After reviewing listening strategies proposed by the aforementioned researchers (i.e. Brown, 1994; Chamot, 1995; Ellis and Sinclair, 1989; Gabler and Scholnick, 1995; Goh, 2002; Grenfell and Harris, 1999; Rost, 2002; Vandergrift, 1996), the researcher notices that Chamot (1995) and Vandergrift (1996) divided listening strategies into categories while the others did not. Therefore, their categories are used as guidelines to group listening strategies proposed by previous researchers into three main categories (i.e. cognitive, meta-cognitive, and social or socio-affective strategies).

Table 2.1 Summary of listening strategy categories and its sub-categories

Main categories	Sub-categories			Researchers							
				1	2	3	4	5	6	7	8
Cognitive strategies	Elaboration			✓	✓	✓	✓	✓	✓		
	Resourcing							✓	✓		
	Inferencing			✓	✓	✓	✓	✓	✓	✓	✓
	Translation							✓			
	Transfer							✓			
	Repetition							✓	✓		
	Deducting/ Inducting					✓		✓			
	Creating structure for input and output	Note-taking/ Summarizing/ Contextualizing		✓			✓	✓			
	Prediction				✓		✓		✓	✓	✓
	Substitution							✓			
Meta cognitive strategies	Planning	Pre-listening		✓			✓	✓			✓
		Selective attention	Listening for main idea		✓	✓	✓		✓		✓
			Listening for specific information	✓	✓	✓					✓
			Visualizing	✓	✓	✓	✓				
			Reconstructing				✓				
		Directed attention					✓				
	Monitoring							✓		✓	
	Evaluating						✓	✓		✓	
	Problem identification							✓	✓		
	Grouping					✓		✓	✓		
Social/ Socio-affective strategies	Cooperation						✓	✓		✓	
	Confidence building/ Self-encouragement						✓	✓			
	Real time					✓	✓				
	Questioning/ seeking Clarification				✓			✓			
	lowering anxiety							✓			
	Taking emotional temperature							✓			
	Responding									✓	

Notes:

1 = Ellis and Sinclair (1989)

2 = Brown (1994)

3 = Gabler and Scholnick (1995)

4 = Chamot (1995)

5 = Vandergrift (1996)

6 = Grenfell and Harris (1999)

7 = Rost (2002)

8 = Goh (2002)

Table 2.1: Summary of listening strategy categories shows that there are three main listening strategy categories: (1) cognitive; (2) meta-cognitive; and (3) socio- or social affective strategies which should be of value in teaching L2 listening comprehension.

Cognitive strategy comprises elaboration, resourcing, inferencing, translation, transfer, repetition, deductive/inductive, creating structure for input and output (i.e. note-taking, summarizing, and contextualizing), prediction, and substitution. Meta-cognitive strategy comprises planning (pre-listening, selective attention, and directed attention), monitoring, evaluation, problem identification, and grouping. Socio- or social affective strategy comprises cooperation, confidence building or self-encouragement, real time, questioning or clarifying, lowering anxiety, and responding.

The researcher then orders the frequency of each strategy in Table 2.1 and identifies five predominant listening strategies proposed by previous researchers.

The first listening strategy is inferencing which refers to the use of information within the text or conversational context in order to guess the meaning of unfamiliar language items associated with a listening task, to predict outcomes, or to fill in missing information (Chamot, 1995; Goh, 2002a; Vandergrift, 1997). Vandergrift (1997) categorized inferencing into four types: (1) linguistic inferencing (i.e. using known words); (2) voice inferencing (i.e. using tone of voice or paralinguistic); (3) extra-linguistic inferencing (i.e. using the background sounds to understand the relationship between the interlocutors, making use of the material in the response sheet, or concrete situational referents); and (4) between-parts inferencing (i.e. using information beyond the local sentential level). The second is elaboration which refers to drawing on prior knowledge outside the immediate text, or conversational context,

in order to fill the missing information (Chamot, 1995; Vandergrift, 1997). The third is 'listening for the main idea' which refers to attending to specific aspects of language input, or general gist of the information (Brown, 1994; Goh, 2002a). The fourth is 'listening for specific information' which refers to attending to details that assist in understanding or task completion (Chamot, 1995; Goh, 2002a; Vandergrift, 1997). The fifth is predicting the content of a listening text by anticipating general content and detail (Chamot, 1995; Goh, 2002a).

The above listening strategies rank as the top five alternative key listening strategies. The three of them are in the cognitive strategy category, while other two strategies are in the meta-cognitive strategy category.

2.3.2 Listening strategies used by second/foreign language learners

This section presents six research studies on listening strategies used by second or foreign language learners. These include work by Goh (1997), Goh (2002b), O'Malley, Chamot, and Küpper (1989), Vandergrift (1997), Vandergrift (2003), and Young (1997).

O'Malley, Chamot, and Küpper (1989) investigated L2 listening comprehension strategies used by eleven ESL high school students in the US. They looked for evidence of the three interrelated cognitive processes identified in Anderson's (1995) L1 listening model (perception processing, parsing and utilization) and the strategies used during each phase of the listening process, as well as differences between more skilled and less skilled listeners. They used the think-aloud procedure to collect the data.

The results of the study showed that during the perceptual processing phase, strategies such as selective attention and directed attention proved to be dominant.

More skilled listeners were able to maintain attention, or redirect it when distracted, whereas less skilled listeners were easily thrown off, when faced with anything unknown. Listener elaborations interfered with comprehension, when listeners did not monitor their attention carefully and concurrently.

During the parsing phase, grouping and inferencing proved to be the dominant strategies. More skilled listeners processed larger chunks and inferred the unknown information from the context using a top-down approach. When that failed, they attended to individual words. Less skilled listeners tended to segment what they heard on a word-by-word basis, using almost exclusively a bottom-up approach.

During the utilization phase, listeners made use of prior knowledge to assist comprehension and recall. Elaboration seemed to be the dominant strategy. More skilled listeners approached the task globally. They inferred meaning from the context, engaged in effective self-questioning, and related what they heard to their world knowledge and personal experience. Less skilled listeners made fewer connections between new information and their own lives.

Young (1997) investigated listeners' comprehension strategies used by advanced ESL learners. Eighteen university-level Chinese students in Hong Kong participated in the study. Data was collected by think-aloud procedures, while students listened to three audio texts selected from commercial ESL textbooks. Results revealed that this group of students had a similar pattern of strategy use, regardless of their gender and English achievement.

Young presented a sequence of six strategies used by these ESL listeners. First, the listeners used 'Inferencing' to guess the theme or topic of the text by grasping the contextual or acoustic clues. Second, they used 'Elaboration' to activate their

background knowledge of the topic that they had been listening to. Third, when their background knowledge was activated, they used 'Summarization' to reinforce their own interpretation of the text. Then, listeners used the meta-cognitive strategies 'Self-monitoring' to control their comprehension, or they used 'Self-evaluation' to evaluate their strategy use. Finally, they also interacted with a text by giving 'Feedback'.

A study of the comprehension strategies of second language listeners was conducted by Vandergrift (1997). This study investigated the relationship between the types of listening comprehension strategies reported, the frequency of their use, and the differences in the reported use across four variables - level of language proficiency, gender, listening ability, and learning style. Thirty two participants (i.e. 10 successful and 11 unsuccessful listeners) were randomly chosen from high school students learning French. They reported on their thought processes during a think-aloud procedure. All students reported using meta-cognitive and cognitive strategies, with an overall increase in total number of strategies reported by proficiency level. The results of the study showed clear differences in reported strategy use by listening ability and proficiency level. The use of metacognitive strategies, such as comprehension monitoring, problem identification, and selective attention appeared to be a significant factor distinguishing the successful from the less successful listeners. Differences for gender were minimal, and differences for learning styles were inconclusive. A qualitative analysis of representative protocols also pointed to the integral role of metacognitive styles, as well as differences in the use of prior knowledge, inferencing, prediction skills and monitoring.

Goh (1997) reported a diary study that revealed beliefs and knowledge 40 ESL Chinese learners had about their listening. It was found that many listeners had clear

ideas about three aspects of listening, their own role and performance as second language listeners or their personal knowledge of themselves, the demands and procedures of second language listening or task knowledge, and strategies for listening or strategic knowledge. In the strategic knowledge aspect, learners demonstrated an extensive awareness of learning strategies, both for assisting comprehension and developing their listening. They used both top-down and bottom-up processing strategies. The reports of students' strategies were divided into three categories: (1) strategies that assist comprehension and recall; (2) strategies for developing listening; and (3) strategies that do not always work.

Strategies identified as assisting comprehension and recall included using visual clues, activating knowledge of context from titles, ignoring unfamiliar words, taking notes, recognizing discourse markers, recognizing tones and intonation features, guessing or inferring meanings, paying attention to repetitions, visualizing the setting or subject, using existing knowledge to interpret, and asking speakers to repeat. Strategies for developing listening ability included talking to competent speakers frequently, listening to different varieties of English and local accents, listening to all kinds of materials, improving vocabulary, developing specific listening skills, listening to different types of input and being familiar with their organization and structure, being familiar with pronunciation of words and learning about phonological modifications, listening to things one enjoys or is interested in, and making use of subtitles in films to check interpretation. Strategies that did not always work included guessing or inferring meaning of words and phrases, using existing knowledge, asking the speaker to repeat, and reading the subtitles of films.

A few years later, Goh (2002b) examined 80 ESL Chinese learners' listening strategies and their listening tactics. Learners were in two naturally occurring classes in an intensive English language program in Singapore. Data were collected through think-aloud sessions by playing a pre-chunked text with pauses. The learners had to report how they had tried to understand the preceding segments. Data were analyzed using a retrospective verbalization procedure based on the principles of human information processing proposed by Ericsson and Simon (1993). Goh found two new strategies, fixation and real-time assessment of input and 44 listening tactics under fourteen strategies.

The fourteen strategies were: (1) inferencing by filling in missing information and guessing the meaning of words; (2) elaboration by embellishing an interpretation to make it meaningful and complete; (3) prediction by anticipating the content before and during listening; (4) contextualization by relating new information to a wider, familiar context; (5) translation by changing words, phrases or sentences into L1 before interpretation; (6) fixation by focusing attention on understanding a small part of text; (7) visualization by forming a mental picture of what is heard; (8) reconstruction by using key words to recreate meaning; (9) pre-listening preparation by preparing mentally and emotionally for a listening task; (10) selective attention by noticing specific aspects of input; (11) directed attention by monitoring attention and avoiding distractions; (12) comprehension monitoring by checking or confirming understanding while listening; (13) real-time assessment of input by determining the value of specific parts of the input; and (14) comprehension evaluation by checking interpretation for accuracy, completeness and acceptability after listening.

Vandergrift (2003) studied listening strategy uses by 36 grade seven students learning French as a second language. He examined the types of strategies that were used and the differences in strategy use between more and less skilled listeners. The students were listening to authentic French texts. Think-aloud data were coded and analyzed both quantitatively and qualitatively. Significant differences between the two groups were found in the use of the category of meta-cognitive strategies, as well as in individual strategies for comprehension monitoring, questioning for elaboration and translation. He concluded that listening competence would be consciously developed with practice. When listeners knew how to (1) analyze requirements of a listening task, (2) activate appropriate listening processes required, (3) make appropriate predictions, (4) monitor their comprehension, and (5) evaluate success of their approach, they would use meta-cognitive knowledge for successful listening comprehension.

Juan & Ge-ling (2010) investigated listening strategies employed by college students of science and technology. The purposes of the study was to find out the general features of their choices of listening strategies and to reveal the differences in the use of such strategies between effective listeners and less effective listeners. The subjects were 156 participants of science and technology from University of Shanghai for Science and Technology. The data were collected by using a questionnaire. The statistics show that the most frequently used listening strategies by the subjects were prediction and association, self-evaluation and speaker-based guessing; the secondarily employed strategies were selective attention, self-monitoring and translating, while the least used ones were preliminary survey, persistence, being active and planned input. The findings also revealed that the more effective group used planned input, self-monitoring, selective attention, prediction and association, being active, speaker-based

guessing, preliminary survey more frequently than the less effective group did, while the less effective group used translating more frequently.

Bidabadi & Yamat (2011) investigate the relationship between Iranian EFL freshman university students' listening proficiency levels and the listening strategies they employed. A total of 92 freshmen were involved in this study. The Oxford Placement Test was employed to identify the learners' listening proficiency levels, and a Listening Strategy Questionnaire was used to identify the strategies they employed in listening. The descriptive analysis of the listening strategy questionnaire revealed that Iranian EFL freshman university students at advanced, intermediate, and lower-intermediate levels employed meta-cognitive strategies the most frequently and actively. The second most frequently employed strategies were cognitive and socio-affective listening strategies. The Pearson Correlation analysis also indicated that there was a significant positive correlation between the listening strategies employed by advanced, intermediate, and lower-intermediate freshmen and their listening proficiency levels at Pearson values of $p < 0.01$ and $p < 0.05$ respectively. This study implied that the students try to think about the ways in which they can plan, make decisions, monitor, and evaluate their listening.

Table 2.2 Summary of L2 learners' listening strategies

Researchers/Year	Participants/ Lang./ Location	Data collection	Findings
O'Malley, Chamot, and Küpper (1989)	11 high school ESL students/ the US.	Think-aloud	3 predominant strategies used by effective listeners: selective attention and directed attention, grouping and inferencing, and elaboration.
Young (1997)	18 advanced university ESL students/ Hong Kong	Think-aloud	Used strategies in sequences: inferencing, elaboration, summarization, self-monitoring, self-evaluation, and feedback.
Goh (1997)	40 ESL Chinese learners (19 yr old)/ Singapore	Keep diary	Used visual clues, activating knowledge of context from titles, taking notes, recognizing discourse markers, recognizing tones & intonation features, guessing or inferring meaning, repetition, using existing knowledge
Vandergrift (1997)	32 high school students of French/ Canada	Think-aloud	Used comprehension monitoring, problem identification, selective attention
Goh (2002b)	80 ESL Chinese students/ Singapore	Think-aloud & Keep diary	Used inferencing, elaboration, prediction, contextualization, translation, visualization, reconstruction, pre-listening, selective attention, directed attention, monitoring, real time assessment, and evaluation
Vandergrift (2003)	36 high school students of French/ Canada	Think-aloud	4 predominant strategies used by effective listeners: linguistic inferencing; world elaboration; questioning elaboration; and summarization
Juan & Ge-ling (2010)	156 participants of science/ China	Questionnaire	The more effective group used planned input, self-monitoring, selective attention, prediction and association, being active, speaker-based guessing, preliminary survey more frequently than the less effective group did. The less effective group used translating more frequently.
Bidabadi & Yamat (2011)	92 Iranian EFL freshmen university students	Questionnaire	Advanced, intermediate, and lower-intermediate students employed meta-cognitive strategies more frequently and actively than cognitive and socio-affective strategies

The data presented in Table 2.2 shows that there are many listening strategies that were used by L2 learners; however, the learners might not be aware that these strategies helped them in their listening comprehension. When comparing the data in Table 2.2 with the four listening strategies (i.e., the strategies that will be implemented in the present study) which are drawn from the most often mentioned strategies of previous researchers, elaboration was widely used by listeners in five studies, while selective attention (i.e. listening for the main idea and listening for specific information) was widely used in three studies. Prediction, by contrast, was widely used in two studies.

2.3.3 Factors influencing L2 learners' choice of listening strategies

While most researchers were interested in investigating listening strategies used by L2 learners, they focused little attention on factors which influence L2 learners' choice of listening strategies. However, Oxford (1990) synthesized existing research on how the following factors influence the choice of strategies used among L2 students. These factors can be applied to the listening strategy training.

1) Motivation: More motivated students tended to use more strategies than less motivated students.

2) Gender: Female students reported using more strategies used than males, although sometimes males surpassed females in the use of a particular strategy.

3) Cultural background: Rote memorization and other forms of memorization were more prevalent among some Asian learners than among learners from other cultural backgrounds.

4) Attitudes and beliefs: These two factors showed a positive effect on the choice of students' strategy use. Negative attitudes and beliefs often caused poor strategy use or a lack of orchestration of strategies.

5) Type of task: The nature of the task helped determine the strategies naturally employed to carry out the task.

6) Age and L2 stage: Students of different ages and stages of L2 learning used different strategies, with certain strategies often being employed by older or more advanced students.

7) Learning style: Learning style often determined the choice of L2 learning strategies.

8) Tolerance of ambiguity: Students who were more tolerant of ambiguity used significantly different learning strategies in some instances than students who were less tolerant of ambiguity.

2.3.4 Implications for the present study

In conclusion, the above literature and previous research studies revealed a number of strategies that were used by L2 learners. However, four most frequently mentioned strategies will be chosen to train participants of the present study.

The four listening strategies in the training are elaboration, listening for main idea, listening for specific information, and prediction. Because these four strategies were identified as important by cognitive researchers and were emphasized in the listening strategy studies, these strategies are paramount in developing L2 learners' listening abilities.

Of the four listening strategies, two are cognitive strategies, while the rest are the meta-cognitive strategies. L2 students should learn and practice the two cognitive

and two meta-cognitive strategies because (1) they are shown to be effective in helping them to better understand listening texts and (2) they are complementary of each other (O'Malley et al., 1985b and O'Malley, Chamot, and Küpper, 1989). The research (O'Malley et al., 1985b; Oxford, 1994) indicated that students should learn a set of listening strategies because they can help them understand texts better and assist them in gaining command over new strategies.

The details of the target listening strategies are as follows:

Elaboration strategy

It is well-known at least since the 1930s that people's prior knowledge has an effect on their cognition (Brown, 2006). Prior knowledge is organized in schemata which are abstract, generalized mental representations of listeners' experiences that are available to help them understand new experiences. Another way to look at this phenomenon is as a script. For example, everyone who has been to a restaurant knows that there is a predictable sequence of questions involved in ordering a meal. Unfortunately, this script does not transfer perfectly from culture to culture because the routine is slightly different in each place. However, when traveling in another country and eating in a restaurant, listeners can make certain assumptions about the kinds of questions that will be asked. Brown (2006) demonstrated an example of Elaboration strategy: food has been ordered but drinks have not, and the server asks another question. Here listeners might fairly predict that the question is about the choice of drinks, based on prior knowledge of what happens in restaurants. Indeed, successful language learners often can be separated from unsuccessful language learners by their ability to contextualize their guesses and use their prior knowledge in this way.

The idea of prior knowledge is one part of the cognitive model of language processing. That model shows that when people listen, they process the information they hear both as top-down and bottom-up processes. **Top-down** means using their prior knowledge and experiences. They know certain things about certain topics and situations, and they use that information to understand the content. *Bottom-up* processing means using the information they have about sounds, word meanings, and discourse markers (i.e. first, then and after that) to assemble an understanding of what they hear one step at a time.

One of the best ways to fully understand new material is through the process of **elaboration**. The processes of rephrasing, applying, analyzing, and otherwise manipulating the information, as used in elaboration strategy, give listeners **a deeper level of understanding. The processes also allow the listeners to personalize aural information.** Listeners can help themselves elaborate by using the chart showing questions at all cognitive levels. Cognitive levels refer to (1) knowledge, (2) comprehension, (3) application, (4) analysis, (5) synthesis, and (6) evaluation (Bloom's Taxonomy of Cognitive levels). By asking and answering these questions, listeners process the information at high levels of thinking and better assure their understanding and ability to apply important concepts.

Furthermore, listeners elaborate and assist their memories by organizing the information into visual formats using visual organizers which include illustrations, maps, tables, charts, webs, and other aids. The process of putting the information into these cognitive frames supports comprehension of it at high levels of cognition. Once information is in a visual format, listeners remember it more easily by "seeing" it in their minds' eye when they are tested or prompted to apply their knowledge.

The application of elaboration strategy is outlined as follows:

1) Pre-listening

The researcher could get the students to have more understanding about the listening texts by: (1) asking the students to think about related stories to the topic by asking them to organize the information into visual formats. The students can think about it in both L1 or L2; (2) asking the students to relate details in the story that they know to the new similar story; and (3) providing some related vocabulary to the story for the students to review.

2) While-listening

While the students are listening they need to monitor their comprehension by: (1) checking the accuracy of their elaboration by listening to the passage; (2) deciding what is and is not important to understand; and (3) answering the questions to check their cognitive levels about the texts.

3) Post-listening

The following strategies might help the students to synthesize, interpret and evaluate what they've heard: (1) consider what they listened and how it fits with what they know; and (4) conclude how to make a better prediction next time.

Listening for main idea

In a motorcycle advertisement, a lot of specific information is given such as the name of the motorcycle, type of gearbox, the engine capacity, price and so on. However, listeners can ignore some details, as they are not necessary to understand the speaker's general message. Listeners should be able to recognise the subject or the topic of the text without paying particular attention to specific information contained in the text. In the

motorcycle example, the listener would listen for the price, make, model, and horsepower of the motorcycle if they were attuned to the main idea of the piece.

Often, speakers stress important points in their discourses. And if listeners are able to recognise when a speaker does this, understanding the important points will facilitate understanding of the main idea of the text. Some of the techniques used by speakers to stress important points in their discourses are: (1) rephrasing, (2) repetition, and (3) summarizing.

Rephrasing something previously said lets the listener know the point must be important if it merits repeating, albeit in different syntax. However, the listener must have enough ability with the language to recognize the same point voiced in different sentences. For the listener that cannot attain that type of recognition, repetition is a sure-fire method to inculcate the importance of a particular point. When the exact same point is said twice, even the low ability students can grasp the point is worth remembering. Yet, if it is in the middle of a passage, the student might forget the point as she tries to comprehend the rest of the passage. This is where summarizing is extremely useful. For when all the information in the passage is contained in a succinct take home message at the end of the passage, the listener is spared the ordeal of having to remember much of the weighty information contained in it.

In addition to techniques the speaker uses to facilitate comprehension among the listeners, there are general listening strategies the listeners themselves employ to aid comprehension. Some general listening strategies to help listeners listen better are: (1) concentrate and focus on the listening text; (2) try to listen with a purpose, grasp the gist of the text, decide what information should be listened to, and look for the key words; (3) do not try to understand every word the speaker is saying in order to

understand the speaker's general message; and (4) learn to guess the meaning of unfamiliar words by paying attention to the context in which they occur.

Concentrating and focusing on the listening text simply means not allowing one's brain to go astray. One must simply pay attention to what is being said. Listening with a purpose enables a view of the proverbial forest without getting lost in the trees. The purpose of the text can be deduced from the title, repetition of words, and emphasis on specific words. If the listener's ears are tuned into those phenomena, the gist of the text is made all the more apparent. Moreover, understanding the key words that reinforce the gist, and not every word in the passage, is essential if the listener wishes to not get lost in the text. If one does encounter unfamiliar words, it is helpful to recognize how they are used by understanding the words around them.

Listeners can listen for signal words and phrases. These indicate that a professor is saying something listeners should remember. Some signal words and phrases are:

Introductory words: give a basic outline of what the day's lecture will cover.

- "Today we should discuss..."
- "After today you should be able to..."

Repeat words: rephrase and clarify information

- "In other words..."
- "This simply means..."
- "In essence..."

Qualifying words: note exceptions to rules and clarify information

- "However..."
- "Nevertheless..."

Test clues: alert one to possible test material.

- "This is important..."
- "Remember this..."
- "You'll see this again..."

Cause and effect phrases: show relationships between ideas and events.

- "Therefore..."
- "As a result..."

Summary words: prompt understanding of the main idea.

- "In a nutshell..."
- "To sum up..."
- "In conclusion..."

Contrast words: also show relationships between ideas and events.

- "On the other hand..."
- "By comparison..."

Example words: explain and clarify information.

- "To illustrate..."
- "For example..."
- "For instance..."

The application of listening for main idea is outlined as follows:

The researcher provides a list of keywords for the students to remember. These can help them notice what and what not to listen for. The researcher also points out in the exercises that most of the speakers stress important points in their discourses. The students should notice it. After they listen to the texts, they can check their understanding by answering the questions and assessing themselves. If they miss some points, they can go back and review their listening.

Listening for specific details

Listening for specific details is one of the bottom-up processes. Asatryan (n.d.) explained the bottom-up processes as the **bottom-up** mode of language processing, which involves the listener paying close attention to important details of the language input. The understanding of the language is worked out from sounds to words to grammatical relationships to lexical meanings, and ultimately to a "final" message.

Having a purpose also helps listeners listen more effectively. For example, when listening to a weather report, if listeners' purpose is to decide whether to take an umbrella, they want to focus on the temperature.

Listening for important details is something listeners do every day. For example, they need the details when they are getting directions to someplace like a friend's home. Just understanding the topic in this case does them no good.

The application of listening for specific details is outlined as follows:

Before the students listen to the texts, they need to have an understanding about the topic. The researcher provides a list of keywords that the students are to listen for. The researcher teaches these keywords after the students learn the listening for the main idea strategy. Therefore, they can remember a set of keywords for listening for the main idea and listening for specific details. Additionally, when they listen to the text, they need to try to find some keywords. Furthermore, they can check their understanding by answering the questions in the exercises.

Prediction

Jiang (2009) stated that prediction strategy, or looking ahead, is a basic strategy for using prior knowledge to understand a text. The learner generates a hypothesis about the type, purpose, or scope of a text to provide a framework for transacting with the text to confirm comprehension.

Our interpretation of what we hear depends to a large extent on what we expect to hear. If what we hear does not meet our expectations, it may sometimes lead to misinterpretation. On the other hand, if we can predict accurately what we shall hear next, our listening will be much more efficient. There are very few occasions when people listen without having some idea of what they expect to hear.

The skill of prediction depends largely on listener's prior knowledge of the world and of the language, how much listener knows about the speaker, and how much one knows about the speaker's intent. Thus the initial stage of the training software for developing the predictive skill should concentrate on getting the listeners to become aware of their own prior knowledge and to use this prior knowledge as their basis for prediction and comprehension. The application of prediction strategy is as follows:

1) Pre-listening

This is a very important stage for listening class. The researcher could get the students ready to listen by doing the following instructions in three steps:

Step one: Help them by: (1) informing them of the background information; (2) teaching new vocabulary and grammar forms relevant to the material; and (3) translating some words they might not be familiar with or difficult to understand.

Step two: Predict what they will be hearing by using: (1) the format; (2) key words, phrases or sentences they might expect to hear; and (3) the information or opinions.

2) While-listening

While the students are listening they need to monitor their comprehension by: (1) check the accuracy of their predictions; (2) deny some predictions and form new ones which may soon be denied again; and (3) decide what is and is not important to understand.

3) Post-listening

The following strategies might help the students to synthesize, interpret and evaluate what they've heard: (1) check what predictions are correct/incorrect and helpful/useless and determine why; (2) consider what they heard and how it fits with what they know; (3) Discuss the prediction strategy they used to listen – how much did they benefit from it?; and (4) conclude how to make a better prediction next time.

2.4 How to train L2 learners to use listening strategies

2.4.1 L2 listening strategy training

Cohen (1990) introduced three main steps for strategy training: (1) raising learners' awareness as to the purpose and rationale of strategy use; (2) giving learners opportunities to practice the strategies that they are being taught; and (3) helping learners understand how to use the strategies in new learning contexts. The sequence of strategies-based instruction (SBI) suggested by Cohen (1996, 1998, 2003) is as follows:

- 1) Describe, model and give examples of potentially useful strategies;
- 2) Elicit additional examples from students based on their own learning experiences;
- 3) Lead small-group/whole-class discussions about strategies;
- 4) Encourage students to experiment with a broad range of strategies; and
- 5) Integrate strategies into everyday class materials, explicitly and implicitly embedding them into the language tasks to provide for contextualized strategy practice.

Oxford, Crookall, Cohen, Lavine, Nyikos, and Sutter (1990) outlined a useful sequence to train strategies which started from (1) introduction of strategies that emphasizes explicit strategy awareness, (2) discussion of the benefits of strategy use, (3) functional and contextualized practice of the strategies, (4) self-evaluation and monitoring of language performance, and (5) suggestions for the transferability of the strategies to new language tasks. The sequence they suggested is:

- 1) Ask students to do a language activity without any training;

2) Have students discuss how they did it and to praise any useful strategies and self-directed attitudes that they mention;

3) Suggest and demonstrate other helpful strategies, mentioning the need for greater self-direction and expected benefits, such as higher grades, faster progress and greater self-confidence;

4) Allow students plenty of time to practice the new strategies with language tasks;

5) Show how the strategies can be transferred to other tasks;

6) Provide practice using the techniques with new tasks; and

7) Help students understand how to evaluate the success of their strategy use and to gauge their progress as more responsible and self-directed students.

They also suggested that teachers should conduct a completely informed strategy training. This involves teachers explicitly talking with the students about the need for greater self-direction and aims at teaching strategies explicitly. They also suggested that this sequence is helpful to provide plenty of practice involving meaningful language-learning tasks.

Chamot and O'Malley (1994) also proposed a sequence of strategy training which was useful after students have already had practice in applying a broad range of strategies in a variety of contexts. There are four stages in this sequence:

1) Planning: The teacher presents the students with a language task and explains the rationale for strategy use. Students are then asked to plan their own approaches to the task, choosing strategies that they think will facilitate its completion.

2) Monitoring: Students are asked to self-monitor their performance during the tasks by paying attention to their strategy use and checking comprehension.

3) Problem-solving: If students encounter problems, they are expected to find their own solutions.

4) Evaluation: After they finish the tasks, students are given time to de-brief the activity. They can be given time to verify their predictions, assess whether their initial goals are met, give summaries of their performance and reflect on how they can transfer their strategies to similar language tasks.

However, there is no evidence for the best method for conducting strategy training (Cohen, 1990). Cohen (1998) mentioned that each sequence of strategy training is useful. It can be combined to complement each other. Moreover, to make strategies applicable, students apparently need to be convinced of their significance (Wenden, 1987).

Wenden (1991) also proposed strategy training guidelines similar to Oxford et al. (1990). First, strategy training should be informed. The purpose of the training should be made explicit and its value brought to the learners' attention. Second, strategy training should be contextualized. Training should be directed to specific language learning problems related to the learners' experience. Third, strategy training should be interactive. However, learners will interact only when they have some ability to manage their use of strategy. Lastly, the content of the training should be based on the actual proficiency of the learners.

Cohen and Weaver (1998) suggested that strategy training can take a number of forms, such as a general study-skills training which is separate from the language course, an awareness training through lectures, workshops, peer tutoring, inserting of strategy discussions directly into the textbooks, video-taped mini-courses, and

strategy-based instruction in which strategy training is fully integrated into the language curriculum under the guidance of the teacher.

Various research studies were conducted on training listening strategies to L2 listeners in order to help them use those strategies and overcome difficulties in their use. O'Malley et al. (1985b) studied ESL strategy learning. Sixty-five high school ESL learners were from Spanish-language countries, and five ESL learners were from Vietnam. The study was divided into two phases: (1) In phase I, students identified the range of learning strategies they already used for specific language activities; (2) In phase II, students were randomly assigned to receive learning strategies training on vocabulary, listening, and speaking tasks. The results of a listening strategy training in phase II showed that the difficulty of the task, or the explicitness of directions for using the strategies, may be important determinants of performance. Students presented with a listening task that was too difficult for them may derive little help from using learning strategies; the initial communication may be so unfamiliar that comprehension and learning fail to occur. Students might not transfer already used strategies to new learning activities. They required continued prompts and structured directions until the strategies become autonomous. However, the meta-cognitive strategy was not the type that would afford students an opportunity to reflect on their learning, to analyze the relevance of the strategy applications and to foresee its potential for future in similar activities. However, O'Malley et al. (1985b) summarized that strategy training can be successfully demonstrated in a natural teaching environment with L2 listening and speaking tasks.

O'Malley and Chamot (1990) investigated listening comprehension strategies used by 11 ESL students who studied in two suburban public high schools in the

United States. Data were collected through a think-aloud report from both effective and “ineffective” listeners to examine the differences in the degree and the character of the learning strategies used by the students. The study consisted of two phases: (1) a training phase, in which students were pre-trained on thinking aloud; and (2) a reporting phase, which consisted of a warm-up, transition, and think-aloud verbal report on a listening comprehension task. There were short pauses during which the interviewer stopped the tape and asked the students to relate as much as they could about their thoughts while listening.

They mentioned that the process of listening comprehension in the case of ESL students was consistent with the depiction of a general listening comprehension process in the cognitive and second language acquisition literature. Listening comprehension brings about active and conscious processes in that the listeners construct meaning by using cues from contextual information and existing knowledge, while relying on multiple strategic resources to fulfill the task requirements. The listening strategies used vary in the different phases of the listening process. Selective attention and self-monitoring strategy were used in the perceptual processing phase. Grouping and inferencing from context strategies were used in the parsing phase. In turn, the strategies of elaboration upon the world knowledge, personal experiences, or self-questioning were used in the utilization phase. It was found that effective listeners used strategies more successfully than less effective listeners. This suggested that the less successful students may need assistance in becoming more strategic listeners.

Sooksripanich (1991) investigated the effects of the prediction strategy on the pre-listening phase in 23 Thai university students. The data were collected from a questionnaire, listening tasks, teacher’s diary, students’ written predictions about the

listening text and informal interviews. In four listening tasks, learners were taught prediction strategies and then were tested on their ability to apply those strategies in the context of listening to a spoken passage. The results showed that the prediction strategies helped students comprehend a listening text better and they were able to apply them in the context of listening.

Thanarak (1992) investigated whether practicing listening strategies which she called listening sub-skills could improve EFL learners' listening ability. The strategies selected were: (1) listening for main ideas, (2) listening for specific information, and (3) listening and making inferences. The study also explored students' attitudes towards the practicing of listening strategies. Participants were 10 first year Thai University students. The data were obtained from a pretest, three listening tasks, a post test, a score-profile, a questionnaire and a semi-structured interview. The pretest, the listening tasks, and the post test were designed for the three experiments which were organized into three parts: (1) asking students to specify the main idea; (2) requiring students to identify specific information; and (3) measuring students' ability to infer implicit information. The results showed that the students' listening ability was improved by practicing the three strategies. The students also had favorable attitudes towards practicing and they felt that they had more confidence in listening to English than prior to the experiment. However, she mentioned that limitation of time and a decrease in students' attention span during the task would be major factors to be considered.

A study in training students in listening for keywords with dictogloss was conducted by Singhasiri (1994). The participants were six first year Thai University students. In order to help the students identify keywords, they were taught three

listening strategies: listening for stress and intonation, listening for content words and predicting from the topic. They were asked to perform three dictogloss activities. There are four stages in the dictogloss (i.e. preparation, dictation, reconstruction, and analysis and correction). The data were gathered by using task results, questionnaires, students' diaries, and semi-structured interviews. The results of the study showed that dictogloss could assist students in identifying key words and subsequently, in comprehending listening passages. However, there were also problems. These related to the kind of the text that was selected for comprehension, heterogeneity of students' proficiency levels and the specific listening strategies that were taught. The data also revealed that unlike the low-proficiency students, the intermediate to high performance students had more positive attitudes towards listening and the techniques, and identification of keywords through dictogloss was useful and effective to their listening comprehension.

Vandergrift (2002) conducted a study with 420 high school students studying French as an L2. The students were taught specific listening strategies (e.g. listening for key words, while focusing on the listening task at hand) and were asked to perform listening comprehension tasks and reflective exercises. Vandergrift used instruments that engaged the students in prediction, evaluation, and other processes involved in listening. Results showed that even young students were aware of many listening strategies that they used in their L2/FL listening. Vandergrift sorted the data into three main types: meta-cognitive strategies involving planning, monitoring, and evaluation, as well as knowledge of the required task and knowledge of oneself. It appeared that the participants' awareness had been raised enough for them to take responsibility for their own planning, monitoring, and evaluation during the listening activities and to be

satisfied with their progress. Vandergrift suggested that key to meta-cognitive development was students' ability to take their knowledge of strategies and then transfer and use the strategies in other listening tasks.

Johnson (2003) investigated listening strategy use in an ESL regular classroom setting. A regular class was used as an experimental group. The research questions were: (1) whether students would use strategies they were learning; (2) whether there would be a difference in frequency of strategy use with authentic and pedagogic (created specifically for language instruction) texts; (3) whether those who typically used strategies would perceive learning new strategies to be easier than those who did not; and (4) whether those who typically used strategies would perform better on listening comprehension exercises. Participants were students enrolled in a high-intermediate ESL listening course. Data were elicited through written retrospective reports that the students wrote in a form of a questionnaire accompanying classroom listening exercises. The results of the study showed that: (1) learners did not consistently use the strategies for which they received explicit training; (2) learners did not use social and affective strategies; (3) learners used taught strategies less on authentic texts than pedagogic texts; (4) those who typically used listening strategies found overall the exercises easier than those who did not use them; and (5) there was no reliable relationship between strategy use and performance on multiple choice comprehension questions.

Carrier (2003) investigated how listening strategy training can improve ESL listening ability. Participants were seven high school ESL students. Six of them were native Spanish speakers and one was a native Albanian speaker. This study tested the hypothesis that targeted listening strategy instruction in an ESL classroom results in

improved listening comprehension and can be of value to English language learners' academic content classes. Both, bottom-up and top-down listening instruction was provided in 15 training sessions. Each session length was 20-30 minutes. Learners did the pre-test and post-test before and after being trained.

Session 1 to 3 included explanations of concepts and practice on the rhythm and sounds of English syllable length, dropped syllables, stops and syllable length, syllable length and word meaning, and clear versus unclear vowels. Sessions 4 and 5 focused on selective attention to teach about patterns and pitch. Sessions 6 and 7 emphasized listening for specific information. Sessions 8 and 9 focused on developing note-taking strategies. The last session focused on top-down video listening strategies. Participants showed a statistically significant improvement in discrete and video listening abilities, as well as in note-taking abilities. The study suggested that targeted listening strategy instruction benefits ESL students.

An investigation of the impact of teaching explicit listening strategies to adult intermediate- and advanced-level ESL university students was conducted by Clement (2007). There were four research questions: (1) Following exposure to a technology-based intervention, does the usage of self-reported strategies depend on the type of university that the students attended?; (2) Following exposure to a technology-based intervention, is there an increase in self-reported strategy use when the level of instruction is statistically controlled?; (3) Following exposure to a technology-based intervention, is there an increase in self-reported strategy use when the native language is statistically controlled?; and (4) Following exposure to a technology-based intervention, is there an increase in self-reported strategy use when listening proficiency levels are statistically controlled? Participants were 64 international

students at two universities in the US. Data were collected by using three instruments: the pre- and post- Strategy Inventory for Language Learning, post-intervention surveys, and post-study survey.

Clement compared participants' self-reports of their strategy use prior to and after four electronically-delivered interventions consisting of explicit instruction and illustration of strategies that can assist listening comprehension. The results showed a statistically significant difference between pre and post SILL scores for participants' level of instruction. There were no differences for the type of school that students attended, their native language, or proficiency levels. Participants indicated high levels of approval of the web-based intervention exercises and indicated a belief that this type of training would help them in future listening tasks.

Chen (2009) reported on the implementation of strategy instruction (SI) in the regular EFL listening curriculum in the context of a Taiwanese technological college. Rather than examining a cause-effect relationship, the study focused particularly on exploring learners' listening strategy development over the course of SI. The participants were 31 non-English major students of different listening proficiency enrolled in an EFL listening course for fourteen weeks. The SI consisted of in class strategy awareness raising, demonstration, practicing and discussion of students' strategy use, as well as out of class students' self reflection on their own listening processes. Data were collected by using reflective journals to provide quantitative and qualitative insights into how students develop their strategy use over time, and how they adapted themselves to learn in more self directed ways. The results showed that students reported greater awareness and control of their listening strategies. Chen

(2009) demonstrated that SI can be integrated in the EFL listening classroom, and can lead to positive effects for learners' understanding and use of listening strategies.

Hamzah, Shamshiri, & Noordin (2009) investigated the instruction of Socio-affective strategies to Malaysian 56 college students in listening comprehension. Subjects took an IELTS listening test, served as a pre-test, to be randomized in the control and experimental group. During a period of six weeks, subjects did different IELTS listening exercises. In the experimental group, subjects received explicit instructions to employ socio-affective strategies for 20 minutes every week, while in the control group, subjects just did the tasks without receiving any special instruction. During the instruction phase, subjects in the experimental group were required to practice relaxation techniques. Finally, subjects received a post-test. Results of the study revealed that the experimental group outperformed the control group in the post-test, which confirms the positive effects of strategy use in previous studies.

Jiang (2009) explored integrating listening strategies into listening class. Among the many strategies, Jiang chose the prediction strategy and described it in three stages: pre-listening, while-listening, and post-listening. Two classes, an experimental group ($n = 55$), and a control group ($n = 58$) were chosen as the participants of the study. The first group twice learned how to use prediction strategy in listening class. The second group did not learn the strategy and only learn with the traditional method. The data were collected by using post-tests and interviews of six students. The results showed that the prediction strategy really helped the experimental group to get high marks. Jiang suggested that although the positive effect of employing the prediction strategy is obvious, it is not enough to use just one strategy to make listening class effective to its utmost. Actually students need make good use of all the

strategies possible and necessary to achieve this goal because it is generally acknowledged that there are no good or bad strategies, but there is indeed good or bad use of strategies.

Coşkun (2010) investigated the effect of metacognitive listening strategy training on the listening performance of a group of beginning preparatory school students at a university in Turkey. Two beginner groups, a control group ($n = 20$) and an experimental group ($n = 20$), were chosen as the participants of the study. The training in the experimental group was limited to the planning, monitoring, evaluation and problem identification strategies embedded in the lessons for five weeks in the first half of the academic year at the preparatory school of a university in Turkey, while the other group did not. At the end of the training, a listening test taken from the teacher's manual of the same course book was administered to both groups. The analysis of the test scores using t-test revealed that the experimental group performed statistically better on the test.

In summation, most of the previous research studies on listening strategy training (i.e. Carrier, 2003; Johnson, 2003; Thanarak, 1992; Vandergrift, 2002; Chen, 2009; Hamzah, Shamshiri, & Noordin, 2009; Coşkun, 2010) conducted in traditional classroom settings used listening texts from students' textbooks, listening instruction textbooks, or commercial textbooks without visual supports. While O'Malley et al. (1985b) and Sooksripanich (1991) added visual supports to their training (i.e. pictures, diagrams, graphs, video tapes), Singhasiri (1994) used listening texts from commercial textbooks, read by native speakers and recorded for the purpose of teaching listening strategies.

2.4.2 Cautions for training listening strategy to L2 learners

Oxford (1994) raised some points relating to strategy training:

- 1) Strategy training should be integrated into regular L2 activities over a long period of time, rather than taught as a separate, short intervention.
- 2) Strategy training should be explicit, overt and relevant, and should provide plenty of practice with varied tasks involving authentic materials.
- 3) Strategy training should not be solely tied to the class at hand; it should provide strategies that are transferable to future language tasks beyond a class
- 4) Strategy training should provide learners with tools for evaluating their own progress and the success of the training which they have undergone.

Chen (2005) conducted a study of difficulties or barriers that sixty-four Taiwanese EFL learners confronted, while practicing listening strategies during their training program. The data were collected from two main sources: (1) the participants' working journals and (2) the unstructured interviews. Chen identified seven major types of learning barriers and divided them into 22 subgroups. One major type was material barriers which included obstacles pertaining to the difficulty level of materials, their spoken features, length of sentences or texts, genre, topics and modalities.

Other six major types were associated with learners' internal factors: (1) affective barriers which included anxiety, distress, frustration, and resistance; (2) habitual barriers which included listening for every word uttered, relying on subtitles and non-purposeful listening; (3) information processing barriers which included obstacles pertaining to spoken-word recognition, processing speed, input retention, processing distraction, interpretation and fatigue; (4) English proficiency barriers

which included obstacles pertaining to limited English vocabulary, poor grammar and overall English proficiency; (5) strategic barriers which included forgetting to activate strategies while listening, feeling challenged by the complex nature of a specific listening strategy, having problems in using appropriate strategies, and being unable to comprehend the text despite applying the strategies; (6) belief barriers which included applying strategies while, in fact, other language skills were required and attending to every word or demanding full comprehension of text.

2.4.3 Implications for the present study

Section 2.4.1 and 2.4.2 offers the present study a suitable sequence of steps for listening strategy training and cautions for the training.

For a suitable sequence, a number of steps identified by Cohen (1990) and Oxford et al. (1990) will be applied in the present study. The reasons for their selection are (1) the participants in this study have never be explicitly trained in the use of listening strategies, so they need prior training and (2) they have not been trained in the use of listening strategies and, as a result, may not be aware of the strategies that they actually use and, therefore, may not be able to report on their use.

Thus, the sequence that is suitable for the present study is as follows. First of all, based on Oxford et al.'s (1990) step 1, participants will be informed the purpose and benefits of listening strategy use. In addition, in the light of Carrier's (2003) research, it follows that this study should provide some, bottom-up and top-down listening activities, as mentioned in section 2.2.4. This is important, as both types of activities allow compensating for incomplete understanding of texts, missed linguistic or schematic input, and misidentified clues. As a result, concern with bottom-up processing, the software asks the participants to listen to four sentences and write

down the number of words that they heard; regarding top-down processing, the software activates participants' prior knowledge by providing questions and pictures related to topic and allowing them to think about those before listening. Second, based on Cohen's (1990) step 1, the software begins training by describing, modeling and giving examples of the target listening strategies. Third, based on Oxford et al.'s (1990) step 4, the software allows participants time to practice using the strategies. The practices are contextualized and directed to specific learning problems related to the learners' experience. Fourth, based on Oxford et al.'s (1990) step 5, the software illustrates how the strategies can be transferred to other listening tasks. Fifth, based on Oxford et al.'s (1990) step 6, the software allows time and opportunities for practice using the strategy with new tasks. Participants are given the opportunity to practice using the same strategy in different contexts. Lastly, based on Oxford et al.'s (1990) step 7, the software helps participants evaluate and better understand their strategy learning performance and strategy use. The participants use their scores on tasks and exercises of each unit to assess their performance. The higher the score, the more effective their strategy uses. Moreover, the participants can assess their use of listening strategies by filling out a questionnaire.

The sequence outlined above is similar to most previous studies (e.g. Singhasiri, 1994; Sooksripanich, 1991; Vandergrift, 2002; Wenden, 1991) which aimed to raise students' awareness of listening strategy use. In addition, in each step of the above sequence, the researcher integrates the principles of second language teaching developed by Doughty and Long (2001) and the principles for designing multimedia CALL proposed by Chapelle (1998). Finally, the researcher follows Chen's (2005) findings on issues associated with learners' internal factors. To manage

affective barriers, the researcher provides a non-threatening and positive learning environment. In order to manage English proficiency barriers, the researcher chose students who have similar levels of English proficiency. Similarities in students' background knowledge are also considered.

2.5 The use of L1 in teaching EFL learners

2.5.1 The use of L1 in teaching EFL learners

Previous research and many articles have shown that the use of L1 by both teachers and students increases both comprehension and learning of L2 (Cook, 2001; Tang, 2002; Case, 2008a; Case 2008b; International Teacher Training Organization, 2001; Morahan, n.d.). Although previous research pointed out the benefits of using strictly L2, that research had neglected specific factors that make L1 especially effective in the L2 classroom. As stated by Carless (2008), L1 has potentially positive consequences of cognitive functions. It was testified that one of the most frustrating aspects of teaching EFL is lack of meaningful communication when only L2 is used in the classroom.

Many teachers find that the use of some L1 provides more time to practice L2 because understanding is achieved much more rapidly. The key with teacher use of L1 is that it be used for clarification purposes, after an attempt has been made to communicate ideas in L2 and students still appear to be confused. The idea is that L1 serves a "supportive and facilitating role in the classroom" (Tang, 2002), and not that it is the primary language of communication. L1 use also allows students to become more aware of the similarities and differences between cultures and linguistic structures, and thus may improve the accuracy of translations. Finding cognates and

similarities between languages build up interlinked L1 and L2 knowledge in the students' minds (Cook, 2001).

Case (2008a) mentions that students want to talk about something that is important for learning English like self-study tips. He further notes that there are times when a good tip just cannot be given in easily understandable English. If the teachers don't speak the students' L1 or want to remain an English-only speaker in class, they are forced to make the effort to communicate with the students.

Case (2008b) mentions that the time saved from using L1 rather than English to explain something could lead to a substantial increase in the amount of time the researcher could spend on more useful language, e.g. in a short course with very specific needs.

International Teacher Training Organization (2001) suggested that in higher levels, teachers may still find using L1 to be a useful time saver in abstract vocabulary situation. However, they suggested using caution because teachers could be creating a crutch that may be very difficult to lose as the students' progress.

Teachers often use L1 in beginning and intermediate classes to:

- give instructions
- explain meanings of words
- explain complex ideas
- explain complex grammar points (Tang, 2002; Morahan, n.d.)

Mile (2004) finds out from his research that (1) using L1 in the classroom does not hinder learning, and (2) L1 has a facilitating role to play in the classroom and can actually help learning.

Latsanyphone & Hiroshima (2009) studied using L1 in teaching vocabulary to low English proficiency students. They mentioned that many English professionals do not seem to pay much attention to the use of L1 in English language classrooms, based on the tenets that English should be taught in English to expose the learners to English which would enhance their knowledge of English and accelerate their learning. While research findings have been inconsistent in relation to this position, the results of the present study found evidence to the contrary. Using 169 students of a low proficiency level, it was found that using learners' mother tongue (L1) to teach English as a foreign language in Laos enhanced their retention of new vocabulary items both in isolation and in context. This is possibly due to clear definitions and explanations in L1, dictation quiz and translation exercises in the classroom. This would have implications for English professionals. The findings indicate that the experimental group achieved significantly better performance in both vocabulary in direct translation and vocabulary in context. These results could provide empirical support for the application of L1 in the foreign language classroom.

Kavaliauskiene's findings (2009) also demonstrated the need for L1 in English classes, although the amount of L1 depends on the students' proficiency in English. This implicitly means that the students' proficiency also determines the use of L1 in EFL classes.

Usadiati (2009) conducted a classroom action research to improve the students' achievement in writing English sentences in Present Perfect Tense in Structure 1 lessons. The subject consisted of 20 Semester II students who took Structure I lessons in the English Education Department of Palangka Raya University, Central Kalimantan, Indonesia. The data were taken from the results of a pre test and post test

after the lesson was taught. The results show that in cycle 1, in which the explanations were fully in English, only 40% of the students showed positive achievement; 5-7 out of 20 test items were correct. After cycle 2 was done using L1 interchangeably with English in the explanations, the students' achievement in writing English sentences in Present Perfect Tense increased to 75%, in which 15-18 out 20 test items were correct. Usadiati suggested that the appropriateness of the use of L1 goes back to the teacher to justify very cautiously when it is appropriate to use L1 or L2 in EFL classrooms. Whenever content (or concepts) is more emphasized, which means comprehending meaning is more important, the use of L1 may be encouraged to enhance learning.

Cianflone (2009) summarized from her research that advocates of the theory do not deny the benefits of FL exposure and practice, but are aware that responsible mother tongue use can save classroom time to be devoted to other learning activities.

2.5.2 Implications for the present study

The use of L1 in the L2 classroom by teachers can be beneficial in the language learning process and may even be necessary for increase comprehension and acceptance of the new language by the language learners. Moreover the time saved, as well as the clarification of ambiguities in the L2, make the use of L1 an invaluable tool in the L2 classroom.

2.6 Computer assisted second language listening comprehension

Computer technology is being often used in classrooms, as a means of supporting instruction (Meskill, 2005). There have been big changes in computer assisted language learning (CALL) over the last few years, both with regard to the nature of the technology used and in respect to the pedagogical approaches and

philosophy that underlie materials and activities (A-P. Lian, 2004; A-B. Lian, 2008). This is said to mean that CALL has gone from utilizing simple static exercises which are limited to students to emphasizing interactive multimedia presentations with sound, animation and full-motion video. This change has not been purely linear; “the new and improved have not replaced the old” (Beatty, 2003, p.11). In fact, as research shows, interactive, multimedia materials were used in CALL as early as the 1980s and 1990s (Lian, 1984, 1993, 1993, 1995; Lian and Cryle 1985).

The role of CALL can be thought in terms of the metaphors of tutor, tool, and medium (Jones and Fortescue, 1987; Warschauer and Healey, 1998; Bax, 2003). First, the computer is regarded as a tutor. This mode of CALL features repetitive language drills for practice (Warschauer and Healey, 1998; Bax, 2003) typical of grammar-translation and audio-lingual methods. Second, the computer is regarded as a tool. Here, the stress is on learning as a process of discovery, expression and development (Jones and Fortescue, 1987; Warschauer and Healey, 1998). The focus is not so much on what students do with the machine, but, rather, on the students’ interaction generated with the help of the computer applications. This shift on interacting was informed by the communicative language teaching method. Third, the computer is regarded as a medium. In other words, computers are being used as tools for bringing together students from different countries in a more immediate and, therefore, more authentic context of interaction with one another. Examples here include the use of free websites (e.g. Google Sites), Youtube, Google video, video (seesmic.com), audio (Skype) and print chat channels and similar venues. The value of this more immediate contact is in agreement with the socio-cognitive approach to L2 learning (Warschauer and Meskill, 2000; Bax, 2003). It emphasizes language use in authentic social contexts

which helps to integrate the various skills of language use. This focus is on content, not grammar alone.

2.6.1 Listening comprehension and the value of CALL

The advantages of CALL for listening comprehension can be divided into two categories: (1) those inherent to the computer and software themselves and (2) those resulting from the contribution of the Internet and the World Wide Web (Frommer, 2006).

Warschauer and Healey (1998) identified a number of benefits of adding CALL in language instruction as: (1) a multimodal practice with feedback; (2) individualization in a large class; (3) fun factors; (4) a variety of resources available, thus helping to attend to different learning styles; and (5) assisting students' general computer-literacy skills. Benefits of using CALL and drawbacks of relying solely on traditional teaching tools for developing learners' listening abilities are compared in table 2.3 below.

Table 2.3 Comparative benefits of using CALL and drawbacks of using traditional tools for developing learners' listening abilities (adapted from Frommer, 2006)

Benefits of using CALL for developing learners' listening abilities	Drawbacks in using traditional tools for developing learners' listening abilities
Motivation (Interactivity)	
<ul style="list-style-type: none"> CALL is a tool with which most students today are relatively familiar and comfortable. This may help some participants to reduce their anxiety about listening comprehension (Warschauer, 1996). 	<ul style="list-style-type: none"> Traditional materials are not as motivating, as they are less interactive. This may create anxiety, as students cannot control the difficulty levels when working with texts.
Presenting listening texts (multiplicity)	
<ul style="list-style-type: none"> Features of traditional audio-visual tools can be easily incorporated. Multiple formats can all be put on a single computer and can be viewed on the same monitor. 	<ul style="list-style-type: none"> Listening texts could be presented with the support of different materials, e.g. video, spoken or print. However, there was less choice and students had to deal with different inputs at the same time.

Table 2.3 Comparative benefits of using CALL and drawbacks in using traditional tools for developing learners' listening abilities (adapted from Frommer, 2006) (cont.)

Monitoring	
<ul style="list-style-type: none"> Students can be monitored and intervened unobtrusively in their activities in a number of ways that are not available in a traditional classroom context or traditional language lab. 	<ul style="list-style-type: none"> Monitoring and intervention is less discreet in a traditional classroom context.
Brainstorming	
<ul style="list-style-type: none"> Distance-learning and individualization can be enhanced with the help of computer applications enabling students to interact synchronously and asynchronously with others. 	<ul style="list-style-type: none"> Traditional class allows only for synchronous communication where only one person can speak at any given time.
Self-assessment	
<ul style="list-style-type: none"> Online self-tests or quizzes may be created to provide instant feedback. Feedback can take more than one form. Students have the freedom to work with text at their own pace, review feedback or follow to next items. 	<ul style="list-style-type: none"> Students may not know when they have misinterpreted or missed important information. Teachers have to take times to check students' quizzes.
Responding to visual or aural input (Control)	
<ul style="list-style-type: none"> CALL allows students to control play/pause/rewind functions. It also allows teacher to control students' console. 	<ul style="list-style-type: none"> Traditional approach with teacher controlling the lesson plan, even when using tape/video/DVD/TV players, does not allow students to control the way in which they work with texts.
Organization of learning materials (simultaneity)	
<ul style="list-style-type: none"> CALL can offer a non-linear organization of learning materials. Hyperlinks allow students to maneuver through information, as they need. 	<ul style="list-style-type: none"> Traditional class has linear organization of learning materials.
Benefits of using CALL for developing learners' listening abilities	Drawbacks in using traditional tools for developing learners' listening abilities
Authentic texts and updating of resources	
<ul style="list-style-type: none"> The Internet allows access to a great deal of language material, thus giving students access to authentic texts. CALL allows for creating templates of activities and assessment tasks, which could easily be adapted over time. 	<ul style="list-style-type: none"> Traditional class uses listening texts from textbooks. Textbooks offer limited range of activities. Unlike computers which accumulate resources collected over time, textbooks simply change those.

2.6.2 Review of CALL studies in L2 listening comprehension

Although there is a substantial amount of research showing that educational technology can enhance reading and writing skills, there is still very little research on

how educational technology may be utilized to support and enhance listening skills (Liu, et al., 2003).

Brett (1995) created a multimedia, language learning software for developing listening skills of ESL learners within a business context. The software aimed to use multimedia to deliver video, audio and print in a variety of combinations and learners could use it as a free-standing, self study resource. The software gave learners choices in the following areas: (1) content; (2) mode; (3) activity; (4) type of tasks; (5) difficulty; (6) level of support; (7) sequence; (8) time and pace of learning; and (9) form of feedback by offering online help, print, save or restore options.

Brett (1995) also outlined a number of potential advantages of his multimedia resource for L2 learning. They included: (1) combination of media – integration of various media was still rare in 1995; (2) quantity of content and quality of data - provide learners with more learning opportunities; (3) computer power –the menu allows for a quick display of texts, tasks, and input; (4) degree of learner control – providing a variety of tasks and texts allows for the provision of satisfactory learner control; (5) economic – once resources are created, their use is cheaper than teacher hours; (6) CALL for skills work – the provision of video and sound allows CALL to move on from being a provider of print-based exercises only; and (7) motivation – computers in general tend to be more attractive to learners than a combination of books, tapes, and videos.

In 1997, Brett investigated listening performance in a computer multimedia environment. His preliminary hypotheses were: (1) learner success rates with comprehension tasks would be greater when using multimedia, rather than audio/video plus pen and paper; (2) greater success on multimedia-delivered comprehension tasks

would assist better language recall; (3) students' learning can be assisted by the unique features of multimedia; and (4) learners would see using multimedia for listening comprehension as positive, effective and motivating.

Brett derived data from worksheets, different types of listening tasks, cloze tests and questionnaires. Results of students' performance on tasks showed that more effective listening comprehension and recall while using multimedia, rather than audio or video plus pen and paper. Learner questionnaires indicated that the possible reasons for students achieving good results when working with multimedia were (1) instant feedback (here in the form of instant ticks and crosses) helped guiding, confirming and realigning learners' internal and ongoing reconstruction of the message and (2) using a single interface can assist listening comprehension better.

Hoven (1997) investigated the management of control in computer-assisted L2 listening comprehension tasks. Her aim was to conceptualize and develop an appropriate instructional design model for a humanistic integrated multimedia CELL (Computer Enhanced Language Learning, Lian, 1988). She mentioned that the programs available back in 1997 were not compatible with the principles of communicative or learner-centered language learning. In her study, she identified features of CELL which were more compatible with those learning models and which she associated with the sociocultural approach to language learning.

Hoven (1999) proposed an instructional design model appropriate for humanistic CELL multimedia in a self-access environment. She focused largely on listening comprehension with the assistance of audio and video texts. The model is grounded in the sociocultural theory. She listed several criteria for developing CELL which included: learner self-direction and autonomy, facilitating multi-channeled

perception / production, self-assessment techniques, self-exploration and self-discovery of problems, and provision of a wide range of print and non-print resources. Hoven's study was divided into two sections. The first dealt with the application of listening theory in the context of computer technology, and the second dealt with aspects of the sociocultural model for language learning in this context.

Hoven found that text, task and context features affect the level of listening difficulty in a CELL environment, and that learners can be introduced to taking control over their own learning by being provided with exposure to awareness-raising activities across all parts of their language learning program, including the CELL software. Identification of possible points of difficulty enables CELL task designers to provide learners with specific forms of support (activities) that would have the potential to assist them with those and, as a result, deal with authentic, not pedagogically adjusted texts. This approach is very unique, as it does not call for adjusting tasks, but for developing creative activities enabling students to deal with real life texts and tasks.

Singhal (2002) evaluated a PC software package named Essential Academic Skills in English: Listening to Lectures. It was designed for university level non-native speakers of English wishing to improve their listening comprehension and academic listening skills. This software contains 85 short video clips from 40 authentic lectures. The tasks are organized around watching video clips from lectures.

Singhal outlined the following as strong features of this program: (1) It offers a well-designed user interface; (2) The operation of the program is self-explanatory and clear; (3) navigation is straightforward, and page numbers inform users of their progress through units; (4) It uses authentic language; (5) The videos provide visual

support. Students can not only listen, but also see speakers' gestures, facial expressions, and body language which can increase comprehension; (6) It provides users with opportunities to employ both top-down and bottom-up processing skills; (7) Many activities are designed to provide background information and activate schemata by encouraging users to think about what they already know about the lecture topic and the skills to be practiced; and (8) Many activities are designed to help users develop listening strategies, including using non-verbal cues to assist in comprehension, synthesizing and summarizing information, recognizing rhetorical organization, and predicting information.

However, the weak features are: (1) Users cannot return to the main menu without exiting the program and starting again; (2) All speakers have British accents, while learners would benefit from exposure to a wide range of English pronunciation patterns; and (3) Some feedback responses offer little in the way of encouragement.

An investigation of the use of CALL in a classroom was conducted by Hegelheimer and Tower (2004). They explored learners' interactions within CALL program in an authentic setting. Their research questions were: (1) Which of the options that the software provided were accessed by learners while interacting with CALL program?; (2) Is there a relationship between the options that learners access and their performance on the tasks/activities provided as part of the software?; and (3) Does language proficiency appear to play a role in terms of the options selected and task performance? The data were collected from 91 female EFL university students in the United Arab Emirates. The participants took the placement test in order to be categorized according to groups of proficiency. The courseware used was contained on

four CDs with two CDs for beginners and false beginners, and two CDs for low-intermediate students.

The options of this program were: (1) exit (to leave the program or return to the previous menu); (2) microphone (to record users' voice in their practice); (3) headphone (to play back user's voice to be compared with the native speakers' voices); (4) rewind (to go to previous sentences); (5) replay (to re-play the previous sentence); (6) pause (to pause the recording); (7) forward (to go to the next sentences); (8) ABC (to re-play and view the transcript); and (9) glossary (includes the words used in the unit).

The result showed a large variation in the use of the available options. While teacher-introduced and mandated options were utilized more frequently, the data revealed that some options were either used infrequently (e.g. glossary), or completely ignored by half of the learners (i.e. ABC). The study also suggested that access to options that provide added redundancy were significant predictors of success, more so than the time spent interacting with the CALL program. While low proficiency students chose dual input (audio and textual), they appeared to be less able to utilize it effectively. Higher proficiency students focused mainly on audio repetition.

Schmidt and Hegelheimer (2004) investigated how authentic web-delivered video can support online L2 instruction and enhance the incidental acquisition of vocabulary and listening comprehension. Other aims were to investigate whether the learner - task interaction facilitated incidental vocabulary acquisition and what listening strategies learners used in their online activities. Twenty-four L2 university students enrolled in a listening comprehension class participated in the study. Data

were collected through pre-tests and post-tests, a CALL activity, an academic lecture on horticulture and a questionnaire.

The results suggested that incidental vocabulary acquisition does occur and that lower-level learners are more likely to refer to the wrong aspects of the lecture when responding to comprehension questions. While engaged in the online CALL activity, advanced learners showed both meta-cognitive, i.e. monitoring, strategy by listening to words and re-checking question, and cognitive learning strategies, i.e. inferencing, by guessing and matching.

Intermediate and lower-level learners made mostly use of cognitive strategies, i.e. summarization, by memorizing lectures and words. They also used the inferencing strategy, when they did not know the vocabulary and elaboration strategy when they used their own world knowledge. Female learners used more strategies than male learners, and female learners preferred cognitive strategies, while male learners used more meta-cognitive than cognitive strategies.

Recent study on CALL and listening course was conducted by I. Kim (2006). Kim described how he developed an online listening comprehension course in English at Korea's Open Cyber University. The course included multimedia content derived from his own textbook. The theoretical underpinnings for the course were derived from L2 acquisition theories (i.e. the noticing hypothesis, learner autonomy, and engagement). Kim explained the relationship between various online and offline elements and suggested that the Internet was an especially appropriate environment for developing both micro- and macro listening skills. In addition to the weekly virtual lecture, the course utilized the communication modes as follows – icebreakers,

collaborative listening projects, e-mail exchanges, bulletin board, online synchronous discussions and virtual office hours.

Kim's analysis of an informal survey taken from two semesters revealed that: (1) most students showed a favorable response to the online environment; (2) most students indicated that the course was effective, because it had a great deal of good-quality English listening materials, video lectures and many interesting hyperlinked sites; (3) many students expressed a positive response to Kim's avatar video lectures; and (4) many students liked participation in group listening projects, because they could establish relationships among students in the course. Kim mentioned that other typical web-based courses tended to be lacking in human relationships.

Cárdenas-Claros and Gruba (2007) attempted to create a principled framework for understanding, development and evaluation of help options in computer-based listening materials. According to their literature analysis, learners experiencing breakdowns in understanding aural input in CALL environments have access to one or more of the following: (1) transcripts; (2) subtitles to read along while listening to aural texts; (3) cultural notes to understand where aural text is contextualized; (4) word definitions presented through glossaries or online dictionaries to look up unknown words; (5) audio control functions (rewind/forward/pause) to replay complete or partial segments of the aural materials; (6) still/dynamic pictures and videos to have a visual representation of the materials; and (7) feedback to assess task completion and learning outcomes. They proposed that L2 learners experiencing breakdowns in the comprehension are able to overcome those by interacting with different forms of enhanced input (i.e., enriched, salient, and modified) provided through help options.

Grgurović and Hegelheimer (2007) studied help options in multimedia listening programs. They investigated whether subtitles or transcripts are more effective in providing modified input to learners. A multimedia listening activity containing a video of an academic lecture was designed to offer help in the form of target language subtitles (captions) and lecture transcripts in cases of comprehension breakdowns. Eighteen intermediate ESL students enrolled in an academic listening class at a research university participated in the study. Two tests and questionnaires in addition to screen recordings were used to analyze students' performance on the activity and their use of help.

The results indicated that participants interacted with the subtitles more frequently and for longer periods of time than with the transcript. Also, they identified four patterns of learner interaction with the help options. Overall the participants interacted with help less than half of the time that they opened the help page. An important challenge in CALL lies in finding ways to promote the use of help.

In summary, researchers like Hoven (1999, 2002) used computers to improve listeners' listening skills by providing practice and self-assessment opportunities as feedback mechanisms in self-access mode to facilitate independent learning. While Hoven focused on developing a battery of creative activities enabling students to deal with predictable and unpredictable difficulties with processing authentic language, others (e.g. Hegelheimer and Tower, 2004; Singhal, 2002; Schmidt and Hegelheimer, 2004) sought to identify very specific forms of help that would prove popular and of value to specific L2 skills.

2.6.3 Implications for the present study

After reviewing the above CALL research, the researcher takes an approach where the CLSTS is used as a tutor and tool in order to allow students greater flexibility in learning the target listening strategies. Thus, in preparing the CLSTS, the researcher relies on previous studies about (1) help options, (2) instruments for data collection, (3) content and (4) communication modes.

Regarding help options, the CLSTS includes functions like rewind, repeat, and forward functions and navigations, and menu buttons enabling students' better navigation. In addition, learners are informed about when and how to use help options.

Regarding data collection, computers are used as a medium to collect data because they can follow students' performance on a daily basis. A learning management system (LMS), i.e. Moodle, is used as a research and pedagogic tool. It is a web-based, hence can be used and managed by all involved anytime, from any place and gives students access to an independent learning facility (Auringer, 2005; Rice, 2006; Wentling, Waightm, Gallaher, Fleur, Wang, and Kanfer, 2000). Videos, audio, scripts, and other technologies which are available on the Internet will be used to facilitate this listening strategy training.

For content, previous research implies that the CLSTS should include a wide range of English accents and patterns. The CLSTS should provide feedback to students in details that encourage the students to delve deeper into the material to reinforce their learning. When the feedback is needed, it should be in modified sources of exercises.

Regarding communication, the present study provides access to virtual office hours and email. Students are able to get in touch with the researcher by communicating via the virtual office hours and via email.

2.7 Theoretical framework for developing the CLSTS

As mentioned above, the sequence of activities of the CLSTS is adapted from Cohen (1990) and Oxford et al. (1990). This sequence is consistent with constructivist learning theory and a number of findings drawn from second language acquisition theories. In addition, five principles (see Table 2.4) from Doughty and Long's (2001) principles of language teaching and Chapelle's (1998) principles for developing multimedia CALL are applied in designing lessons for CLSTS. Each principle is explained in detail in the following sections.

Table 2.4 Theoretical framework for developing the CLSTS

	Principles
Input	
1	Providing rich comprehensible input
2	Advising learners to use prior knowledge to construct new meanings
Learning process	
3	Encouraging active learning
4	Providing negative and positive feedback
5	Promoting collaborative learning

Principle 1: Providing rich comprehensible input

“Successful instructed language learning requires extensive L2 input” (Ellis, 2005, p.38). Ellis points out that if students do not receive exposure to the target language, they cannot acquire it. Based on this principle, the CLSTS provides participants with various listening text types, both short extracts and longer texts. Modeled after written language, these texts are not scripted or dressed up to look like spoken text.

In addition to rich input the linguistic characteristics of the target language input need to be made salient (Chapelle, 1998). Schmidt and Frota (1986) noted that learner's noticing of linguistic input plays an important role in making unknown target language forms into known and used forms. Development of principles for CALL design methods requires effective "input enhancement", i.e. attempts to focus the students' attention on specific target structure (Smith, 1993). A better way to formulate this goal could be to focus participants' attention on regularities, rather than on teaching students linguistic regularities. This would be in agreement with the constructivist principle that students should be allowed to build (CONSTRUCT) their own systems of organizations, rather than be taught the teachers' systems. Keeping this in mind, activities in the CLSTS give participants plenty of opportunities to explore linguistic and semiotic relationships that help them construct meaning and act in a meaningful way. The researcher uses plenty of imagination for this purpose, including highlighting words and facilitating the use of hyperlinks and similar aids. The CLSTS provides access to audio and video. At the same time, it offers feedback activities which utilize the benefits of this varied input to accommodate different cognitive styles and learning strategies.

Participants can choose the listening texts that they see of value to their learning process. They are also able to ask their peers and the researcher for help and advice, which enable them to tailor their technology options, thus making their individualized learning a reality (Doughty and Long, 2001).

Principle 2: Advising learners to use prior knowledge to construct new meanings

Constructivists propose that new learning is built upon prior knowledge. The theory maintains that knowledge is not received from outside, but students construct

knowledge based on what they already know in the context of interaction, which facilitates their ongoing intellectual development. Mendelsohn (2006) emphasizes that there should be a recognition of the importance of prior knowledge in any listening comprehension course. The CLSTS environment utilizes as much as possible of participants' cognitive resources by giving them access to a multitude of activities that activate multi- sensory redundancies. Their familiarity with the listening content will also help them in their learning, reduce processing load and help them focus on listening strategies that they will be taught. The listening topics are similar to English textbooks of various publishers (e.g. Green Light Five, Super Goal 5, Gateway 2, Different 2, World Club 5, etc.) because these textbooks have already constructed participants' background knowledge.

Principle 3: Encouraging active learning

Constructivist learning theory states that students are actively involved in their learning process. Therefore, to learn, students need to be involved in activities that encourage this involvement. The learning activity needs to engage them in exploring, experimenting, doing research, asking questions, and seeking answers (Alessi and Trollip, 2001; Driscoll and Carliner, 2005; Reyes and Vallone, 2008). Consequently, they learn not only information, but also how to learn. Students who learn with an active orientation will be more intrinsically motivated to study, will enjoy learning, and will learn more than students who learn with a passive orientation (Benware and Deci, 1984; Educational Broadcasting Corporation, 2004). The CLSTS promotes active learning by requiring students to do meaningful learning activities and think about what they are doing.

Principle 4: Providing negative and positive feedback

When learners modify their previous output (utterances) in response to negative feedback, learning opportunities are created by both the provision of negative feedback and the production of modified output.

(McDonough, 2005, p. 79)

With reference to cognitive feedback, Ellis (1994) points out on the basis of a study by Vigil and Oller (1976) that positive cognitive feedback results in fossilization, whereas negative feedback causes learners to work on their error. Here, positive cognitive feedback means that the recipient of a message signals that he or she understood the message independent of the number of errors. Negative feedback refers to a reply which says that the utterance has not been understood. Even more precise information on the nature of effective feedback is provided by Pica and others who established that the main factor was the nature of the feedback signals (cited in Ellis, 1994). Lyster and Ranta (1997) came to a similar conclusion. Learners tended to rephrase their utterances upon clarification requests but were less likely to rephrase after confirmation requests or repetitions. In other words, if errors trigger a clarification request which signals that what the learner said has not been understood, the learner is much more likely to work on the error (Schulze, 2003).

Immediate negative feedback therefore refers to any input providing information about the unacceptability of an answer. L2 students provided with negative feedback are said to outperform students given minimal or no negative input (Aljaafreh and Lantolf, 1994). In designing the CLSTS, opportunities for the provision of negative feedback will be provided without discarding positive feedback all together. Opportunities for the provision of negative feedback will come from students

negotiating in English with their teacher or peers who will assist each other in clarifying the participants' approach to the questions in tasks and their listening strategies use.

Thus the CLSTS provides positive feedback for the participants to confirm their responses and expectations. Positive feedback and confirmations of students' language production as acceptable have been shown to strengthen linguistic knowledge already registered in their inter language systems (Lai, 2000).

Principle 5: Promoting cooperative/collaborative learning

Based on constructivist learning theory and second language learning models (e.g. Doughty and Long, 2001), cooperative learning is very important to facilitating successful L2 learning. As a result, the researcher promotes the benefits of collaborative learning at the outset of the course by allowing the participants to consult their friends and the research as they wish. This is important for students to feel supported and understand that this support can come from the teacher and from their peers. Without this confidence, students may get discouraged and may quickly lose motivation. Any online learning process may feel pointless without the rules of collaboration being made clear (Doughty and Long, 2001).

CHAPTER 3

METHODOLOGY OF THE STUDY

This chapter presents a detailed description of the methods used in the present study with respect to: (1) research design; (2) participants; (3) research instruments; (4) research treatments (i.e. a CLSTS and a CLTS); (5) data transcribing, coding, and scoring procedures; (6) data analysis techniques and hypotheses testing; and (7) procedures for data collection.

3.1 Research design

The research study was designed using a quasi-experimental methodology i.e. a pretest-posttest nonequivalent control group design (Gall, Borg, and Gall, 1996; Gay, 1992; Robson, 2002; Tuckman, 1999). However, in using this method, the researcher tried to mitigate the problem by selecting intact groups in ways that make it likely that the groups do not differ greatly prior to the treatment. The more similar the groups are, the better (Gay, 1992). The researcher then made every effort to use groups that were as equivalent as possible. Instrumentation threats were controlled by this design. Both groups were first administered a pre-listening comprehension test. One group learned with the CLSTS; the other group practiced listening with the CLTS. The difference between the two groups was the CLSTS group was trained in listening strategies while the CLTS group was not trained in any listening strategy. Finally, both groups were administered a post-listening comprehension test.

N1	O1	X1	O2
N2	O1	X2	O2

Figure 3.1 Research design of this study

N1	=	Experimental group
N2	=	Control group
O1	=	Pre-test
O2	=	Post-test
X1	=	The CLSTS
X2	=	The CLTS

However, the pre-test/post-test nonequivalent control group design has two weaknesses. The first weakness is that the pre-test may introduce bias (e.g. when the pre-test controls sources of invalidity, its influence may plague the study. As a result, the researcher used parallel pre- and post-tests in this study. The second weakness is that the pre-test scores of the two groups may prove not to be equivalent. Because the second weakness was present in the study, the researcher chose to eliminate the lowest and highest scores of participants in the study. The researcher did this to facilitate equivalence in the pretest. This enabled a more accurate measure of the effect of teaching listening strategies by CLSTS. After elimination of the highest and lowest scores, the pre-test scores of the two groups proved to be relatively equivalent.

3.2 Participants

The participants were Thai high school EFL students (i.e., students who study in Grade 10 in a Thai high school in Bangkok. Two intact classes of participants in Grade 10 were chosen. The researcher screened the participants again by collecting their pre-listening comprehension scores. Even though the participants were from the intact classes, the researcher did not select students who got the lowest or the highest scores in order to control internal variables. One class comprised 36 students; only 27 students were selected as participants. Another class comprised 33 students; only 30 students were selected as participants. Therefore, the participants had medium English language learning proficiency (see section 3.7.1 Selection of a research site and participants).

3.3 Research instruments

To collect the data for the present study, the researcher used five research instruments: (1) a personal and academic questionnaire; (2) pre- and post- listening comprehension tests; (3) questionnaires on the strategies trained by the CLSTS; (4) a final questionnaire on the CLSTS; and (5) a semi-structured interview. A matrix illustrating how each data set was used to answer each research question is shown in Table 3.1. In the following sections, each instrument is described in detail.

Table 3.1 A matrix illustrating how each data set was used to answer each research question

	Research questions	
Research instruments	1) To what extent does the CLSTS enable Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension?	2) What are the students' opinions towards the CLSTS and its applicability?
1) A personal and academic questionnaire	✓	
2) Pre-/post-listening comprehension tests	✓	
3) Questionnaires on the strategies trained by the CLSTS	✓	✓
4) A final questionnaire on the CLSTS	✓	✓
5) A semi-structured interview	✓	✓

3.3.1 A personal and academic questionnaire

A questionnaire written in the Thai language (see Appendix 6) was developed to gather each participant's personal and academic information. The questionnaire was divided into two sections. The first section covered their names, grades in two English courses from the previous semester, self-evaluation on their language skills, computer and Internet skills, their extra English courses outside class time, listening strategy learning experiences, English study in the target culture, and time availability for

participating in the present study. The second section was used to prove whether the participants used listening strategies when they listen to English language.

This questionnaire was comprised of dichotomous questions, multiple choice questions, and rating scales. The dichotomous question is useful because “it compels respondents to come off the fence of the issue and it provides a clear, unequivocal response” (Cohen, Manion, and Morrison, 2007, p. 322). The multiple choice question is used to capture the likely range of responses to given statements (Cohen, Manion, and Morrison, 2007). This questionnaire was first tried out on ten Grade 10 Thai EFL students to examine whether there would be any weakness in the written questionnaire and whether the content in the written questionnaire would be understandable and suitable to the students. The modified questionnaire would be administered in the actual experiment.

3.3.2 Pre- and post- listening comprehension tests

The researcher adopted the Preliminary English Test (PET) from the University of Cambridge to assess the participants’ English listening ability, for the pre- and post-listening comprehension tests, because (1) PET is an examination for learners who can use everyday written and spoken English at an intermediate level or at Level B1 of the Common European Framework of Reference for Language (CEFR) – an internationally recognized benchmark of language ability, (2) PET is a truly international certificate, recognized by administrative, industrial, and service-based employers as a qualification in intermediate English, (3) it is also accepted by a large number of educational institutions for study purposes, (4) many researchers confirm that this test is helpful to measure students’ listening comprehension, and (5) from the

pilot test with groups of five and ten students, the participants' English language abilities were at Level B1.

The largest benefit of using PET as a research instrument is the researcher had a chance to know whether participants used the four listening strategies (elaboration, listening for the main idea, listening for specific details, and prediction) before and after the training. The PET did not ask the participants directly to use each strategy. However, to successfully negotiate the test, each question beckons the use of each listening strategy. The participants listened to the PET as a normal listening comprehension test and had to utilize the four target listening strategy trainings to answer the questions. For example,

- 1) From part 1, item 1 in the pre-listening comprehension test (see appendix 7), when participants viewed three pictures of athlete's shoes in a multiple choice question, they would use prediction strategy to find the price of the athlete's shoes from the content. They had to use elaboration strategy or draw their background knowledge about the approximate price of athlete shoes and then convert it to Euros. They had to listen to the main idea of athlete shoe selling. And lastly, they would listen for specific details about the price.
- 2) From part 3, items 14-19 in the pre-listening comprehension test (see appendix 7), when participants saw the title "Firefighter training programme", they would use elaboration strategy to draw on their background knowledge about firefighters. They used listening for the main idea to understand the whole text and used listening for specific details to find the word to fill in the blank. When they listened, they had to predict what the speaker was going to talk about next.

- 3) Part 2, items 8-13 in the post-listening comprehension test (see appendix 8), when participants read the recommendations before listening, they would use elaboration strategy or draw their background knowledge to understand about being interviewed on the radio. When they viewed the questions, they would use prediction strategy to prognosticate what they would hear. They had to listen to the main idea in order to answer the question 8. And they had to listen for specific details in order to answer the rest of the questions by using the questions as guidelines for listening.

These show the suitability of the PET in measuring the participants' propensity to use the target listening strategies when listening to English language.

The CEFR framework uses six levels to describe language ability from A1 to C2 (see Appendix 15). PET is for students at Level B1. It covers all four language skills – reading, writing, listening, and speaking. However, only the listening part from previous versions was used. This listening part was used to prove whether the student's English listening proficiency is in line with the student's grade in English courses they took the previous semester, which is shown in their personal and academic questionnaire. Since students' previous grades were based on results of an entire English proficiency score, some students might have achieved a listening proficiency level somewhat higher or lower than their overall English grades. The researcher then used the pre-listening comprehension tests to measure their level in listening proficiency.

The parallel listening comprehension pre- and post-tests (see Appendixes 5 and 6) were used to (1) display individual and group levels of achievement in using the listening strategies after being trained by comparing their post-test scores with their

pre-test scores and (2) reveal individuals' and group's strengths and weaknesses across a series of performances of four listening strategies in listening comprehension (i.e. elaboration, specify the main idea, identify specific information, and prediction).

The pre- and post- listening comprehension tests were administered in a computer lab with Internet connectivity. Both tests have 25 items and the scores were computed by a computer program. There were four parts in the listening version of PET. In the first part, students listened to short dialogues then chose the correct picture for each question. In the second part, students listened to a monologue then chose only one appropriate response from three choices for each item. In the third part, students also listened to a monologue and filled in the missing information in the space provided. In the last part, students listened to a long dialogue and decided if each sentence was correct or incorrect. The participants of the present study took a listening comprehension pre-test one week before they used the CLSTS or the CLTS and took a listening comprehension post-test one week after they used the CLSTS or the CLTS. A parallel test was used for the post-test because the time of the course was rather short (four weeks from the pre-test), and there was a favorable likelihood that each participant may remember the contents of the pre-test.

In developing the pre- and post- listening comprehension tests, the researcher:

- 1) Randomly selected parts 1 to 4 from listening test papers of previous versions of the Preliminary English Test (PET). The total number of test items was 25.
- 2) Conducted a content analysis of the test items to check their relatedness to the strategies trained. Three experts in teaching English for high school checked each item to prove that each item was related to the target listening strategy trained. The results were used to ensure the validity of the selected test items.

- 3) Tried out the English listening proficiency test with 10 Thai Grade 10 EFL students.
- 4) Conducted an item analysis of the test items to check their reliability and validity based on the KR20 formula. The SPSS program was used to calculate the Cronbach score of the test. The results can be used to ensure the reliability and validity of the previous research.
- 5) Reselected the test items and piloted again until the test reached an acceptable reliability value of at least 70 percent.

The scores from the pre-listening comprehension test was used as criteria to identify the target students' English listening proficiency levels and was used to select the participants for the study. That is, participants who got a medium level score on the test were selected. For Group A, 36 students took the test; only 27 students were selected. For Group B, 33 students took the test; only 30 students were selected. However, the students who were not selected still had chance to learn with the software because they were in the same class.

3.3.3 Questionnaires on the strategies trained by the CLSTS

The researcher developed Thai questionnaires on the strategies trained by the CLSTS (see Appendix 9 and 10). They were administered after each training unit. There were six, five-point rating questions and one open-ended question in each questionnaire. The questionnaires on the strategies trained by the CLSTS were used to elicit participants' opinions about the target listening strategies, their opinions towards the CLSTS, and its applicability.

In developing questionnaires on the strategies trained by the CLSTS, the researcher:

- 1) Developed Thai questionnaires on the strategies trained by the CLSTS, that is, Questions 1, 6 and 7 asked about the effectiveness of the training and Questions 2, 3, 4 and 5 asked about the applicability of the training. For the applicability, the researcher showed how each strategy is used as guidelines in answering the questions. The rating scale for the positive statements is:

5	=	strongly agree
4	=	agree
3	=	neutral
2	=	disagree
1	=	strongly disagree

- 2) Asked five experts on Thai language to check the questionnaires
- 3) Piloted the questionnaires with five students
- 4) Revised the language and content
- 5) Piloted the questionnaires with 10 Thai Grade 10 EFL students
- 6) Revised the language in the questionnaires and used the modified version with the actual group of students

3.3.4 A final questionnaire on the CLSTS

The researcher developed a Thai version of a questionnaire on the CLSTS (see Appendixes 11 and 12) to gather the participants' opinions regarding the CLSTS. The questionnaire enhanced the researcher's understanding of students' opinions regarding the effectiveness and applicability of CLSTS.

The questionnaire on the CLSTS consisted of two sections, i.e. 15 five-point rating scale questions and two open-ended questions. The five-point Likert Scale categories were labeled using numbers ranking from 1 to 5 ("strongly disagree" to

“strongly agree”). The participants had 10 minutes to do the questionnaire. The following steps used for constructing the questionnaire are adapted from Dörnyei (2003) and Robson (2002).

- 2) Reviewed related literature regarding methods of creating opinion questionnaires based on Likert’s method.
- 3) Compiled possible computer issues relating to L2 listening strategy training.
- 4) Constructed positive statements based on the possible issues relating to the CLSTS. The rating scale for the positive statements is:

5	=	strongly agree
4	=	agree
3	=	neutral
2	=	disagree
1	=	strongly disagree

- 5) Asked five experts to examine the questionnaire.
- 6) Revised the questionnaire.
- 7) Tried out the questionnaire with five students from Grade 10 in order to examine the problems, weaknesses, and obstacles in understanding the questionnaires (Dörnyei, 2003). This can increase the appropriateness and the validity of the questionnaire (Lauer, 2006).
- 8) Revised the questionnaire based on the students’ feedback.
- 9) Piloted the questionnaire with 10 Thai Grade 10 students in order to find its reliability and validity.
- 10) Improved the questionnaire and used the modified questionnaire in the actual experiment.

3.3.5 A semi-structured interview

On the same day of the post-training session and two days after the post-training session and during the participants' free time, a semi-structured interview in Thai was conducted to obtain the participants' opinions regarding: (1) the effects of the CLSTS in enabling Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension; and (2) the CLSTS itself and its applicability (see Appendix 14). The semi-structured interview aimed to acquire data not obtained by the questionnaires on the strategies trained by the CLSTS or the final questionnaire on the CLSTS, and to confirm earlier answers and elicit more information from each participant. All participants from the experimental group were interviewed one-to-one by the researcher and two assistants. By doing this, the researcher obtained in-depth and thoughtful responses and more personal accounts of the situation (Colton and Covert, 2007). Note taking and audio recording methods were used to record the information collected in the interview. The length of each interview was approximately 10 minutes.

In developing a semi-structured interview, the researcher:

- 1) Developed a Thai version of semi-structured interview questions.
- 2) Asked at least five experts on content and language to check them (see Appendix 16, 17).
- 3) Piloted the guided questions with a group of 5 students.
- 4) Revised the guided questions.
- 5) Piloted the revised version with 10 Thai Grade 10 EFL students.
- 6) Improved the questions and used the modified questions in the actual experiment.

3.4 Research treatments

To do experiments in the present study, the researcher used two research treatments: (1) computer-assisted listening strategy training software (CLSTS); and (2) computer-assisted listening training software (CLTS). Below is the introductory page to both research treatments. The participants then clicked on available courses that they were already assigned to attend.

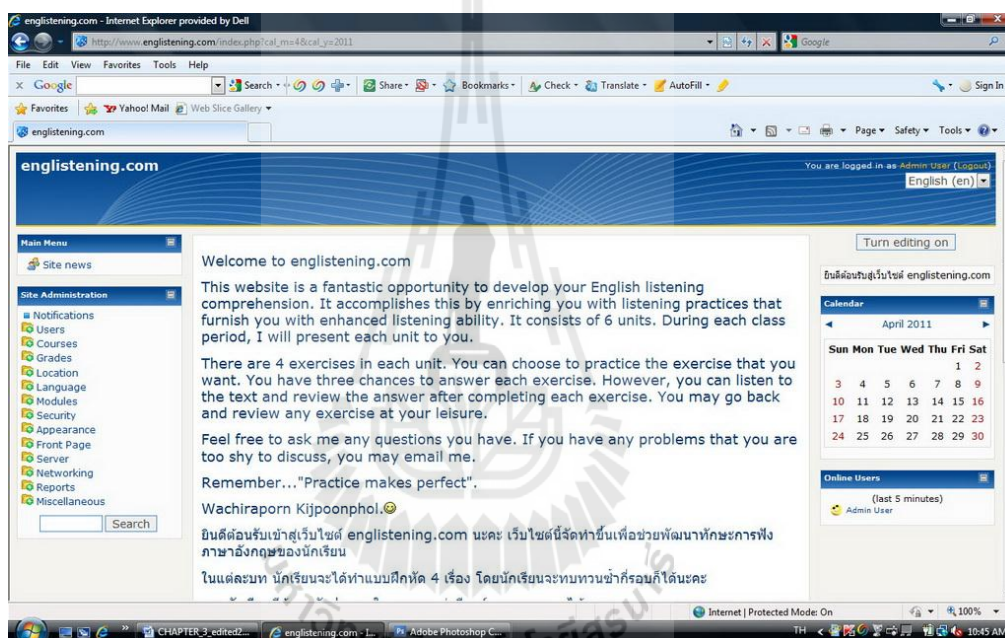


Figure 3.2 A screenshot of the home page of the software

The introduction briefed the participants on the overview of the lesson regarding its objectives and how to learn the content. Participants in group A (i.e. the experimental group) attended an English listening comprehension practice (Group 1) which is the CLSTS; Participants in group B (i.e. the control group) participated in an English listening comprehension practice (Group 2) which is the CLTS. When they click on their assigned group, they participated in different steps.

3.4.1 Computer-assisted listening strategy training software (CLSTS)

Before developing the CLSTS, the researcher reviewed previous studies related to the listening training and listening strategy training software.

3.4.1.1 Model for design and development of the CLSTS

In designing the CLSTS, Alessi and Trollip's (2001) Model for Design and Development was used as a guideline. This model consisted of three phases: planning, design, and development.

Phase 1: Planning. In this phase, the researcher ensured a thorough understanding of what the project is all about and the constraints inherent in the project. The steps which the researcher followed were:

- 1) Define the scope of the content by preparing details of the four listening strategies that were used
- 2) Identify characteristics of students such as age, educational level, proficiency, motivation, nature, goals, and learning context (Levy, 1999). When these characteristics were considered, the researcher decided to choose Grade 10 students who had medium proficiency to participate in this study.
- 3) Established constraints such as hardware, software, timelines, and content. The specifications of the computers in the computer lab at the research site were as follows:

CPU: Pentium Dual Core E2180 2.0 GHz

RAM: DDR2 800/2GB

HDD: Seagate 160GB

Mainboard: ASUS P5G-MX

VGA/Sound Card: VGA ASUS EAH3450

Monitor: SAMSUNG LCD 19'

Operation system: Window XP

The CLSTS run with the Moodle program.

- 4) Determined and collected resource materials which were relevant to: (a) participants' background knowledge related to the topics and participants' textbooks – Green Light Five, Super Goal 5, Gateway 2, Different 2, World Club 5, etc.; (b) the instructional design (i.e., texts and manuals about instructional design and lists of relevant instructional factors which generate and organize the ideas (see details in section 2.6.2 Review of CALL studies in L2 listening comprehension) and teaching processes (i.e., listening strategy training framework applied from Cohen (1990) and Oxford et. al. (1990)); and (c) the delivery system for the software (i.e., Moodle program with Flash player version 8). Then asked three teachers who teach English at high school level to review whether the content was suitable for students (see Appendix 18, 19).

Phase 2: Design. In this phase the researcher structured lessons, content, and activities by following the theoretical framework for the CLSTS (see details in section 2.7 Theoretical framework for developing the CLSTS) so that they can be learned effectively. The researcher designed activities that maximize (1) interest by providing participants with interesting topics and exercises, (2) learning by giving participants negative and positive feedback, and (3) retention by providing support that enables the students themselves to reconstruct their own target language cognitive schemata. The steps that the researcher followed were:

- 1) Developed the initial theme of each unit by using one theme for two units. By doing this, participants did not need to frequently recall their background knowledge. They would pay attention to the listening strategy that they learned.

- 2) Created flowcharts using the Cmap Tools program which provided a visual representation of the design and details that needed to be implemented.
- 3) Prepared scripts in both Thai and English which described what students should do in each step.

Phase 3: Development. This phase included all the computer programming necessary to make the software function to its fullest potential. The researcher chose a free learning management system, i.e. “Moodle” program, to support the study. The researcher:

- 1) Prepared and assembled all media such as graphics, and audio. In choosing listening materials, the factors to be considered were: the pace of speech (i.e., the researcher prepared authentic listening texts, but adjusted them to be at a slightly slower pace of speech) in which the slower version was more suitable than the original version, cultural references and schemata (i.e., the researcher used listening texts about which the participants had background knowledge in, and the listening texts avoided unfamiliar cultural references – see details in section 2.1.3 Implications for the present study), and dialectal colloquial expressions (i.e., the researcher tried to avoid these kinds of expressions because they are one factor that hinders participants’ listening comprehension) (Hinkel, 2006). The Listening tasks were then carefully selected from the following websites: <http://www.bbc.co.uk/>, <http://www.voanews.com/>, <http://esl.about.com/>, <http://www.manythings.org/>, and <http://www.thebobandrobshow.com/>.
- 2) Collected monologues and dialogues from the aforementioned websites. The advantages of using both monologues and dialogues in the CLSTS were (1)

one-way communication is a salient and important area for academic lectures. It is still the dominant form in lecture settings of secondary classroom education (Rost, 2002) and (2) two-way communication is an important area for students when communicating with foreigners in real life situations. Both provide good opportunities for students to practice. Mendelsohn (2006) mentions that one essential feature of any listening comprehension course is that it should cover different kinds of listening.

The difficulty level of listening texts was measured by applying the Flesch-Kincaid Readability scale because there was no listening ability scale for listening texts. The Flesch-Kincaid Readability scale is used for grade-level ranging from 0-12. This scale is automated in Microsoft Word and has been demonstrated to be reliable and valid. The scale assesses readability on the basis of the average number of syllables per word and the average number of words per sentence.

Table 3.2 Flesch-Kincaid Readability Index

Index	Level	Difficulty
90-100	Very easy	Easily understood by average 11-year old students
80-89	Easy	
70-79	Fairly easy	
60-69	Standard	Easily understood by average 13- to 15-year old students
50-59	Fairly difficult	
30-49	Difficult	
0-29	Very confusing	Understood by college graduates

However, this index is used for native English speakers exposed to reading texts. The researcher applied the index to Thai high school students exposed to listening texts. This led the researcher to lower the index. The listening texts which range from 70-79 were used for the present study.

- 3) Constructed the CLSTS by working with computer programs such as Macromedia Flash 8, Adobe Photoshop CS3, and Adobe Captivate CS3 and uploaded every step into the CLSTS.
- 4) Tried out the software individually with one student who had similar characteristics to the target participants of this research study (for details see section 3.7.1 Selection of a research site and participants - 3.7.2 Inviting participants to take part in the study). The advantages gained from this stage were (a) determining whether the participants had any problems in using the CLSTS, (b) determining whether the participants could finish every unit in the time allocated, and (c) trying out questionnaire procedures.
- 5) Improved all units of the CLSTS by using all data obtained from the trial.
- 6) Tried out the software with a small group of five students who had similar characteristics to the participants in this research study (see details in section 3.7.2 Inviting participants to take part in the study). This gave the researcher an opportunity to observe the time it took to complete each unit of the CLSTS, the influence of environmental conditions, and any problems students continued to have (Colton and Covert 2007).
- 7) Revised the software in order to eliminate any problems.
- 8) Tried out the software with a pilot group of ten students who had similar characteristics to the target participants. The participants participated in every

facet of the CLSTS, including the interview section. The reason to include the interview section was to try out the interview questions and to record the time it took for each participant to complete them.

- 9) Made a final revision after obtaining data from the field tryout.

3.4.1.2 Components and sequence of units 1-6 of the CLSTS

In preparing the components of each unit of the CLSTS, a theoretical framework for developing the CLSTS, which was based on the constructivist learning theory and second language acquisition theories (i.e., Doughty and Long's principles of language teaching and Chapelle's principles for developing multimedia CALL) and a sequence of the CLSTS which was applied from Cohen (1990) and Oxford et. al. (1990) was used.

The sequence was as follows. First of all, participants were informed of the purpose and benefits of listening strategy use. It followed some bottom-up and top-down listening activities. Concerning with bottom-up processing, the software asked the participants to listen to four sentences and write down the number of words that they heard; regarding top-down processing, the software activated participants' prior knowledge by providing questions and pictures related to topic and allowing them to think about those before listening. Second, the software began training by describing, modeling and giving examples of the target listening strategies. Third, the software allowed participants time to practice using the strategies. The practices were contextualized and directed to specific learning problems related to the learners' experience. Fourth, the software illustrated how the strategies can be transferred to other listening tasks. Fifth, the software allowed time and opportunities for practice using the strategy with new tasks. Participants were given the opportunity to practice

using the same strategy in different contexts. Lastly, the software helped participants evaluate and better understand their strategy learning performance and strategy use. The participants used their scores on tasks and exercises of each unit to assess their performance. The higher the score, the more effective their strategy used.

The CLSTS was comprised of six units. The length of each unit was approximately 50 minutes. Topics of listening texts for each unit were drawn from English textbooks because they are a part of the participants' background knowledge. However, only topics that were relevant to their daily life were chosen.

Table 3.3 Components and sequence of Units 1 - 6 of the CLSTS

Components	Sequence
Learning Objectives	After completing the CLSTS, the participants should be able to - use the four target listening strategies to enhance their listening comprehension inside class time
Units 1 and 2: All about food Listening strategy: Elaboration	1. Pre-listening activity 2. Listening strategy study 3. Listening strategy practice 4. Demonstration of the use of listening strategies in other tasks. 5. More listening strategy practice 6. Self assessment
Units 3: Daily life Listening strategy: Listening for main idea	
Units: 4: Recreation Listening strategy: Listening for specific details	
Unit 5 and 6: Jobs and occupations Listening strategy: Prediction	

The details of Table 3.2 are as follows:

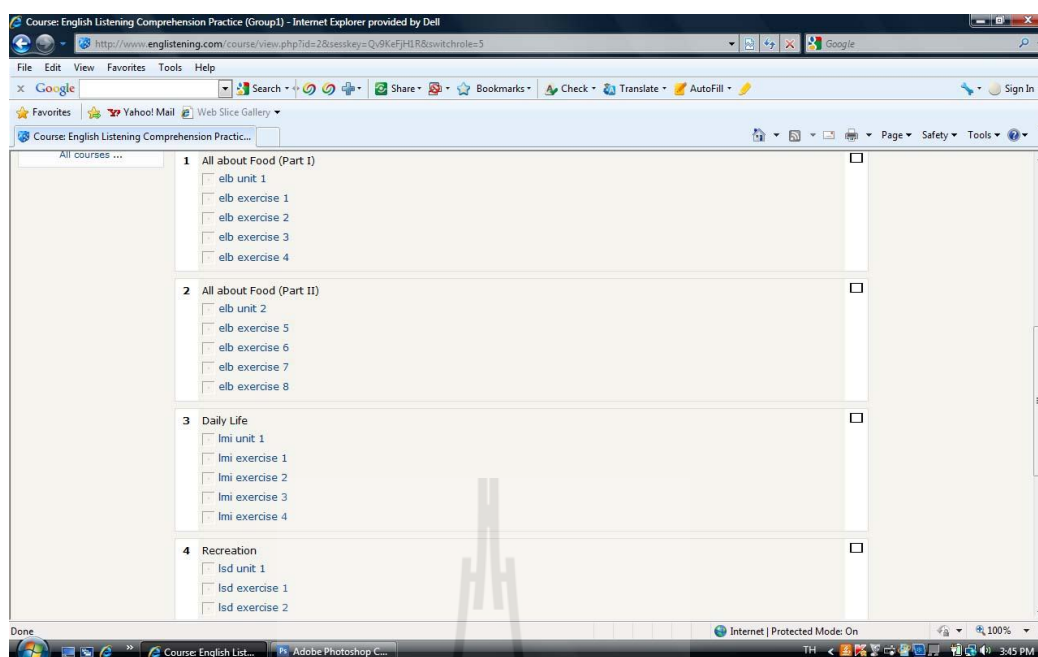


Figure 3.4 A screenshot of the activities in the CLSTS

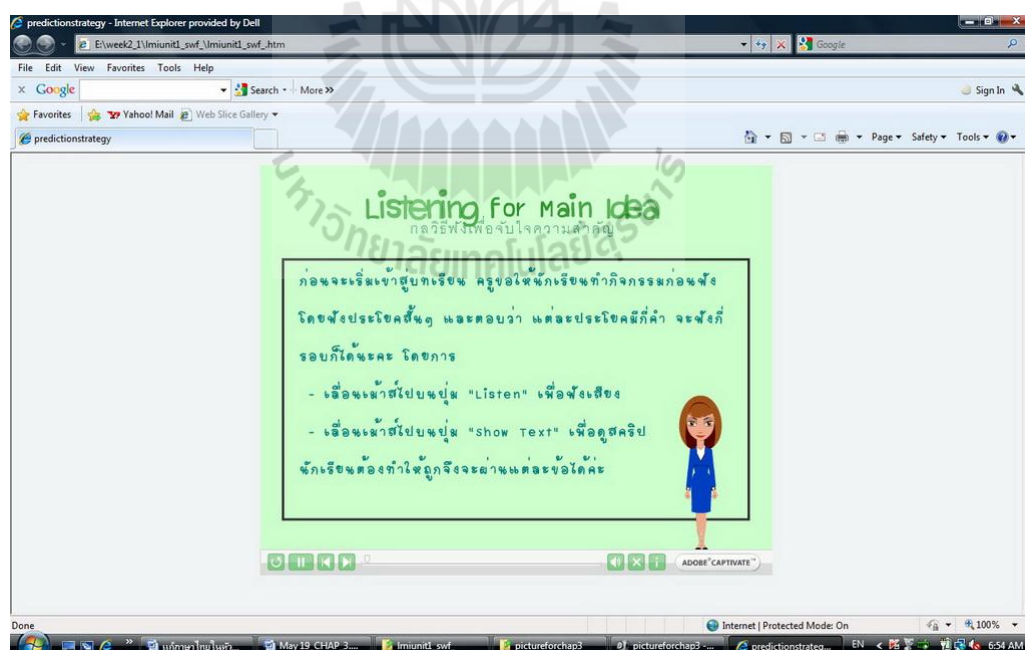


Figure 3.5 A screenshot of introduction to Unit 3 Listening for main ideas

Figure 3.5 illustrates a screenshot of introduction to Unit 3: Listening for main ideas. In this figure, the CLSTS asked the participants to do the pre-listening activities by listening to four short sentences and answering how many words in each sentence. The participants could listen to it by moving the mouse over the “Listen” button. If they could not provide the correct answer, they could view the text by moving the mouse over the “Show Text” button. In this activity, the participants had to provide correct answers in order to move to other activities. The researcher used participants’ L1 as a medium to communicate (see more details in Section 2.5 Computer assisted second language listening comprehension).

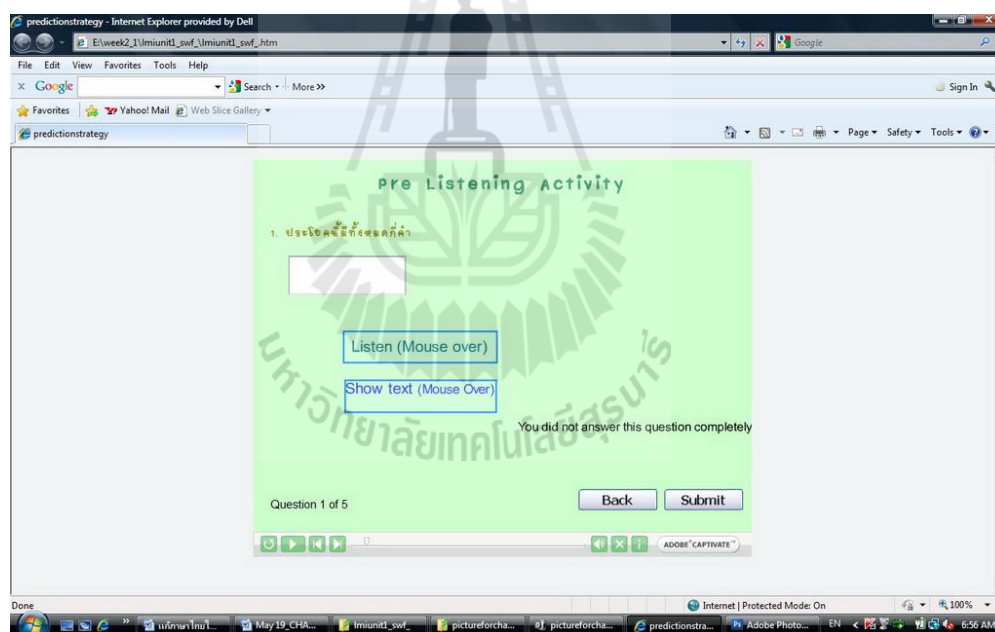


Figure 3.6 A screenshot of practicing listening to sounds of normal spoken English in Unit 3 Listening for main idea

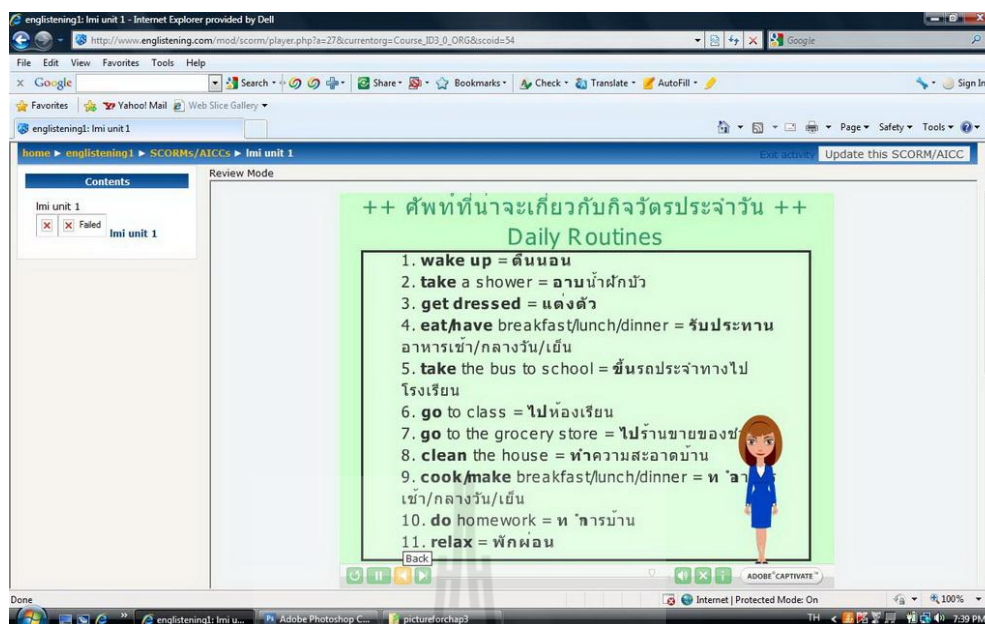


Figure 3.7 A screenshot of vocabulary related to the topic of the CLSTS

The second step: Listening strategy study

In the second step, listening strategy study, the software described, modeled, and gave examples of the target listening strategy (i.e., elaboration, specifying the main idea, identifying specific information, and prediction) by providing Flash videos that the participants could read and apprehend easily. They could stop, rewind, and skip some parts of the video. For this step, the researcher followed Principle 3: Encouraging active learning.

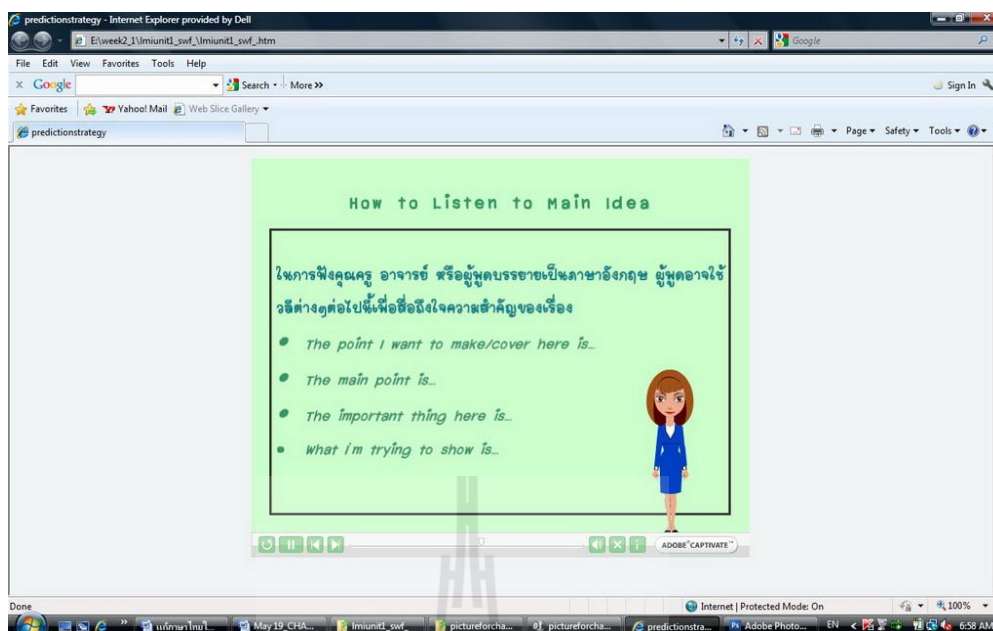


Figure 3.8 A screenshot of listening strategy training in Unit 3 of the CLSTS

The third step: Listening strategy practice

In the third step: listening strategy practice, the participants had a chance to practice listening to the text presenting a wide range of English accents and discourse structures and then answer matching or fill-in-the-blank questions. They could review the training before listening to four texts because the CLSTS aimed to exercise the participants' cognitive resources by giving them access to a multitude of activities activating multisensory redundancies. For this step, the researcher followed Principle 3: Encouraging active learning.

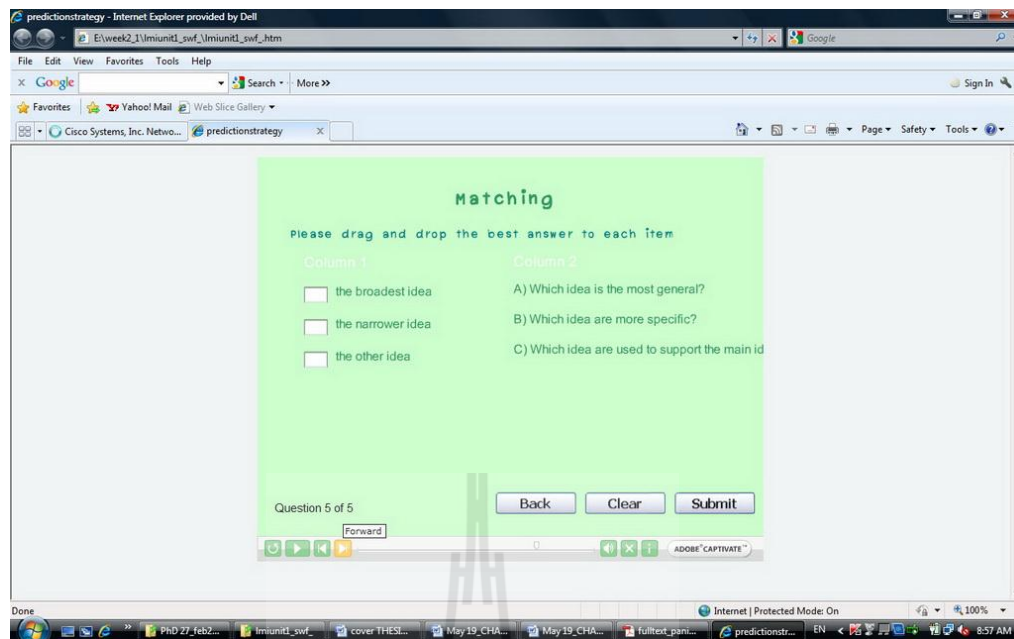


Figure 3.9 A screenshot of matching exercise in the CLSTS

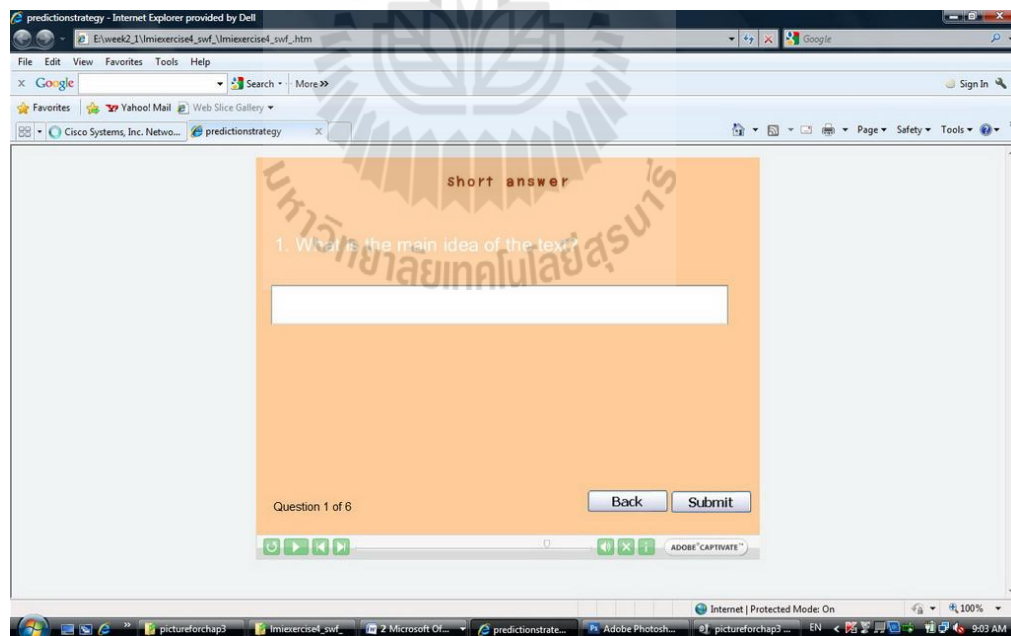


Figure 3.10 A screenshot of short answer exercise in the CLSTS

The researcher also offered ‘Help options’ (i.e. glossary of terms for each text, highlighting the clues of each text) which the participants could review as individualized instruction. It was crucial that the participants had ample opportunity to try them out.

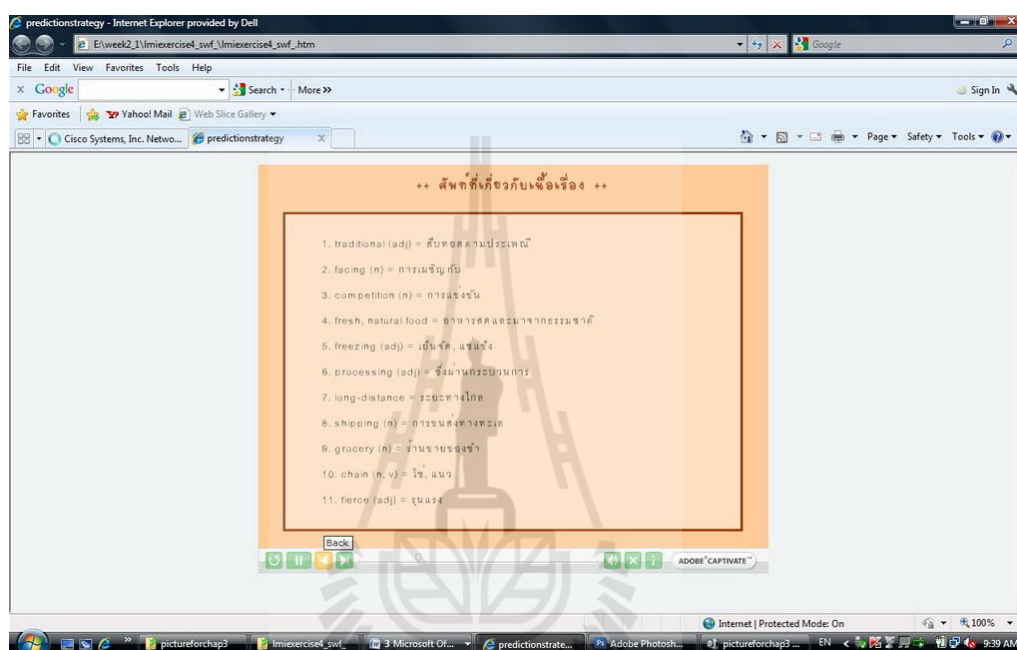


Figure 3.11 A screenshot of glossary of terms in the CLSTS

More importantly, the participants received either negative feedback, i.e. a reply which says that the utterance has not been understood (Schulze, 2003), or positive feedback to their answers. This step was also congruent with Principle 1: Provide rich comprehensible input and Principle 4: Provide negative and positive feedback because the participants can learn through multimedia and feedback.

The fourth step: Demonstration of the use of listening strategies in other tasks

The fourth step was a demonstration of the use of listening strategies in other tasks. The participants had a chance to review the use of listening strategies in other listening texts. The software showed how the listening strategies can be transferred to other listening tasks by providing examples of scripts which were highlighted to show how a target listening strategy was applied.

The objective of this step was to reinforce the students with the strategies and help them recall the strategies that they had learned and exhibit their effectiveness. The focus on listening strategies was explicit in that the CLSTS trained listening strategies via step two. Then they were reminded about the listening strategies in step three, and, in this step and at other times, the listening strategies were implicitly embedded into activities.

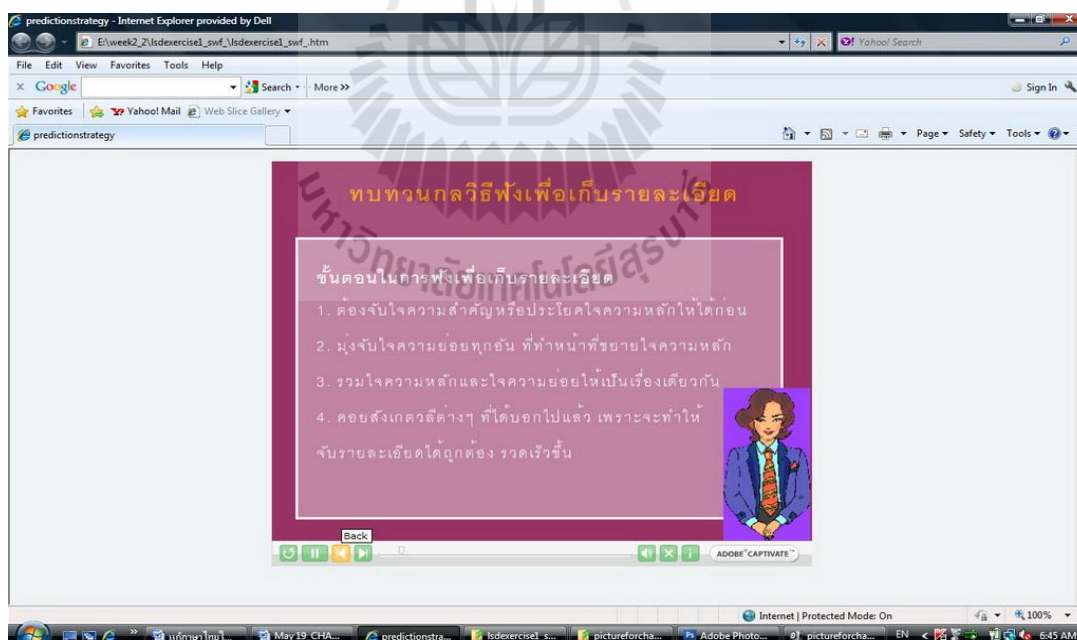


Figure 3.12 A screenshot showing a review of the use of listening for main ideas

The fifth step: More listening strategies practice

The fifth step was more listening strategy practice. The participants had a chance to practice the same strategy in different contexts. They listened to listening text, and then answered multiple choice questions, answered true-false questions (in some units), and provided their own answers in the box after listening to the texts (in some exercises). This step was designed to reinforce listening strategies that had already been trained. The listening texts were selected based on listening strategies that they were already trained in and on material consistent with the participants' background knowledge. The participants also could decide the order of listening texts.

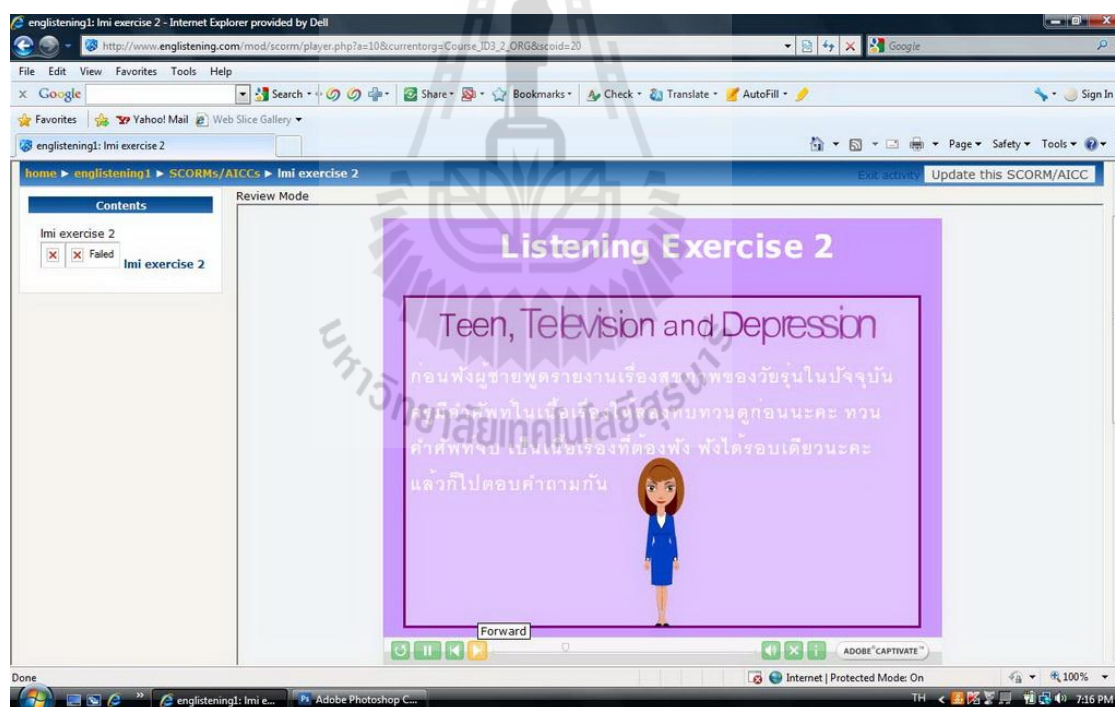


Figure 3.13 A screenshot showing a listening exercise in the CLSTS

However, if the participants wanted to learn more about the meaning of vocabulary or clues to answer the questions, they could rewind or go forward to review

data in the “glossary of terms”. The Glossary of terms section comprises vocabulary in each listening passage and their definitions.

The participants received negative or positive feedback after they submitted their answers. Negative feedback such as “Are you sure?”, “Go back and review step 2”, “Go back and review step 4”, “You should try again”, “You should try harder”, “Carefully listen to the third sentence” were given to the participants if they provided a wrong answer. Positive feedback such as “Well done”, “Great job”, or “Very good answer” was given to correct answers. The participants had two chances to answer each question. If they could not answer correctly, the CLSTS would show a correct answer.

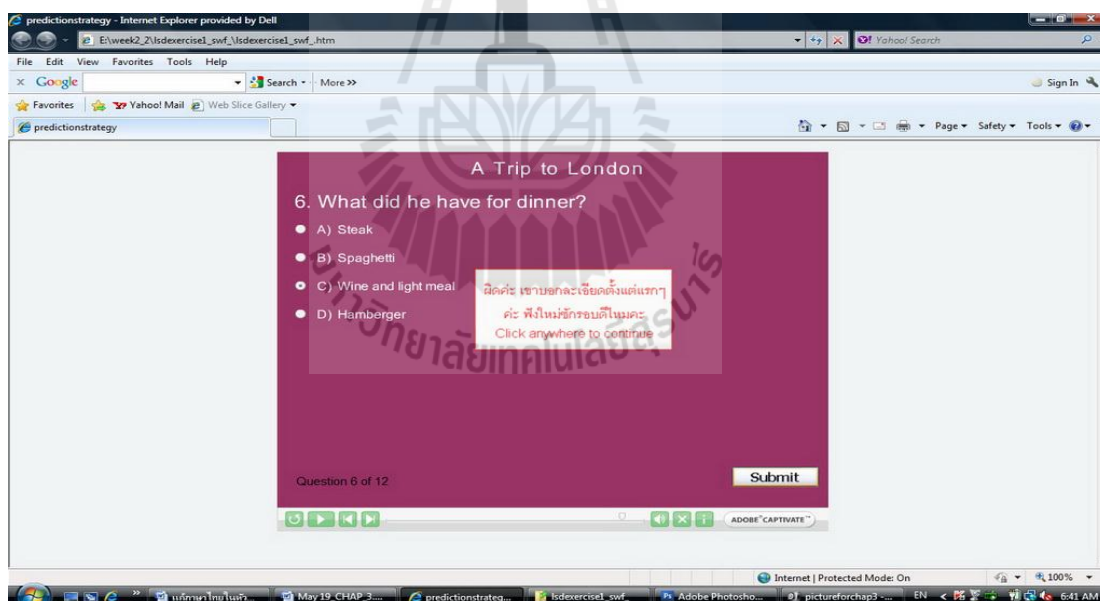


Figure 3.14 A screenshot showing negative feedback from Exercise 2 in Unit 4

The sixth step: Self-assessment

The sixth step provided the participants with a self –assessment. The participants used their percentage from listening exercises to assess their ability to use the target listening strategy. They could also check their progress by using criteria provided in advance. In addition, when the participants answered a questionnaire on each unit of the CLSTS, they could assess their proficiency with the listening strategy used.

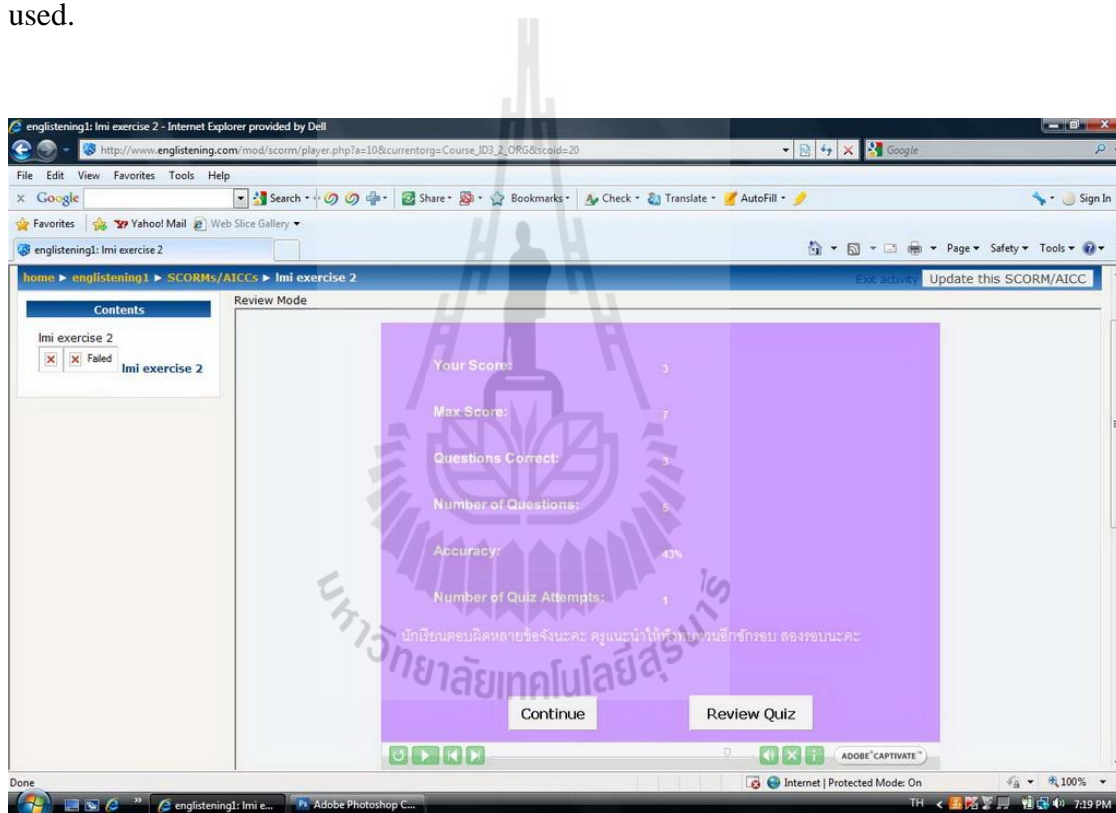


Figure 3.15 A screenshot of the participant’s score profile of the CLSTS

In addition, the software provided access to virtual office hours (five hours a week). As a result, the participants were able to get in touch with the researcher by communicating via the virtual office hours and email. They could get feedback (i.e., negative or positive feedback), when they requested, or submit questions about the

tasks or their performance. They could also share their thoughts about their experiences using the target listening strategies with their classmates and the researcher.

3.4.2 Computer assisted listening training software (CLTS)

In designing the CLTS for the control group, the researcher used the same listening texts and exercises as in the CLSTS. However, the control group did not receive the listening strategy training.

3.4.2.1 Model for designing and development of the CLTS

In the design of the CLTS, the researcher used the model for design and development of Alessi and Trollip (2001) as mentioned in section 3.4.1.1 Model for design and development of the CLSTS. The researcher used the same listening texts as in the experimental group.

3.4.2.2 Components and sequence of units 1-6 of the CLTS

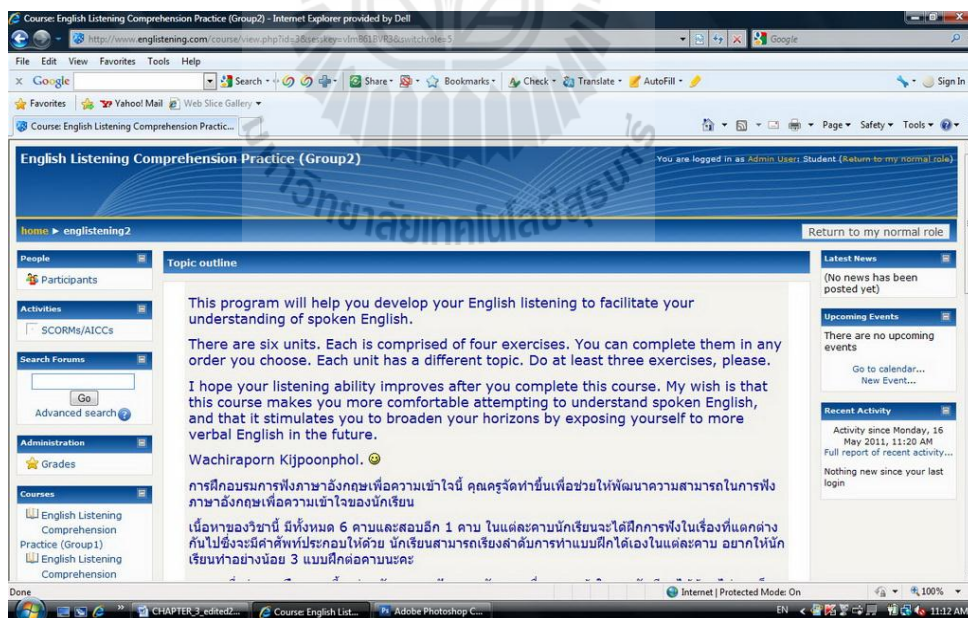
In preparing the components of each unit of the CLTS, the researcher used the same topics and the same listening texts as with the experimental group. The CLTS was comprised of six units. The length of each unit was approximately 45 minutes (i.e., less than the CLSTS). Each unit was systematically arranged as shown in table 3.4. The CLTS was similar to the traditional way of teaching listening comprehension because it contains drills and practices.

Table 3.4 Components and sequence of units 1-6 of the CLTS

Components	Sequence
Learning Objectives	After completing the CLTS, the participants should be able to enhance their English listening ability.
Units 1 and 2: All about Food	1. Pre-listening activity
Units 3: Daily life	2. Vocabulary study
Units 4: Recreation	3. Listening ability practice
Units 5 and 6: Jobs and Occupations	4. Self-assessment

The details of table 3.4 are as follows.

The first step was the pre-listening activity. The participants in the CLTS (i.e., Group B) were informed about the benefits of listening practice and the topic that they would listen to in each unit.

**Figure 3.16** A screenshot of the introductory page of the CLTS

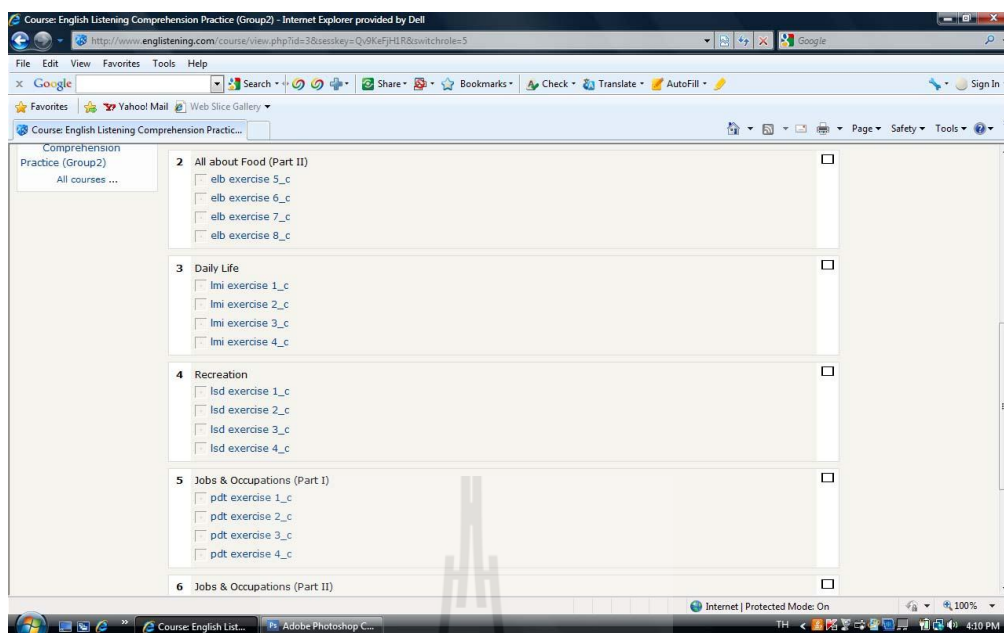


Figure 3.17 A screenshot of the activities in the CLTS

The second step was vocabulary study. The researcher provided a glossary of listening texts in Step 3 for the participants to study before they listened to the texts.

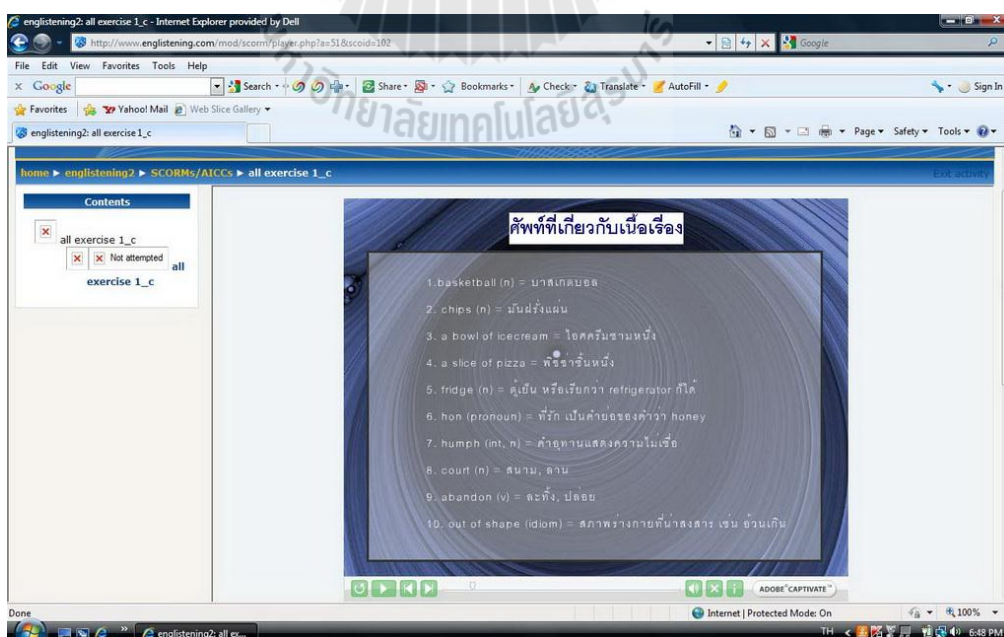


Figure 3.18 A screenshot of vocabulary study of the CLTS

The third step was listening practice. Participants practiced listening with the same texts as the experimental group. The participants had a chance to listen to all listening texts or choose to listen to only the same two or three texts as the experimental group.

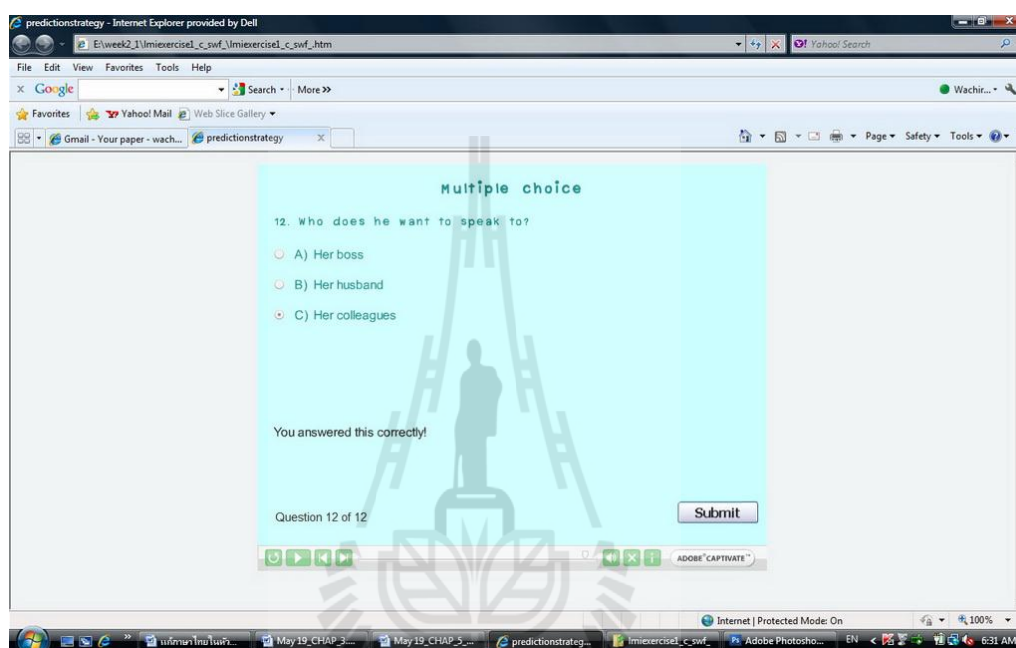


Figure 3.19 A screenshot of listening practice featured by the CLTS

The fourth step was self-assessment. The participants reviewed their scores from the listening exercises and made a self-assessment. The researcher provided criteria that participants could use to assess themselves.

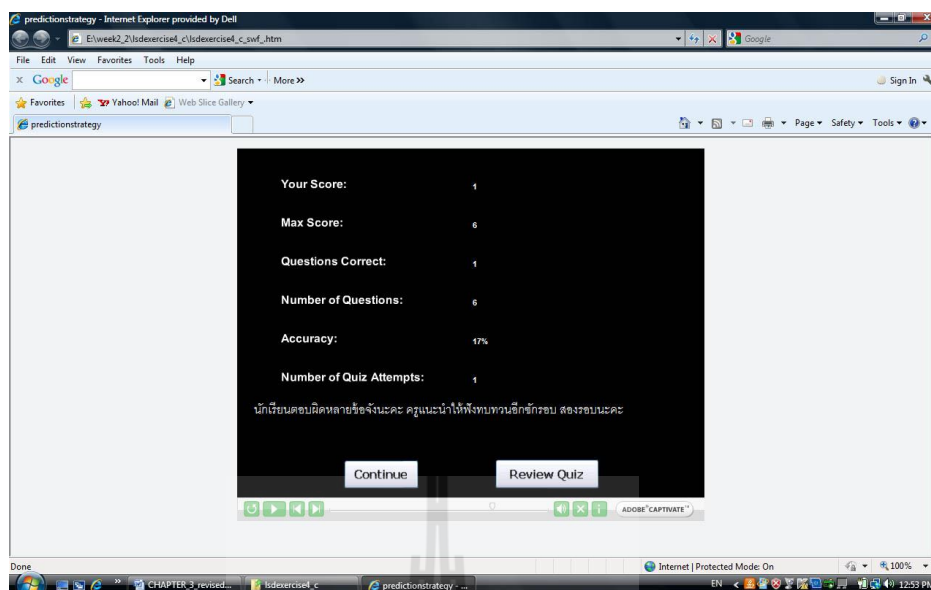


Figure 3.20 A screenshot of self-assessment of the CLTS

3.5 Data transcribing, coding, and scoring procedures

Five sets of data were collected in this research from: (1) a personal and academic questionnaire; (2) pre- and post- listening comprehension tests; (3) questionnaires on the strategies trained by the CLSTS; (4) a final questionnaire on the CLSTS; and (5) a semi-structured interview.

3.5.1 A personal and academic questionnaire

The researcher used Microsoft Excel and SPSS program to calculate the results of the personal and academic questionnaires. The first part related to participants' personal data and the second part related to participants' use of listening strategies. There were ten four-point rating questions for the second part.

3.5.2 Pre- and post- listening comprehension tests

The researcher used the SPSS program to calculate the Pre- and post- listening comprehension tests scores. There were four parts: (1) students listened to short

dialogues then chose the correct picture for each question; (2) students listened to a monologue then chose only one appropriate response for each item; (3) students listened to a monologue and filled in the missing information; and (4) students listened to a long dialogue and decided if each sentence was correct or incorrect. For part 3, misspelled words were not counted in both pre- and post-listening comprehension tests, even if the spelling was nearly correct. The students got one point for each correct item.

3.5.3 Questionnaires on the strategies trained by the CLSTS

There were six five-point rating questions and one open-ended question in each questionnaire. The individual score for each item of the five-point rating questions was from one to five according to the degree of opinion. These scores were calculated for percentage. The data from the open-ended questions were grouped into similar concepts.

The data were interpreted by using the mean score and interval number. The mean scores were classified into 5 interval scales, which were calculated as follows:

$$\begin{aligned}\text{The interval level} &= (\text{Max}-\text{Min})/n \\ &= (5-1)/5 \\ &= 0.80\end{aligned}$$

Therefore, all criteria considered, the arithmetic mean were rated in the following range.

Means	Description
1.00 – 1.80	Students absolutely disagree with the statement.
1.81 – 2.60	Students disagree with the statement.
2.61 – 3.40	Students have neutral opinions towards the statement.
3.41 – 4.20	Students agree with the statement.
4.21 – 5.00	Students absolutely agree with the statement.

3.5.4 A final questionnaire on the CLSTS

There were two sections in the final questionnaire on the CLSTS. Therefore, the scores were divided into two parts. The score for the first part was from one to five according to the student's opinion. The data were interpreted by using the mean score and interval number. The range is divided by the number of intervals ($5-1/5 = 0.80$). Therefore, all criteria considered, the arithmetic means were rated in the following range.

Means	Description
1.00 – 1.80	Students have very negative opinions towards the CLSTS.
1.81 – 2.60	Students have negative opinions towards the CLSTS.
2.61 – 3.40	Students have neutral opinions towards the CLSTS.
3.41 – 4.20	Students have positive opinions towards the CLSTS.
4.21 – 5.00	Students have very positive opinions towards the CLSTS.

The data in the second part was grouped into similar concepts, in order to make it more workable.

3.5.5 A semi-structured interview

The recording of the interviews was transcribed and marked with a series of codes (see grounded theory approach in section 3.6.3: Questionnaires on the strategies trained by the CLSTS).

3.6 Data analysis techniques and hypotheses testing

Five sets of data analysis were used in this study. Scores were analyzed as follows:

3.6.1 A personal and academic questionnaire

The descriptive statistic was used to analyze the scores obtained from the first and second parts.

3.6.2 Pre- and post- listening comprehension tests

The pre- and post- listening comprehension test scores of the experimental and control groups were compared using t-tests to determine whether the participants in the experimental group used the target listening strategies to enhance their listening comprehension. Statistical software, SPSS for Windows was used. However, the criterion for giving students' scores for answers was only a 100% correct answer for the fill-in-the-blank questions. Therefore, the scores of both groups were quite low because most participants (90%) misspelled the word in 5 items. They did not get five scores.

3.6.3 Questionnaires on the strategies trained by the CLSTS

The total score of five-point rating questions from four sets of questionnaires were compared in order to find out the effects of each unit on the participants' use of listening strategies and their opinions towards the CLSTS. Statistical software, i.e. SPSS for Windows, was used.

The data from the open-ended question were grouped into similar concepts by following the grounded theory. The grounded theory was a qualitative research method that emphasizes generation of theory from data in the process of conducting research.

3.6.4 A final questionnaire on the CLSTS

The descriptive statistic was used to analyze the scores obtained from the first part. For the second part, grounded theory approach was used to interpret the data (see details in section 3.6.3 Questionnaires on the strategies trained by the CLSTS).

3.6.5 A semi-structured interview

The data from the semi-structured interviews were analyzed (see grounded theory approach in section 3.6.3 Questionnaires on the strategies trained by the CLSTS).

Table 3.5 Summary of instruments and data analysis techniques

No	Instruments	Research areas	Methods of analyses	Analyses
1.	A personal and academic questionnaire	The effects of the CLSTS in enabling Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension.	Quantitative	Descriptive statistics
2.	Pre- and post-listening comprehension tests	The effects of the CLSTS in enabling Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension.	Quantitative	Dependent sample t-test
3.	Questionnaires on the strategies trained by the CLSTS	The effects of the CLSTS in enabling Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension. The students' opinions towards the CLSTS and its applicability.	Quantitative Qualitative	Descriptive statistics Grounded Theory
4.	A final questionnaire on the CLSTS	The effects of the CLSTS in enabling Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension. The students' opinions towards the CLSTS and its applicability.	Quantitative Qualitative	Descriptive statistics Grounded theory
5.	A semi-structured interview	The effects of the CLSTS in enabling Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension. The students' opinions towards the CLSTS and its applicability.	Qualitative	Grounded theory

3.7 Procedures for data collection

The data was collected between December 8th, 2010 and January 17th, 2011.

3.7.1 Selection of a research site and participants

The selected research site was a high school in Bangkok, Thailand. It was selected based upon the following criteria:

- 1) The school had a good academic reputation.
- 2) The school had computer labs where the participants can access the Internet.
- 3) The principal and the academic head officer of the school supported the research after they read the letter requesting permission to conduct the study at that school (see Appendix 1 and 2).

Two intact classes of Grade 10 in this study were selected by the principal and English teachers based on the following criteria:

- 1) The students in the class had studied English for nine years (from Grade 1 to Grade 9).
- 2) The students in the class had a medium level of English
- 3) The students in the class agreed to participate in the study.

One class of students was assigned to the experimental group and another class was assigned to the control group. However, the participants in this study were selected after the researcher got their pre-listening comprehension test scores.

3.7.2 Inviting participants to take part in the study

The researcher distributed an invitation letter (see Appendix 3 and 4) to Grade 10 students who were studying in intact classes. Students who were interested in participating in this study were required to fill out and submit a consent form, which

was attached with the invitation letter (see Appendixes 5 and 6), to their English teachers.

After receiving the consent form from every student in the selected classes, the researcher informed these students of the date of a pre-listening comprehension test. These students worked on the test. Then, 57 students who showed medium performance grades (either B or C) in a major English course (i.e. E 41102) or elective English course (i.e. E 41202, E 41204 and E 43106) during their previous semester and who showed a medium level score on the pre-listening comprehension test were selected to participate in this study. However, the rest of the students in these two classes still had an opportunity to study using the software.

3.7.3 Experimental procedures

Two different procedures were used in this study. One procedure was used for participants assigned to the experimental group (**CLSTS**). Another procedure was used for participants assigned to the control group (**CLTS**). Before the pre-listening comprehension test session, the researcher arranged an orientation for each group which lasted one session (i.e. 50 minutes). In the orientation, the researcher used Thai language to inform participants of the aim of the study, how to log in/ log out, and the usefulness of the software. The participants in both groups were informed that they would study in two different modules and should not ask about the details of the module of another group. The participants then explored how the software works.

3.7.3.1 Experimental procedure for participants who were assigned to the experimental group

The experimental group (**CLSTS**) participated in the pre-training session which lasted 50 minutes. They completed the pre- listening comprehension test.

Five days after the pre-training unit, the participants completed unit one. They were informed to manage their time in order to finish every step within 50 minutes because the time for each session at the school is 50 minutes. The participants first did a pre-listening activity. Next, the software described, modeled, and gave examples of a target listening strategy. Third, the participants practiced using the listening strategy that they learned. Then, the software showed how the strategies can be transferred to new listening tasks by providing Flash video demonstrations. Fifth, the participants practiced listening strategies. The participants then spent ten minutes doing a self-assessment and completing a questionnaire expressing their use of listening strategies and opinions related to listening strategy training through the CLSTS (see details in section 3.4.1.2 Components and sequence of units 1-6 of the CLSTS). From unit two to unit six, the experimental group followed the same process as in unit one.

Two days after the participants completed unit six, they participated in a post- training session which lasted 50 minutes. They first spent 40 minutes doing the post- listening comprehension test. Then, they spent 10 minutes completing the final questionnaire on the CLSTS; some of them spent 10 minutes answering the semi-structured interview. The researcher made an appointment with the rest of the students in order to interview them two days after the post-training session.

Table 3.6 Timetable for the experimental group (Group A)

Session	Focus	Time	Activities
1	Orientation	50 minutes	Demonstration of how to use/navigate and the structure of the CLSTS
2	Pre-training	50 minutes	pre-listening comprehension test
3 - 8	Unit 1 - 6	50 minutes	Training and questionnaires on each unit
9	Post-training	50 minutes	post-listening comprehension test, final questionnaire on the CLSTS, one-to-one semi-structured interview
10	Interview	10 minutes/ student	One-to-one semi-structured interview

3.7.3.2 Experimental procedure for participants who were assigned to the control group

The participants in the control group (Group B) received no listening strategy training. That is, they were simply told to listen to and practice the same listening tasks as the experimental group. During the pre-training session, they took the same pre- listening comprehension test as the experimental group. Five days after the pre-test, they completed the first unit. They were informed to manage their time in order to finish every step within 50 minutes because the time for each period in the school was 50 minutes. They learned about the topic that they would listen to in each unit. Then, they took 10 minutes to review and study related vocabulary of the listening texts that they listened to. Next, they practiced their listening by choosing to listen to three out of four texts (i.e., the text that was the same as that used by the experimental group). The participants spent 10 minutes doing a self-assessment when they finished all of the above. The procedures in units two to six were the same as

those in unit one. Two days after completing unit six, the participants in the control group worked for 40 minutes doing a post- listening comprehension test.

Table 3.7 Timetable for the control group (Group B)

Session	Focus	Time	Activities
1	Orientation	50 minutes	Demonstration of how to use/navigate the software and the structure of the CLTS
2	Pre-training	40 minutes	Pre- listening comprehension test
3 – 8	Unit 1-6	50 minutes	Training
9	Post-training	40 minutes	post- listening comprehension test

3.8 The results of the one-to-one pilot study

The purpose of the one-to-one pilot study was to determine whether the participant had any problems using the CLSTS and whether she could finish every unit in the time allocated. Another purpose was to try out the final questionnaire and the questionnaires on each strategy's training of the CLSTS. This trial was similarly revealing about the confusing or unnecessary elements of the CLSTS. Many of the findings were consistent with those of the expert reviews. For example, the participant was indeed confused by English words such as strategy, elaboration, phrase, and clue; she did not understand the purpose of reviewing the listening scripts; and she thought that some buttons such as play, pause, rewind, forward, and stop, were confusing or unnecessary.

Other findings were also consistent with the expert's comments. The insufficient time to complete six exercises in each unit was a perfect example. The time constraint for each session was 50 minutes. If she would like to review the

vocabulary or the listening scripts, she could not finish them in time. Another example was the fonts and the background. The participant asked the researcher to use many font types and various background colors in the CLSTS in order to reduce repetition. Based on the data from the one-to-one pilot study, the researcher improved all units of the CLSTS, and then performed a 5-student pilot study.

3.9 The results of the 5-student pilot study

In this pilot study, a small group of five students was asked to do all the CLSTS units, except for the interview section. The purpose of the small group implementation was to observe the time the participants took to complete each unit of the CLSTS, the influence of environmental conditions, and any problems the participants continued to have.

One important finding, the insufficiency of the instructions, was consistent with the experts' comments, but added important factors to the consideration of the issue. The participants did not understand the purposes of the units, the directions on how to study the unit content nor how to do the exercises. In this respect, they concurred with the researcher. In the one-to-one implementation, the researcher was not faced with this problem because there was only one participant and the researcher always assisted the participant in the navigation.

Several comments called into question the purpose and usefulness of various controls. For example, the researcher allowed only one attempt for each exercise in order to note the participants' improvement of their scores. This function was consistently described as distracting the participants' learning because they wanted to go back and forth while they were doing the exercises. Other controls, such as the

play-video and back buttons were confusing and thought to detract from the intended outcomes. Some of the content presented, such as the participant's bio information, likewise seemed unnecessary. Finally, the listening activities seemed to use the English language too much, even though the students were learning English. It was suggested by the students that the researcher should try to explain how to use each listening strategy in the participants' native language. They thought that they would learn more about the strategy in their own language.

However, the researcher discovered that the participants did not read the instructions. They clicked on many buttons first until they realized that they did not know how to continue. They would ask the researcher, the assistant, or their teacher. Once the participants understood what they were supposed to do, they seemed to be able to work the controls of the interface with little difficulty, showing only a little awkwardness using the mouse.

Based on the data from the 5-student pilot study, the researcher improved all the weak points, and then performed a 10-student pilot study.

3.10 The results of the 10-student pilot study

In this pilot study, a group of 10 students were asked to participate in all the CLSTS exercises, including the interview section. The purpose of the pilot group implementation was to gather rich feedback. The most important points that the participants mentioned were the formal language used in the CLSTS, the questionnaires on each strategy's training of the CLSTS, the final questionnaire on the CLSTS, and the semi-structured interview. They stated that it would be nice if the researcher changed from a formal language to a less formal language.

However, they also revealed a related issue not articulated in the expert reviews. The participants did not read the instructions; they often clicked on a few controls first and noticed the instructions only after they thought they were getting lost. Although the researcher asked the teacher of the computer room to emphasize to the participants not to skip the first page, they still did.

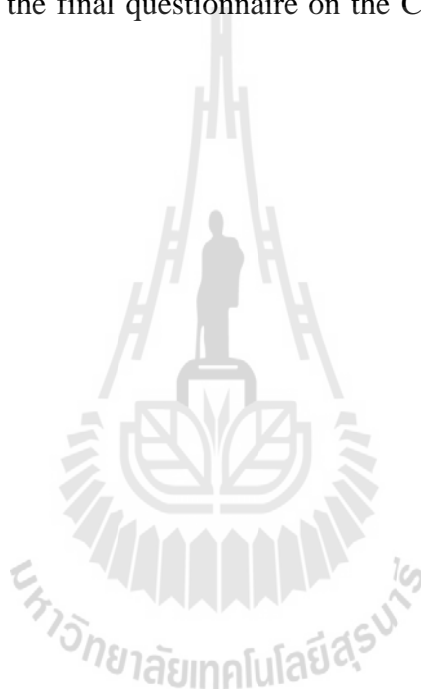
When the researcher interviewed the participants about what they liked most in the three-week training (two units for each week) of the CLSTS, the new method of teaching and learning was one of five items listed. Then, when the participants were asked why it was mentioned and what they liked about it, they reported that it was a strange way of learning. However, they could learn listening tips more effectively than in a conventional classroom environment. They talked about how they liked practicing together and applying all they had learned. They enjoyed learning with their friends with whom they discussed the answers to the exercises. Finally, they thought it was a valuable, good experience.

When the researcher asked what they did not like about the implementation, the most common response (80%) was that everything was fine. However, when the researcher asked them to speak out, the participants mentioned five items, four of which were related to techniques in the CLSTS. One item was the illustrations in the CLSTS. Another one, which was not related to the techniques, was the length of some listening texts. This made some of them feel bored.

Finally, when the researcher asked what they would improve from the implementation, one of the three issues discussed was the need for more time to practice. Specifically, the participants said they wanted to learn with the CLSTS more often throughout the semester; and they wanted to share their knowledge face-to-face

with friends who are below or beyond their current level. The participants also talked about the speed of some listening texts.

Many of the weaknesses and suggested modifications were triangulated – that is, they were identified by potential experts during reviews. Some suggestions answered several of the evaluation questions at the same time, and their accompanying modifications helped to improve the CLSTS, the questionnaires on the strategies trained by the CLSTS, the final questionnaire on the CLSTS, and the semi-structured interview.



CHAPTER 4

RESULTS

The results of the data-gathering phase are reported in three main sections. The first section demonstrates the effects of the CLSTS on promoting the participants' ability to use the target listening strategies. The second section presents the participants' opinions towards the applicability and motivating capability of CLSTS. The third section presents demonstrates the shortcomings of the CLSTS. The results are presented both quantitatively and qualitatively.

4.1 The effects of the CLSTS on promoting the participants' ability to use the target listening strategies

RQ1: To what extent does the CLSTS enable Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension?

Hypothesis1: After training with the CLSTS, Thai high school EFL students will be able to use the target listening strategies to enhance their listening comprehension.

4.1.1 The participants' ability to use the target listening strategies

From the personal and academic questionnaire, a total of 20 participants from the experimental group and a total of 22 participants from the control group responded that they had never studied listening strategies before.

To find out whether the participants in the experimental group had studied listening strategies before, the researcher put the question about any previous listening strategy learning in the final questionnaire. Table 4.3 Question 6 shows that a total of 15 participants (55.55%) indicated that listening strategy learning was new for them. However, 33.33% were uncertain whether the listening strategies were new for them. There were 3 participants (11.11%) who indicated that listening strategy learning was not new for them. The relative uncertainty among the respondents about previous listening strategy learning means that the listening strategies taught by the CLSTP might not have been the only variable that contributed the use of listening strategies by the participants.

Table 4.1 Number and percentage of participant responses and average ratings of the academic questionnaire

Questions	4	3	2	1	\bar{X}
	Qty. %	Qty. %	Qty. %	Qty. %	
1. Listen in on people who are having conversations in the target language to try to catch the gist of what they are saying.	6 22.22	10 37.04	11 40.74	0 0.00	2.815
2. Try to predict what the other person is going to say based on what has been said so far.	2 7.41	9 33.33	14 51.85	2 7.41	2.407
3. Prepare for talks and performances I will hear in the target language by reading some background materials beforehand.	1 3.70	11 40.74	15 55.56	0 0.00	2.481
4. Listen for key words that seem to carry the bulk of the meaning.	1 3.70	14 51.85	10 37.04	2 7.41	2.519
5. Listen for word and sentence stress to see what native speakers emphasize when they speak.	3 11.11	12 44.44	10 37.04	1 3.70	2.556
6. Practice "skim listening" by paying attention to some parts and ignoring others.	1 3.70	8 29.63	13 48.15	4 14.81	2.148
7. Focus on the context of what people are saying.	5 18.52	9 33.33	12 44.44	1 3.70	2.667
8. Listen for specific details to see whether I can understand them.	4 14.81	10 37.04	11 40.74	2 7.41	2.592
9. Make educated guesses about the topic based on what has already been said.	6 22.22	9 33.33	12 44.44	0 0.00	2.778
10. Draw on my general background knowledge to get the main idea.	5 18.52	11 40.74	10 37.04	1 3.70	2.778

Notes.

- 4 = I use this method and like it.
 3 = I have tried this method and would use it again.
 2 = I have never used this method but am interested in it.
 1 = This method doesn't fit for me.
 Qty. = Quantity of participants' opinions
 % = Percentage of participants' opinions

However, even allowing for the possibility of previously learned listening strategies among some participants; those participants did not demonstrate any advantage over those claiming no previous experience with the strategies. From the results of the pre-listening comprehension test, there was no statistically significant difference between the average score of those who claimed earlier experience with listening strategies and those who did not. Therefore, previous listening strategy use can be eliminated as a variable determining each participant's ability to use the targeted listening strategies.

On the other hand, a more definite determiner of the participant's ability to use the targeted listening strategies is the software itself. An opportunity for assessment of the effectiveness of the participants' use of listening strategies was when they received either positive or negative feedback during the exercises. This gave them a chance to review their weak points in listening strategy use. Moreover, the participants themselves, when they completed a questionnaire, were able to assess whether they applied the strategies at the end of each strategy training and whether that strategy was conducive to their learning experience. The answers to the questionnaire reveal different attitudes towards each respective strategy.

With respect to the participants' use of elaboration strategy, Table 4.1, Questions 3 and 10 show that a total of one participant (3.70%) and a total of five participants (18.52%) used elaboration strategy and liked it. A total of 11 (40.74%) and a total of 11 participants (40.74%) had tried elaboration strategy and would use it again. A total of 15 participants (55.56%) and a total of 10 participants (37.04%) had never used elaboration strategy but were interested in it. However, a total of one

participant (3.70%) answered Question 10 that elaboration strategy did not fit his/her natural learning style.

With respect to the participants' use of listening for main idea, Table 4.1 Question 1 and 5 show that a total of six participants (22.22%) and a total of three participants (11.11%) used listening for main idea and liked it. A total of 10 (37.04%) and a total of 12 participants (44.44%) had tried listening for main idea and would use it again. A total of 11 participants (40.74%) and a total of 10 participants (37.04%) had never used listening for main idea but were interested in it. However, a total of one participant (3.70%) answered to Question 5 that listening for main idea did not fit his/her natural learning style.

With respect to the participants' use of listening for specific details, Table 4.1 Question 4 and 6 show that a total of one participants (3.70%) used listening for specific details and liked it. A total of 14 (51.85%) and a total of 8 participants (29.63%) had tried listening for specific details and would use it again. A total of 10 participants (37.04%) and a total of 13 participants (48.15%) had never used listening for specific details but were interested in it. However, a total of two participants (7.41%) and a total of four participants (14.81%) answered that listening for specific details did not fit their natural learning styles.

With respect to the participants' use of listening for specific details, Table 4.1, Questions 2 and 9 show that a total of two participants (7.41%) and a total of six (22.22%) used prediction strategy and liked it. A total of 9 (33.33%) had tried prediction strategy and would use it again. A total of 14 participants (51.85%) and a total of 12 participants (44.44%) had never used prediction strategy but were

interested in it. However, a total of two participants (7.41%) answered Question 2 that prediction strategy did not fit their natural learning styles.

The mean score of each question is between 2 to 3. This means that participants are interested in using the target strategies and would like to use them again. Some of them had previously utilized the strategies, while others had never tried them.

From the final questionnaire on the CLSTS, it was found that after training with the CLSTS, 13 participants (48.14%) either strongly agreed or agreed that the CLSTS is a useful tool for developing their English listening ability. And a total of 25 participants (92.59%) indicated that they gained more knowledge about the English listening strategies while participating in CLSTS.

Data from the semi-structured interview also confirmed that, while participating in the CLSTS, the participants learned how to use listening strategies and use them effectively (see details of responses in section 4.2.2.6.1 that indicated that the participants will use the target listening strategies in the future).

At the end of each strategy training, the participants had to do the questionnaire. They had a chance to review their weak points in listening strategy use. And after they finished the training, they had another chance to assess themselves in listening strategy use. Moreover, when the participants answered each item in the exercise, they got either positive or negative feedback. This helped them know more about how effectively they used the listening strategies.

From the results of the study and the activities in which the software provided, it can be assumed that the CLSTS enables Thai high school EFL

participants to develop their ability to use the target listening strategies to enhance their listening comprehension.

4.1.2 Pre- and post-listening comprehension test results

Before the training and after the training phases, participants took a listening test comprising 25 questions with 25 points. The results of the Independent sample T-test as well as other tests run are illustrated in Table 4.2. The means expressed by the tests are the mean improvements attained for each group from pre- to post-listening comprehension test.

Table 4.2 The descriptive statistics for the experimental and control groups' pre- and post-listening comprehension tests.

	Experimental Group		Control Group	
	Pre-test	Post-test	Pre-test	Post-test
N Valid	27	27	30	30
N Lost	0	0	0	0
Mean	12.56	15.93	12.57	13.76
Median	12.00	16.00	12.00	14.00
Mode	11	16	10	14
S.D.	2.778	3.025	3.245	3.111
Minimum	9	9	8	9
Maximum	19	22	19	20
t score	-10.223		-3.029	
Sig. (Bilateral)	0.000		0.005	

4.1.2.1 Pre-listening comprehension test results

Table 4.2 shows that most participants in the experimental group performed above the passing score (12.5 points over 25). The number repeated most was 11 points. The lowest score was 9 and the highest was 19. The average score for all participants in the experimental group is 12.56 with a standard deviation of 2.78. Most control participants performed above the passing score (12.5 points over 25). The number repeated most was 10 points. The lowest score was 8 and the highest was 19. The average for all participants was 12.57 with a standard deviation of 3.24.

4.1.2.2 Post-listening comprehension test results

Table 4.2 shows that most participants in the experimental group performed above the passing score (15.9 points over 25). The number repeated most was 16 points. The lowest score was 9 and the highest was 22. The average score for all participants was 15.93 with a standard deviation of 3.02. Most control participants performed above the passing score (13.7 points over 25). The number repeated most was 14 points. The lowest score was 9 and the highest was 20. The average score of all participants was 13.76 with a standard deviation of 3.11.

4.1.2.3 Post-listening comprehension test results compared to pre-listening comprehension test results

An independent t test was conducted to compare improvement in English listening skills between participants who used software that taught listening strategies and those who used software that did not. Table 4.2 shows that the value of the participants in the experimental group's t distribution is -10.223 and the p-value associated with the statistic of contrast, "Sig. (bilateral)", is 0.000. At or below a < 0.001 significance level, the means are significantly different. Since the p-value is

lower than 0.05, the participants showed measurable improvement in their English listening skills after being instructed in listening strategies by the software. This suggests the software is effective in promoting learners' ability to use the target listening strategies.

The control group's *t* distribution value is -3.029 with an associated *p* value of 0.005. This indicates the control group improved their listening abilities to a measurable degree, and this is despite the fact that the software they used did not instruct them in listening strategies. However the *p* value of the control group (0.005) < 0.01 differed markedly from that of the experimental group (0.00). The disparity in the *p*- values likely derives from the experimental group's access to listening strategies inculcated by the software.

4.1.2.4 Difference between experimental and control group pre- and post-listening comprehension tests

Table 4.3 Pre- and post- listening comprehension tests – comparison of groups

		N	Mean	S.D.	t	Sig.
Pre-test	Experimental (Group A)	27	12.56	2.778	-.014	.989
	Control (Group B)	30	12.57	3.245		
Post-test	Experimental (Group A)	27	15.93	3.025	2.774*	.008
	Control (Group B)	30	13.67	3.111		

**P*<.01

The researcher was interested in comparing one group's performance after using the CLSTS with another group's performance after using the CLTS by looking at overall totals of pre- and post-test scores.

The null hypothesis is that, after training with the CLSTS, Thai high school EFL students will not be able to use the target listening strategies to enhance their

listening comprehension. The alternative hypothesis (i.e., that after training with the CLSTS, Thai high school EFL students will be able to use the target listening strategies to enhance their listening comprehension) is validated if the p-value in the study comparing means for post-tests scores between the two groups is $< .01$.

Based on Table 4.3, while there does seem to be some difference between the pre- listening comprehension mean scores of both groups, this difference is not statistically significant ($p > .05$, $df = 55$, $t = -.014$). However, the difference between the two groups in post-listening comprehension mean scores were highly significant ($p < .01$, $df = 55$, $t = 2.774$), with the CLSTS group showing statistically demonstrable improvement over the CLTS group. This suggests that, after training with the CLSTS, Thai high school EFL students are able to use the target listening strategies to enhance their listening comprehension.

4.1.3 The effectiveness of the software on promoting the participants' ability to use the target listening strategies

4.1.3.1 The effectiveness of the software in the training of elaboration strategy

Concerning to the effectiveness of the elaboration strategy training, Table 4.4 shows the results of participants' responses to the questionnaire on the "elaboration strategy" training.

Table 4.4 Number and percentages of participant responses and average rating on the aspect of effectiveness of elaboration strategy training

Questions	SA	A	N	D	SD	\bar{X}
	Qty. %	Qty. %	Qty. %	Qty. %	Qty. %	
1. Units 1 & 2 helped me use background knowledge to understand what I hear when I listen to English.	4 14.81	14 51.85	9 33.33	0 0.00	0 0.00	3.814
6. In general, units 1 and 2 effectively developed my ability to use listening strategies to help me comprehend spoken English.	8 29.63	15 55.55	4 14.81	0 0.00	0 0.00	4.148

Notes: The mean-values (X) are calculated using the following criteria

SA = 4.21–5.00 = strongly agree Students absolutely agree with the statement.

A = 3.41–4.20 = agree Students agree with the statement.

N = 2.61–3.40 = neutral Students have neutral opinions towards the statement.

D = 1.81–2.60 = disagree Students disagree with the statement.

SD = 1.00–1.80 = strongly disagree Students absolutely disagree with the statement.

N= 27

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

The results can be summarized as follows:

With respect to the understanding the elaboration strategy, Table 4.4, Question 1 shows that a total of 18 participants (66.66%) agreed that the CLSTS helped them more effectively use background knowledge to understand what they hear when they listen to English. However, a total of 9 participants (33.33%) had neutral opinions on this question.

With respect to participants' perception about the effectiveness of CLSTS units 1 and 2 in promoting their abilities to use the listening strategies, Table 4.4, Question 6 shows that a total of 23 participants (85.18%) agreed that these two units

effectively developed their listening ability. However, 14.81% had neutral opinions on this question. In conclusion, the overwhelming percentages of positive responses in questionnaire data suggest that CLSTS is a useful tool for cultivating listening strategies among those learning to better understand spoken English.

From the second part of the questionnaire on the “**elaboration strategy**” training, participants were asked whether they liked or disliked the two units of the elaboration strategy training. A total of 22 participants (81.48%) indicated that they liked the two units. Some participants also provided short answers to the reason why they liked or disliked these two units. The most frequent answer is they knew the strategies in the units could assist them to have better understanding of the listening texts.

4.1.3.2 The effectiveness of the software in the training of listening for main idea

Concerning the effectiveness of the training on listening for main ideas, Table 4.5 shows the results of participants’ responses to the questionnaire on the “**listening for main idea**” training.

Table 4.5 Number and percentages of participant responses and average rating on the aspect of effectiveness of the listening for main idea training

Questions	SA	A	N	D	SD	\bar{X}
	Qty.	Qty.	Qty.	Qty.	Qty.	
	%	%	%	%	%	
1. This unit helped me more effectively listen for main ideas in the text.	5 18.52	16 59.26	6 22.22	0 0.00	0 0.00	3.962
6. In general, this unit was useful for developing my listening ability.	9 33.33	15 55.55	3 11.11	0 0.00	0 0.00	3.629

Notes: The mean-values (X) are calculated using the following criteria

SA = 4.21–5.00 = strongly agree	Students absolutely agree with the statement.
A = 3.41–4.20 = agree	Students agree with the statement.
N = 2.61–3.40 = neutral	Students have neutral opinions towards the statement.
D = 1.81–2.60 = disagree	Students disagree with the statement.
SD = 1.00–1.80 = strongly disagree	Students absolutely disagree with the statement.
N =	27
Qty. =	Quantity of participants' answers
% =	Percentage of participants' answers

The results can be summarized as follows:

With respect to listening for main ideas, Table 4.5 Question 1 shows that a total of 21 participants (77.77%) agreed that the CLSTS helped them better comprehend the process of listening for main ideas in the text.

With respect to participants' opinions of the third unit of the CLSTS, Table 4.5, Question 6 shows that 24 participants (88.88%) agreed that the third unit was good for developing their listening abilities. However, some participants (11.11%) were uncertain whether they agreed or disagreed with this point.

From the second part of the questionnaire on “**listening for main idea**” training, participants were asked whether they liked or disliked the training. A total of 23 participants (85.18%) indicated that they liked it. Several participants (37.03%) provided reasons why they liked unit three, answering that it gave them more chances for practicing English listening. Other participants (18.51%) answered that they learned a new technique in helping them understand the listening texts.

4.1.3.3 The effectiveness of the software in training of listening for specific details strategy.

Concerning the effectiveness and the applicability of the training on listening for specific details, Table 4.6 shows the results of participants' responses to the questionnaire on the “**listening for specific details**” training.

Table 4.6 Number and percentages of participant responses and average rating on the aspect of effectiveness of the listening for specific details training

Questions	SA	A	N	D	SD	\bar{X}
	Qty. %	Qty. %	Qty. %	Qty. %	Qty. %	
1. This unit helped me better listen for the specific details of the text.	4 14.81	16 59.26	7 25.92	0 0.00	0 0.00	3.888
6. In general, this unit was good for developing my listening ability.	7 25.92	17 62.96	3 11.11	0 0.00	0 0.00	4.148

Notes: The mean-values (X) are calculated using the following criteria

SA = 4.21–5.00 = strongly agree Students absolutely agree with the statement.

A = 3.41–4.20 = agree Students agree with the statement.

N = 2.61–3.40 = neutral Students have neutral opinions towards the statement.

D = 1.81–2.60 = disagree Students disagree with the statement.

SD = 1.00–1.80 = strongly disagree Students absolutely disagree with the statement.

N= 27

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

The results can be summarized as follows.

With respect to listening for specific details, Table 4.6 Question 1 shows that a total of 20 participants (74.07%) strongly agreed or agreed that the CLSTS helped them better listen for specific details in the text. However, some participants (25.92%) were uncertain whether they agreed or disagreed with this point.

With respect to the participants' opinions of the fourth unit of the CLSTS, Table 4.6 Question 6 shows that a total of 24 participants (88.88%) agreed that the fourth unit was useful in developing their listening abilities. However, a total of 3 participants (11.11%) had neutral opinions on whether the fourth unit of the CLSTS was useful in developing their listening abilities.

From the second part of the questionnaire on “**listening for specific details**” training, participants were asked whether they liked or disliked the training. A total of

23 participants (85.18%) indicated that they liked it. Some participants provided reasons why they liked unit four. The most frequent answer is they had good chances to practice their listening.

4.1.3.4 The effectiveness of the software in the training of prediction

Concerning to the effectiveness and the applicability of the training on prediction strategy, Table 4.7 shows the results of participants' responses to the questionnaire on the “**prediction strategy**” training.

Table 4.7 Number and percentages of participant responses and average rating on the aspect of effectiveness of prediction strategies

Questions	SA	A	N	D	SD	\bar{X}
	Qty. %	Qty. %	Qty. %	Qty. %	Qty. %	
1 Units 5 & 6 helped me better predict what I hear when I listen to spoken messages.	3 11.11	16 59.26	8 29.63	0 0.00	0 0.00	3.296
6. In general, units 5 & 6 are good for developing my listening ability.	10 37.04	12 44.44	5 18.52	0 0.00	0 0.00	4.185

Notes: The mean-values (X) are calculated using the following criteria

SA = 4.21–5.00 = strongly agree Students absolutely agree with the statement.

A = 3.41–4.20 = agree Students agree with the statement.

N = 2.61–3.40 = neutral Students have neutral opinions towards the statement.

D = 1.81–2.60 = disagree Students disagree with the statement.

SD = 1.00–1.80 = strongly disagree Students absolutely disagree with the statement.

N= 27

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

The results can be summarized as follows.

With respect to understanding prediction strategy, Table 4.7 Question 1 shows that a total of 19 participants (70.37%) agreed the CLSTS helped them better predict

what they hear when they listen to spoken messages. However, some participants (29.63%) were uncertain whether they agreed or disagreed with this point.

With respect to the participants' thoughts of the fifth and the sixth units of the CLSTS, Table 4.7 Question 6 shows that a total of 22 participants (81.48%) agreed that these two units were useful in developing their listening abilities. However, some participants (18.52%) had neutral opinions on this point.

From the questionnaire about the “**prediction strategy**” training, participants were asked whether they liked or disliked the training. A total of 19 participants (70.37%) indicated that they liked these two units. A total of 5 participants (18.52%) provided reasons why they liked these two units, one chief reason being they knew the technique helped them understand the listening texts. A total of 8 participants (29.62%) provided reasons for disliking these two units, with the main reason being prediction strategy was too difficult. Also, they could not predict the texts if they did not know the vocabulary.

4.1.3.5 The effectiveness of the software: Data gained from the final questionnaire

The data from the final questionnaire are as follows:

Table 4.8 Number and percentage of participant responses to questions related to the effectiveness of the CLSTS

Question	\bar{X}	SA	A	N	D	SD
		Qty. %	Qty. %	Qty. %	Qty. %	Qty. %
2. Lessons in CLSTS help me to develop English listening ability.	3.59	2 7.40	14 51.85	9 33.33	2 7.40	0 0.00
3. CLSTS helps me better understand other listening texts.	3.63	5 18.51	10 37.03	9 33.33	3 11.11	0 0.00
4. I feel that CLSTS is a useful learning tool for developing English listening ability.	3.30	2 7.40	11 40.74	9 33.33	3 11.11	2 7.40
6. Listening strategy learning is new for me.	3.41	0 0.00	15 55.55	9 33.33	2 7.40	1 3.70
7. I gained more knowledge about English listening strategies while participating in CLSTS.	4.15	6 22.22	19 70.37	2 7.40	0 0.00	0 0.00
9. I am aware of the importance of language learning strategies after I participated in CLSTS.	3.63	6 22.22	7 25.92	13 48.15	0 0.00	1 3.70
10. I would like to know more about other listening strategies.	3.70	5 18.51	12 44.44	7 25.92	3 11.11	0 0.00
11. I was comfortable using CLSTS during the CLSTS activities.	3.70	3 11.11	14 51.85	9 33.33	1 3.70	0 0.00
12. Positive feedback helps me learn more about the lesson.	3.44	2 7.40	10 37.03	13 48.15	2 7.40	0 0.00
13. Negative feedback helps me learn more about the lesson.	3.74	4 14.81	13 48.15	9 33.33	1 3.70	0 0.00

Notes: The mean-values (X) are calculated using the following scale

- SA = 4.21–5.00 = strongly agree Students have very positive opinions towards the CLSTS.
 A = 3.41–4.20 = agree Students have positive opinions towards the CLSTS.
 N = 2.61–3.40 = neutral Students have neutral opinions towards the CLSTS.
 D = 1.81–2.60 = disagree Students have negative opinions towards the CLSTS.
 SD = 1.00–1.80 = strongly disagree Students have very negative opinions towards the CLSTS.

N= 27 (see Section 3.5.3 A final questionnaire on the CLSTS)

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

The results can be summarized as follows:

With respect to the effectiveness of the CLSTS in developing the participants' listening comprehension ability, Table 4.8, Questions 2 and 3 show that the participants agreed that the CLSTS helped them better understand listening texts and develop their English listening ability. A total of 16 participants (59.25%) from the answer of Question 2 and 15 participants (55.55%) from the answer of Question 3 are either in strong agreement or agreement. However, two participants (7.40%) and three participants (11.11%) disagreed. Some other participants (33.33%) were uncertain whether they agreed or disagreed that the CLSTS helped them better understand listening texts and develop their English listening ability.

In relation to the CLSTS being a useful tool for developing English listening ability (Table 4.8 Question 4), 13 participants (48.14%) either strongly agreed or agreed, while nine participants (33.33%) had neutral opinions towards the CLSTS as a useful tool in developing their English listening ability. Some other participants (18.51%) either strongly disagreed or disagreed that the CLSTS is a useful tool in developing their English listening ability.

With respect to the CLSTS as a motivation to develop the participants' English listening skill, Table 4.8, Question 5 shows that the participants agreed that the CLSTS can motivate them to develop their English listening skill. A total of 51.85% indicated that CLSTS motivated them to develop their listening skill. However, 33.33% were uncertain whether they agreed or disagreed that the CLSTS motivated them to develop their English listening skill. There are two participants (7.4%) who disagreed with this point, and indicated that the CLSTS did not motivate them to develop their English listening ability.

To prove whether the participants had previously known about the listening strategies, Table 4.8 Question 6 shows that a total of 15 participants (55.55%) indicated that listening strategy learning was new for them. However, 33.33% were uncertain whether the listening strategies are new for them. There are 3 participants (11.11%) who indicated that listening strategy learning was not new for them.

In regards to gaining more knowledge about the listening strategies while participating in CLSTS, Table 4.8 Question 7 shows that the participants gained more knowledge about the listening strategies ($\bar{X} = 4.15$, S.D. 534) while participating in the CLSTS. A total of 25 participants (92.59%) indicated they gained more knowledge about English listening strategies while participating in CLSTS. They responded either in strong agreement or agreement. However, two participants (7.40%) were uncertain whether they gained more knowledge about English listening strategies while participating in CLSTS.

As to the awareness of the importance of the listening strategies, Questions 9 and 10 from Table 4.8 show that the participants agreed that they were aware of the importance of the listening strategies and would like to learn more about them. A total of 13 participants (48.14%) from the answer of Question 9 and 17 participants (62.95%) from the answer of Question 10 are either in strong agreement or agreement. However, a total of 13 participants (48.15%) were uncertain whether they were aware of the importance of language learning strategies after participating in the CLSTS. And a total number of seven participants (25.92%) were uncertain whether they would like to learn more about listening strategies. There was only one participant who strongly disagreed s/he was aware of the importance of the listening

strategies; while three participants (11.11%) disagreed s/he would like to learn know more about other listening strategies.

Regarding the participants' comfort in using the CLSTS, Table 4.8, Question 11 shows that three participants (11.11%) strongly agreed that they were comfortable using the CLSTS during the CLSTS activities. A total of 14 participants (51.85%) agreed with this point. However, a total of 33.33% were uncertain whether they were comfortable using the CLSTS during the CLSTS activities. There was one participant who disagreed with this point.

In relation to feedback from the CLSTS, Table 4.8 Questions 12 and 13 show that the participants had positive opinions towards both positive ($\bar{X} = 3.44$, S.D. = .751) and negative feedback ($\bar{X} = 3.74$, S.D. = .764). A total of 12 participants (44.44%) indicated that positive feedback helped them learn more about the lesson; a total of 17 participants (62.96%) indicated that negative feedback helped them learn more about the lesson. However, 48.15% and 33.33% had neutral opinions towards the positive and negative feedback respectively. There are two participants (7.4%) and one participant (3.70%) who negative opinions on this point. They disagreed that both positive and negative feedback helped them learn more about the lesson.

Some participants also provided answers to the two open-ended questions of the final questionnaire. In response to Question 16 asking about their opinions towards the CLSTS, the participants indicated that (1) the CLSTS was the new way of learning English in comfortable atmosphere; (2) the participants had less anxiety as they felt more comfortable in their ability to learn by themselves; (3) the participants could take control of their exercises; and (4) the participants could learn more from

instant feedback and tips which could help them improve their listening comprehension.

4.1.3.6 The effectiveness of the software: Data gained from semi-structured interview

A semi-structured interview is used to acquire in-depth and thoughtful responses not obtained by the questionnaires on each taught listening strategy of CLSTS or the final questionnaire on the CLSTS, and to confirm earlier answers and elicit more information from each participant. It is used to support the view that after training with the CLSTS, the participants in the study are able to use the target listening strategies to enhance their listening comprehension. Twenty- seven students were interviewed about the effectiveness of the CLSTS in promoting the use of listening strategies when the participant hears spoken English.

There were five main questions in the semi-structured interview:

Q1: After the participants were trained with the CLSTS, what did they think about their listening ability? Had it improved?

Q2: How did the participants feel about the CLSTS?

Q3: Did the participants think they would use the target listening strategies in the future? If yes, could they tell the researcher what factors motivate them? If no, why couldn't they?

Q4: The participants were trained in four listening strategies. Did they try to use all of them? If they did, what effect did these strategies have on their listening? If they didn't, why did they eschew the strategies?

Q5: Are there any suggestions about the software itself or the training?

Interviews were conducted with participants who used the software that taught them listening strategies. The participants' responses to the interview questions lend credence to the questionnaire data and further elaborate how the software effectively promotes the use of target listening strategies by the students.

There are six aspects of the software, which are detailed in sections 4.1.3.6.1 to 4.1.3.6.2

4.1.3.6.1 The activities in the software help participants learn how to use listening strategies.

Below are some excerpts that are drawn from semi-structured interview data. The researcher omits the repetitive answers, as well as ones that comment on matters unrelated to the listening strategies taught by the software.

Participant 1:

...I think I can understand the listening text more than in the past because I can listen to the text directly. I can turn on the volume as loud as I want to hear it. I can do the exercises at my own pace. No need to wait for the teacher...

Participant 3:

...When I practiced with listening exercises of the CLSTS, I was familiar with how to use the listening strategies...

Participant 7:

...After I spent time thinking about related vocabulary, I could understand the listening text that I heard more than not thinking about related vocabulary...

Participant 9:

...It was good to start with “warm-up activities” or “pre-listening activities”.

I could fine tune my listening ability before doing the exercise...

Participant 10:

...Pre- listening activities are also good because I had chances to see the answers and listen again. I did it many times...

Participant 13:

...I like the variety of the listening exercises. They made me enjoy learning. I also learned new vocabulary before I listened to the text. That was good for me because I had known only few words before. If I didn't know the meaning of words, I could not use the strategies that I had learned...

Participant 17:

...The software always asked me to think about the vocabularies and stories related to the listening text that I would hear. This helped me in practicing listening strategies which I learned...

Participant 18:

...I was familiar with contents of listening texts, and that helped me a lot in practicing elaboration strategy...

Participant 19:

...I like listening to four sentences before starting each unit. They helped me warm up my ears before listening to long listening exercises...

Participant 21:

...Knowing all four listening strategies are a very good chance for me. I can apply them in my daily life to listen to English...

Participant 27:

...I think the software helped me improve my listening ability. When I practiced, I was familiar with how to use the listening strategies and was familiar with the intonation of native speakers from many nationalities...

4.1.3.6.2 The illustrations, pictures, videos, and the names of listening texts in the CLSTS were effective in strengthening the participants' listening strategies.

Below are some excerpts that are drawn from semi-structured interview data. The researcher omits the repetitive answers, as well as ones commenting on matters unrelated to the listening strategies taught by the software.

Participant 6:

...I sometimes did not pay attention to pictures or bold/italic words in student's textbook. It looked like usual data. However, in the CLSTS, I had to pay attention to emphasized words, phrases, or pictures to make myself understand listening texts and remember them. I had changed my style of learning when I participated in the CLSTS...

Participant 16:

...When we learned listening in class, the teachers turned on the listening texts from his/her computer. We could not hear it clearly. This way of learning (with CLSTS) made me hear the text very clearly...

Participant 26:

...When I saw pictures about each occupation such as janitor and nurse, I could imagine the story that I would hear. This helped me a lot in practicing listening strategies...

4.1.3.6.3 Feedback by the software to participants' answers helped the participants refine their listening capabilities by improving how they used the listening strategies.

Below are some excerpts that are drawn from semi-structured interview data. The researcher omits the repetitive answers, as well as ones commenting on matters unrelated to the listening strategies taught by the software. Short related answers are mentioned in the chapter 5.

Participant 1:

...I also like getting feedback and comparing it to my friends who were sitting next to me...

Participant 7:

...Some feedback that I got makes me understand my mistakes. It made me know what to focus on when I listened...

Participant 8:

...I enjoyed getting feedback from listening exercises that the CLSTS provided for my answers and my friends' answers. Those answers stimulated my curiosity and motivated me to get good scores...

Participant 9:

...Thai feedback is easy to understand and follow...

Participant 11:

...It seems that the software provided some discouraging feedback for me. Anyway, that feedback was good. It made me understand my mistakes sometimes...

Participant 15:

...When I clicked submit to each question, I wanted to know more about the question. I could learn some tips from viewing feedback. When learning in a conventional classroom, I have less of a chance to hear feedback to my responses, especially this kind of feedback...

Participant 16:

...I liked listening strategies because they helped me to understand the meaning in the text. When I practiced using it and found that my answers were not correct, I didn't feel sad and I learned from my mistakes...

Participant 20:

...I learned a lot from my mistakes and errors in doing exercises. I knew that they were my mistakes and errors because the software gave me feedback and my friends gave me the corrections. Then I tried to redo those exercises in order to find the correct answers...

4.1.3.6.4 The software equips the participants with listening strategies that help the participants feel confident attempting to understand spoken English.

This point of view was shared by only a small sample of participants.

Participant 4:

...I have never learned English in a computer room where I can talk about the lesson with my friends. I have never known about listening strategies. I think it is the best way to teach us English listening...

Participant 16:

...I liked the listening strategies because they helped me to understand the meaning in the text...

4.1.3.6.5 The software gives the participants considerable autonomy in the way they learn the listening strategies.

Below are some excerpts that are drawn from semi-structured interview data. The researcher omits the repetitive answers, as well as ones commenting on matters unrelated to the listening strategies taught by the software. Short related answers are mentioned in the chapter 5.

Participant 1:

...I think I could understand the listening text more than in the past because I could listen to the text directly. I could turn on the volume as loud as I wanted to hear it. I could do the exercises at my own pace. No need to wait for the teacher...

Participant 3:

...I liked the CLSTS because I could repeat what I needed to learn. I think it would be better if the software had a pronunciation function for the vocabulary section...

Participant 4:

...I have never learned English in the computer room where I could talk about the lesson with my friends...I think it is a good way to teach us English listening...

Participant 10:

...I like the CLSTS because I can repeat, review, and skip forward through lessons and exercises. I think it would be nice if I could use it when I am home or when I need to practice listening...

Participant 12:

...The CLSTS is new to me, but I think the idea of teaching listening this way is good. I can control the learning by myself.

Participant 19:

...When I cannot understand the content or I cannot answer questions, I try to listen to them many times. I think repetition can help me to have more understanding...

Participant 21:

...This way of learning put me, not the teacher, in control of my learning. When I have problems, I have to review lessons by myself to understand them...

4.1.3.6.6 Teaching listening strategies in L1 helped the participants better apply them when listening to exercises in L2.

Below are some excerpts that are drawn from semi-structured interview data. The researcher omits the repetitive answers, as well as ones commenting on matters unrelated to the listening strategies taught by the software. Short related answers are mentioned in the chapter 5.

Participant 15:

...Teachers had never taught learning strategies in Thai. I think for me learning strategies in Thai are much easier to understand...

Participant 17:

...Now I understood the exact meaning of four listening strategies in Thai language because the CLSTS provided them to me...

The second section features the participants' opinions towards the applicability and motivating capability of CLSTS. Taken together, they are a testament to the strengths and weaknesses of the software in instilling the willingness to use listening strategies among participants.

4.2 Regarding the participants' opinions towards the applicability and motivating capability of the CLSTS

RQ2: What are the students' opinions towards the CLSTS and its applicability?

Hypothesis2: Thai high school EFL students will regard the use of CLSTS as applicable and motivating.

4.2.1 The final questionnaire on the CLSTS results

After the training with the CLSTS, the participants were asked to answer the final questionnaire on the CLSTS. The results from the final questionnaire are shown in Table 4.9. Table 4.9 illustrates the standard deviation of the participants' responses to a final questionnaire on the CLSTS, the average score of the final questionnaire on the CLSTS, and the percentage of each response recorded from the participants.

Table 4.9 Number and percentage of participant responses and average score of a final questionnaire on the CLSTS

Question	\bar{X}	Std. Error Mean	S.D.	SA	A	N	D	SD
				Qty. %	Qty. %	Qty. %	Qty. %	Qty. %
1. I have a positive attitude towards the use of CLSTS.	3.70	.139	.724	3 11.11	14 51.85	9 33.33	1 3.70	0 0.00
2. Lessons in CLSTS help me to develop English listening ability.	3.59	.144	.747	2 7.40	14 51.85	9 33.33	2 7.40	0 0.00
3. CLSTS helps me better understand other listening texts.	3.63	.178	.926	5 18.51	10 37.03	9 33.33	3 11.11	0 0.00
4. I feel that CLSTS is a useful learning tool for developing English listening ability.	3.30	.198	1.03 1	2 7.40	11 40.74	9 33.33	3 11.11	2 7.40
5. CLSTS motivates me to develop my listening skill.	3.63	.170	.884	5 18.51	9 33.33	11 40.74	2 7.40	0 0.00
6. Listening strategy learning is new for me.	3.41	.153	.797	0 0.00	15 55.55	9 33.33	2 7.40	1 3.70
7. I gained more knowledge about English listening strategies while participating in CLSTS.	4.15	.103	.534	6 22.22	19 70.37	2 7.40	0 0.00	0 0.00
8. I can apply listening strategies learned from CLSTS to other English listening texts such as TV, radio, and other media.	3.89	.172	.892	7 25.92	12 44.44	6 22.22	2 7.40	0 0.00
9. I am aware of the importance of language learning strategies after I participated in CLSTS.	3.63	.186	.967	6 22.22	7 25.92	13 48.15	0 0.00	1 3.70
10. I would like to know more about other listening strategies.	3.70	.176	.912	5 18.51	12 44.44	7 25.92	3 11.11	0 0.00
11. I was comfortable using CLSTS during the CLSTS activities.	3.70	.139	.724	3 11.11	14 51.85	9 33.33	1 3.70	0 0.00
12. Positive feedback helps me learn more about the lesson.	3.44	.145	.751	2 7.40	10 37.03	13 48.15	2 7.40	0 0.00
13. Negative feedback helps me learn more about the lesson.	3.74	.147	.764	4 14.81	13 48.15	9 33.33	1 3.70	0 0.00
14. Pictures and videos used are appropriate to the lessons.	3.67	.207	1.07 4	6 22.22	11 40.74	6 22.22	3 11.11	1 3.70
15. Time used is appropriate to the lessons.	3.30	.158	.823	2 7.40	8 29.62	13 48.15	4 14.81	0 0.00
Average	3.64	.0962	.500					

Notes: The mean-values (X) are calculated using the following scale

SA = 4.21–5.00 = strongly agree	Students have very positive opinions towards the CLSTS.
A = 3.41–4.20 = agree	Students have positive opinions towards the CLSTS.
N = 2.61–3.40 = neutral	Students have neutral opinions towards the CLSTS.
D = 1.81–2.60 = disagree	Students have negative opinions towards the CLSTS.
SD = 1.00–1.80 = strongly disagree	Students have very negative opinions towards the CLSTS.
N=	27 (see Section 3.5.3 A final questionnaire on the CLSTS)
Qty. =	Quantity of participants' answers
% =	Percentage of participants' answers

To determine that the participants regard the use of the CLSTS as applicable and motivating, averages of responses to statements after being trained by the software are calculated. Hypothesis #2 is accepted if mean scores are >3.41 with supporting data from the questionnaires on the strategies trained by the CLSTS and the semi-structured interviews on the training of the CLSTS. The average of opinions towards the CLSTS is 3.643. This means the participants agreed overall that the CLSTS helped them develop their listening comprehension, helped them learn more about the lesson, helped them better understand other listening texts and motivated them to learn other learning strategies. The participants also developed awareness about the importance of language learning strategies.

While Hypothesis #2 is accepted, there are many supporting details gained from questionnaires on the strategies trained by the CLSTS, the final questionnaire on the CLSTS, and semi-structured interview data. For details about supporting details see Section 4.2.2: Participants' opinions towards the applicability of the software.

4.2.2 Participants' opinions towards the applicability of the software

4.2.2.1 Participants' opinions towards the applicability of the training of elaboration strategy

Concerning the applicability of the training on elaboration strategy, Table 4.10 shows the results of participants' responses to the questionnaire on the “**elaboration strategy**” training.

Table 4.10 Number and percentages of participant responses and average rating on the aspect of applicability of elaboration strategy training

Questions	SA	A	N	D	SD	\bar{X}
	Qty. %	Qty. %	Qty. %	Qty. %	Qty. %	
2. The lesson about elaboration helped me use this strategy when I listen to English.	3 11.11	15 55.55	9 33.33	0 0.00	0 0.00	3.777
3. I used my background knowledge to help me understand the texts while I work on the exercises in the unit.	4 14.81	16 59.26	6 22.22	1 3.70	0 0.00	3.851
4. I used the setting and environment of the text to help me better understood the texts while I was working on the exercises of the unit.	4 14.81	14 51.85	8 29.63	1 3.70	0 0.00	3.777
5. I used my common sense to understand the texts while I was working on the exercises of the unit.	11 40.74	10 37.04	6 22.22	0 0.00	0 0.00	4.185

Notes: The mean-values (X) are calculated using the following criteria

SA = 4.21–5.00 = strongly agree Students absolutely agree with the statement.

A = 3.41–4.20 = agree Students agree with the statement.

N = 2.61–3.40 = neutral Students have neutral opinions towards the statement.

D = 1.81–2.60 = disagree Students disagree with the statement.

SD = 1.00–1.80 = strongly disagree Students absolutely disagree with the statement.

N= 27

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

The results can be summarized as follows:

With respect to the application of the elaboration strategy, Table 4.10 Questions 2 to 5 ask whether they applied the elaboration strategy to their listening comprehension. A total of 18 participants (66.66%) agreed that viewing a lesson

about an elaboration strategy helped them use this strategy when they listened to spoken English. However, 33.33% had a neutral opinion on this point. A total of 20 participants (74.07%) agreed that the use of background knowledge helped them understand the texts. However, one participant (3.70%) indicated that s/he did not use the background knowledge to help her/him understand the texts. A total of 18 participants (66.66%) indicated the use of setting and environment in the text helped them better understand the texts. Eight participants (29.63%) had neutral opinions to this question. However, one participant (3.70%) disagreed that the use of setting and environment of the text helped them better understand the texts. A total of 21 participants (77.77%) agreed that the use of common sense helped them understand the texts. However, 22.22% had neutral opinions to this question.

4.2.2.2 Participants' opinions towards the applicability of the training of listening for main idea

Concerning the applicability of the training on listening for main ideas, Table 4.11 shows the results of participants' responses to the questionnaire on the "listening for main idea" training.

Table 4.11 Number and percentages of participant responses and average rating on the aspect of applicability of listening for main idea training

Questions	SA	A	N	D	SD	\bar{X}
	Qty. %	Qty. %	Qty. %	Qty. %	Qty. %	
2. Viewing the lesson about listening for main ideas helped me use this strategy when I listen to spoken English.	4 14.81	17 62.96	5 18.52	1 3.70	0 0.00	3.888
3. I tried to catch the start or end of a talk in order to comprehend the main idea of the text.	6 22.22	15 55.55	5 18.52	1 3.70	0 0.00	3.962
4. I paid attention to statements that start with phrases such as “My point is...” or “The thing to remember is...” in order to understand the main idea of the text.	4 14.81	14 51.85	8 29.63	1 3.70	0 0.00	3.777
5. I listened for critical information and ignored less important information.	7 25.92	13 48.15	6 22.22	1 3.70	0 .00	3.962

Notes: The mean-values (X) are calculated using the following criteria

SA = 4.21–5.00 = strongly agree Students absolutely agree with the statement.

A = 3.41–4.20 = agree Students agree with the statement.

N = 2.61–3.40 = neutral Students have neutral opinions towards the statement.

D = 1.81–2.60 = disagree Students disagree with the statement.

SD = 1.00–1.80 = strongly disagree Students absolutely disagree with the statement.

N = 27

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

The results can be summarized as follows:

With respect to the application of listening for main ideas, Table 4.11 Questions 2 to 5 investigated whether the participants applied the listening for main ideas to their listening comprehension. A total of 21 participants (77.77%) agreed that viewing a lesson about listening for main ideas helped them use the strategy while they listened to spoken English. A total of 5 participants (18.52%) had neutral opinions to this question. However, one participant (3.70%) disagreed that the lesson

about listening for main ideas helped him use the strategy while he listened to spoken English. A total of 21 participants (77.77%) indicated they tried to catch the start or end of a talk to comprehend the main idea of the text. A total of 5 participants (18.52%) had neutral opinions on this matter. However, one participant (3.70%) indicated that he did not catch the start or end of the talk to comprehend the main idea. A total of 18 participants (66.66%) agreed that they paid attention to statements that start with phrases such as “My point is...” or “The thing to remember is...” in order to understand the main idea of the text. A total of 8 participants (29.63%) had neutral opinions on this matter. However, one participant (3.70%) indicated that he did not pay attention to any statements to understand the main idea of the text. A total of 20 participants (74.07%) indicated that they attended to critical information and ignored less important information. A total of 6 participants (22.22%) had neutral opinions on this matter. However, one participant (3.70%) responded that he did not pay any attention to critical information and did not ignore less important information.

4.2.2.3 Participants’ opinions towards the applicability of the training of listening for specific details

Concerning the applicability of the training on listening for specific details, Table 4.12 shows the results of participants’ responses to the questionnaire on the “**listening for specific details**” training.

Table 4.12 Number and percentages of participant responses and average rating on the aspect of applicability of listening for specific details training

Questions	SA	A	N	D	SD	\bar{X}
	Qty. %	Qty. %	Qty. %	Qty. %	Qty. %	
2. Viewing the lesson about listening for specific details helped me to use this strategy when I listen to spoken English.	4 14.81	17 62.96	6 22.22	0 0.00	0 0.00	3.925
3. I paid attention to the information that came after the main ideas of the texts.	4 14.81	16 59.26	6 22.22	1 3.70	0 0.00	3.851
4. Specific details like numbers, names, dates, reasons, events, etc. were very helpful in listening for specific details.	5 18.52	15 55.55	7 25.92	0 0.00	0 0.00	3.925
5. Sometimes important information occurred right at the beginning of the dialogue.	6 22.22	13 48.15	6 22.22	2 7.40	0 0.00	3.851

Notes: The mean-values (X) are calculated using the following criteria

SA = 4.21–5.00 = strongly agree Students absolutely agree with the statement.

A = 3.41–4.20 = agree Students agree with the statement.

N = 2.61–3.40 = neutral Students have neutral opinions towards the statement.

D = 1.81–2.60 = disagree Students disagree with the statement.

SD = 1.00–1.80 = strongly disagree Students absolutely disagree with the statement.

N= 27

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

The results can be summarized as follows.

With respect to the application of listening for specific details, Table 4.12, Questions 2 to 5 investigated whether the participants applied the listening for specific details to their listening comprehension. A total of 21 participants (77.77%) agreed that viewing a lesson about listening for specific details helped them use this strategy while they listened to spoken English. However, some participants (22.22%) were uncertain whether they agreed or disagreed with this point. A total of 20 participants (74.04%) indicated they paid attention to the information that came after the main

ideas of the texts. Some participants (22.22%) were uncertain whether they agreed or disagreed with this point. However, one participant (3.70%) indicated that s/he did not pay attention to the information that came after the main idea. A total of 20 participants (74.04%) indicated that specific details were very helpful in listening for specific details. However, some participants (25.92%) were uncertain whether they agreed or disagreed with this point. Also, a total of 19 participants (70.37%) agreed that sometimes important information occurred right at the beginning of the dialogue. Some participants (22.22%) were uncertain whether they agreed or disagreed with this point, while two participants (7.41%) responded they did not agree that sometimes important information occurred at the beginning.

4.2.2.4 Participants' opinions towards the applicability of the training of prediction strategy

Concerning the applicability of the training on prediction strategy, Table 4.13 shows the results of participants' responses to the questionnaire on “prediction strategy” training.

Table 4.13 Number and percentages of participant responses and average rating on the aspect of applicability of prediction strategies

Questions	SA	A	N	D	SD	\bar{X}
	Qty. %	Qty. %	Qty. %	Qty. %	Qty. %	
2. Viewing the lesson about predicting helped me use this strategy when I listened to spoken English.	4 14.81	16 59.26	7 25.92	0 0.00	0 0.00	3.888
3. I used pictures and a topic to guess what I had heard before I listened to the texts.	5 18.52	17 62.96	5 18.52	0 0.00	0 0.00	4.000
4. I paid attention to transitional markers (e.g. change of direction, cause & effect, additional information, sequence) as they help in predicting what comes next.	4 14.81	15 55.55	7 25.92	1 3.70	0 0.00	3.814
5. I tried to predict what the other person says based on what has been said.	6 22.22	14 51.85	7 25.92	0 0.00	0 0.00	3.962

Notes: The mean-values (X) are calculated using the following criteria

SA = 4.21–5.00 = strongly agree Students absolutely agree with the statement.

A = 3.41–4.20 = agree Students agree with the statement.

N = 2.61–3.40 = neutral Students have neutral opinions towards the statement.

D = 1.81–2.60 = disagree Students disagree with the statement.

SD = 1.00–1.80 = strongly disagree Students absolutely disagree with the statement.

N= 27

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

The results can be summarized as follows.

With respect to the application of prediction strategy, Table 4.13, Questions 2 to 5 investigated whether the participants applied the prediction strategy to their listening comprehension. A total of 20 participants (74.07%) indicated that viewing the lesson about prediction strategy helped them use this strategy when they listen to English. However, some participants (25.92%) were uncertain whether they agreed or disagreed with this point. A total of 22 participants (81.48%) agreed that they used

pictures and a topic to guess what they would hear before they listened to the texts. However, some participants (18.52%) were uncertain whether they agreed or disagreed with this point. Also a total of 19 participants (70.37%) indicated that they paid attention to transitional markers as they helped in predicting what came next, while some participants (25.92%) were uncertain whether they agreed or disagreed with this point. However, one participant (3.70%) indicated that he did not pay attention to transitional markers, saying they didn't help in predicting what came next. A total of 20 participants (74.07%) agreed that they tried to predict what the other person was going to say based on what had been said. However, some participants (18.52%) were uncertain whether they agreed or disagreed with this point.

4.2.2.5 Participants' opinions towards the applicability of the CLSTS: Data gained from the final questionnaire

Concerning to the applicability of the CLSTS, Table 4.14 shows the results of participants' responses to the final questionnaire of the CLSTS.

Table 4.14 Number and percentage of participant responses to questions related to the applicability of the CLSTS

Question	\bar{X}	SA	A	N	D	SD
		Qty. %	Qty. %	Qty. %	Qty. %	Qty. %
1. I have a positive attitude towards the use of CLSTS.	3.70	3 11.11	14 51.85	9 33.33	1 3.70	0 0.00
8. I can apply listening strategies learned from CLSTS to other English listening texts such as TV, radio, and other media.	3.89	7 25.92	12 44.44	6 22.22	2 7.40	0 0.00
14. Pictures and videos used are appropriate to the lessons.	3.67	6 22.22	11 40.74	6 22.22	3 11.11	1 3.70
15. Time used is appropriate to the lessons.	3.30	2 7.40	8 29.62	13 48.15	4 14.81	0 0.00

Notes: The mean-values (X) are calculated using the following scale

SA = 4.21–5.00 = strongly agree	Students have very positive opinions towards the CLSTS.
A = 3.41–4.20 = agree	Students have positive opinions towards the CLSTS.
N = 2.61–3.40 = neutral	Students have neutral opinions towards the CLSTS.
D = 1.81–2.60 = disagree	Students have negative opinions towards the CLSTS.
SD = 1.00–1.80 = strongly disagree	Students have very negative opinions towards the CLSTS.
N=	27 (see Section 3.5.3 A final questionnaire on the CLSTS)
Qty. =	Quantity of participants' answers
% =	Percentage of participants' answers

The results can be summarized as follows:

With respect to the participants' attitudes towards the use of the CLSTS, Table 4.14 Question 1 shows that the participants had positive attitudes ($\bar{X} = 3.70$, S.D. = .724) towards the use of the CLSTS. From Table 4.9, 62.96% of participants (three participants strongly agreed, 19 participants agreed) reported that they had positive attitudes. However, some participants (33.33%) had neutral attitudes towards the use of the CLSTS. There was one participant (3.70%) who disagreed with this point, and indicated that s/he did not like using the CLSTS.

Pertaining to the application of the listening strategies, the participants had positive opinions ($\bar{X} = 3.89$, S.D. .892) towards the CLSTS on this point. Table 4.14 Question 8 shows the participants indicated that they would apply listening strategies learned from the CLSTS to other English listening texts, with 19 participants (70.37%) either responding in strong agreement or agreement. However, a total of six participants were uncertain whether they would apply listening strategies learned from the CLSTS to other English listening texts. There were two participants (7.4%) who disagreed on this point.

Table 4.14 questions 14 and 15 show that the participants indicated that the pictures, videos, and learning time of the CLSTS were applicable in teaching the targeted listening strategies. A total of 17 participants (62.96%) indicated that the

pictures and videos used were applicable to the lessons, while 33.33% were uncertain about this point. A total of 10 participants (37.03%) indicated that time used was applicable for the lessons, while 22.22% were uncertain about this point. There were four participants (14.71%) who disagreed that pictures and videos and time used were applicable to the lesson.

4.2.2.6 Participants' opinions towards the applicability of the CLSTS: Data gained from the semi-structured interview

Following are the results of the participants' semi-structured interview reported by the participants concerning whether listening strategy practices enabled them to develop their ability to use the listening strategies to enhance their listening comprehension.

The interview data lend credence to the questionnaire data and reveal more details about aspects of the software that make it applicable in promoting participants' ability to learn and use the target listening strategies. There are two aspects of the software:

4.2.2.6.1 The participants will use the targeted listening strategies in the future.

Below are some excerpts that are drawn from semi-structured interview data. The researcher omits the repetitive answers, as well as ones commenting on matters unrelated to the listening strategies taught by the software. Short related answers are mentioned in the chapter 5.

Participant 5:

...I still want to use the CLSTS while I am home because it can help me improve my listening...

Participant 11:

...I will practice these listening strategies. I think in the future I will be able to identify the main idea, the supporting details and understand the listening texts, though I will not achieve 100% comprehension...

Participant 14:

...I never knew or used any listening strategies before, so these strategies will be the ones that I will utilize when I have to listen to anything in English...

Participant 17:

...It is interesting to continue practicing them because, when I used them, I had more understanding about the content...

Participant 24:

...I think I like listening more than in the past because I now know what I should do when I'm faced with a long listening passage...

Participant 25:

...Even though I knew the strategy before, I didn't realize its importance in helping me understand the text. I will try to practice using it more...

4.2.2.6.2 The participants used a variety of targeted listening strategies when completing the exercises.

Below are some excerpts that are drawn from semi-structured interview data. The researcher omits the repetitive answers, as well as ones commenting on matters unrelated to the listening strategies taught by the software. Short related answers are mentioned in the chapter 5.

Participant 4:

...After I had learned the details of each strategy, I realized that some strategies such as listening for main ideas and listening for specific details were easy to use. I could catch the main idea of the listening text, which leads to understanding the whole text...

Participant 5:

...I hadn't had background knowledge to predict some exercises. When I predicted and found that my prediction was not correct, I learned that I should change my method of prediction...

Participant 6:

...I think I learned a lot from the CLSTS, especially the vocabulary in the exercises, though I could not use all the listening strategies in each exercise...

Participant 8:

...I could use the steps involved in the listening strategies and vocabulary that I learned from the CLSTS to help me practice English listening...

Participant 13:

...After being trained with the CLSTS, I now pay more attention to listening strategies, especially when I attempt to recall what I have just listened to...

Participant 15:

...I now know good English listening strategies that are applicable in English listening comprehension...

Participant 17:

...I used context clues. Although using the strategy took me a lot of time while listening, I can understand the texts better now. I mean, compared with how I listened before. I concentrate better...

Participant 18:

...After having been trained in listening strategies, I think I can understand the listening texts more and I have more confidence as well...

Participant 24:

...For example, from Unit 4- Recreation, I learned more about how to book flights, holiday vacations, and trips abroad. To clarify this, I could catch the meaning of frequent questions that I would hear because I knew some listening strategies. I will use this knowledge to support my learning...

Participant 25:

...Now listening to English is still difficult for me, but I learned good techniques to help me have better understanding...

Participant 26:

...I tried to use four of them. The easiest one is listening for main idea. Predicting from the topic and pictures is helpful to understand the listening text quickly though...

4.2.3 Participants' opinions towards the motivating capability of the CLSTS

4.2.3.1 Participants' opinions towards the motivating capability of the CLSTS: Data gained from the final questionnaire

Concerning to the motivating capability of the CLSTS, Table 4.15 shows the results of participants' responses to the final questionnaire of the CLSTS.

Table 4.15 Number and percentage of participant responses to questions related to the motivating of the CLSTS

Question	\overline{X}	SA	A	N	D	SD
		Qty. %	Qty. %	Qty. %	Qty. %	Qty. %
5. CLSTS motivated me to develop my listening skill.	3.63	5 18.51	9 33.33	11 40.74	2 7.40	0 0.00

Notes: The mean-values (X) are calculated using the following scale

SA = 4.21–5.00 = strongly agree Students have very positive opinions towards the CLSTS.

A = 3.41–4.20 = agree Students have positive opinions towards the CLSTS.

N = 2.61–3.40 = neutral Students have neutral opinions towards the CLSTS.

D = 1.81–2.60 = disagree Students have negative opinions towards the CLSTS.

SD = 1.00–1.80 = strongly disagree Students have very negative opinions towards the CLSTS.

N= 27 (see Section 3.5.3 A final questionnaire on the CLSTS)

Qty. = Quantity of participants' answers

% = Percentage of participants' answers

With respect to the CLSTS capability to motivate the participants to develop their English listening skill, Table 4.15, Question 5 shows that the participants agreed that the CLSTS motivated them to develop their English listening skill. A total of 51.85% indicated that CLSTS motivated them to develop their listening skill. However, 33.33% were uncertain whether they agreed or disagreed that the CLSTS motivated them to develop their English listening skill. There are two participants (7.4%) who disagreed with this point, and indicated that the CLSTS did not motivate them to develop their English listening ability.

4.2.3.2 Participants' opinions towards the motivating capability of the CLSTS: Data gained from the semi-structured interview

The interview data lend credence to the questionnaire data and reveal more details about aspects of the software that make it motivating in promoting the

participants' ability to learn and use the target listening strategies. The software motivated the participants to continue practicing listening strategies. A few participants explicitly stated this point of view.

Participant 5:

...I still want to use the CLSTS while I am home because it can help me improve my listening...

Participant 17:

...It was interesting to continue practicing listening strategies because, when I used them, I acquired more understanding about the content...

Participant 20:

...A variety of accents in the listening texts makes me want to practice using listening strategies with other foreign accents...

Participant 22:

...The CLSTS makes me realize the importance of listening comprehension and listening strategies. It motivates me to practice listening strategies in order to understand listening texts...

Participant 24:

...I think I like listening more than in the past because I now know what I should do when I faced with a long listening passage...

4.3 Shortcomings of the CLSTS

4.3.1 Criticism that addresses the shortcomings of the software

Respondents suggested how to improve the teaching of listening strategies with the CLSTS and talked about the weaknesses of the software.

Various criticisms that address the shortcomings of the software were found from the semi-structured interview data.

Participant 20:

...Sometimes I knew the main idea of the listening texts, but only in my L1. I could not type the correct answer in L2. So, I didn't get any score...

Participant 23:

...I disliked prediction strategy because, when I knew that my idea did not match with that of the listening text, it made me confused. I preferred using elaboration strategy...

Participant 26:

...Prediction strategy is the most difficult strategy for me because, before I listened, I could not predict the right story to match the text...

Why prediction strategy proved to be vexing for more than one respondent is either rooted in the complication of the strategy itself or the software's inability to teach it effectively. If the latter proves to be the true cause, then the next version of CLSTS should adopt more lucid methods to cover prediction strategy. It can accomplish this by using topics that passionately elicit the interest of the students such as sports and fashion. Also it can start with simpler examples of the strategy, increasing the difficulty from one pre-listening activity to another in smaller increments. These remedies should be able to address the complication of the strategy itself, provided that is the true cause.

Addressing the other criticisms, a learner with a weak English vocabulary needs to be better grounded in vocabulary commensurate with his/her grade level before proceeding with other activities. This is a liability that has to be corrected

before the learner works with the software. The inability of another learner to type correct English answers to questions should tell that learner that s/he needs English writing practice. This again is something to be corrected prior to using the software.

Moreover, various criticisms that address the shortcomings of the software were found from the final questionnaire about the CLSTS.

From Table 4.9, the acceptable mean score is >3.41 . The actual mean score of Question 4 is 3.30. This rating ascertained whether participants felt the CLSTS is or is not a useful learning tool for developing English listening ability. This implies that only listening strategy training may not be enough to enhance listening ability. Very likely, the participants also needed extra options in the software prompting them to review vocabulary if they were not confident enough to proceed to the next section. The mean score of Question 15, concerning whether or not participants felt that the time used was appropriate to the lessons, is 3.30. This implies that time used may not be enough. The participants needed more time to practice and study the listening strategies.

In conclusion, the criticisms leveled at the software, though harboring some validity, are largely ones borne of other L2 deficiencies that need to be ameliorated in other L2 learning activities. However, the difficulty participants had with prediction strategy is something to be seriously considered in the next version of the software. As prediction strategy is a vital component to listening comprehension, the better it is inculcated; the more formidable will be the English listening comprehension of Thai students. Other recommendations, such as accompanying audio to feedback and scripts following completion of the exercises, should also be pursued and implemented.

4.3.2 Suggestions for improvement the software

The participants indicated concerns about the CLSTS on Question 17 of the final questionnaire asking about suggestions to improve the CLSTS. The suggestions included (1) the tendency of the participants to forget listening texts before answering the questions, as the texts were too long for them; (2) the need to use the CLSTS at their homes; and (3) the need for different ways of answering the questions. Fill-in-the-blank answers proved to be inadequate, as they did not know how to spell every word correctly.

Moreover, various suggestions for improvement in the software were found from the semi-structured interview data.

Participant 2:

...The CLSTS is good. However, it would be better if it had more related pictures to draw my attention whenever I have to listen to a long listening passage... Anyway, I think it would be better if the software provided sound for the vocabulary part....

Participant 4:

...I like learning listening strategies in Thai language. However, the software should have transcriptions of each lesson to review too...

Participant 19:

...I like the CLSTS. It made me want to practice English. I think it would be more interesting if the software had verbal feedback...

Participant 22:

...I felt frustrated when the listening texts were not so clear. I mean there was a lot of noise in some texts. I think if there were no background noise in the text, I would be able to concentrate while learning with the CLSTS...

CHAPTER 5

DISCUSSION AND CONCLUSIONS

This chapter discusses and summarizes findings reached in the study and how such conclusions relate to extant literature. Finally this chapter discusses the study's implications and recommendations for further research.

The study examined whether CLSTS promotes Thai Grade 10 EFL learners' ability to use the target listening strategies to enhance their listening comprehension. The participants in the CLSTS were Grade 10 at a Thai high school in Bangkok. Finally, the study evaluates the opinions the participants submitted about the CLSTS.

The study used quantitative and qualitative research methods to investigate and answer the following questions which were the focuses of the study:

- 1) To what extent does the CLSTS enable Thai high school EFL students to develop their ability to use the target listening strategies to enhance their listening comprehension?
- 2) What are the students' opinions towards the CLSTS and its applicability?

The discussion is based upon the theoretical framework for developing the CLSTS: (for full details see section 2.7: Theoretical framework for developing the CLSTS).

The findings of this study can be summarized as follows: First, the participants in the experimental group gained higher scores on their post listening comprehension test as compared to the participants in the control group. There were statistically

significant differences between the two groups' mean scores. Second, the participants in the experimental group had positive opinions towards the CLSTS and its usefulness.

5.1 Discussion

As mentioned in Chapter 1, there is very little research on listening strategy training for Thai high- school EFL students. As far as the literature reviews go, most previous research investigated if training listening strategies (in classroom-based and paper-based formats) would significantly increase students' listening comprehension (Sooksripanich, 1991; Thanarak, 1992; Singhasiri, 1994; Chen, 2009; Hamzah, Shamshiri, & Noordin, 2009). Some other studies conducted both inside and outside Thailand investigated the use of computer and instructional design to enhance students' listening comprehension (Hoven, 1999, 2002; Hegelheimer and Tower, 2004; Singhal, 2002; Smidt and Hegelheimer, 2004), only a small number of them investigated the use of computers to train listening strategies (Clement, 2007). However most of the previous studies did not use software to teach listening strategies. They only used computers or others technologies to promote learners' ability to comprehend listening texts. The use of software to teach listening strategies is what sets this study apart from the others. The findings of the present study reveal that the CLSTS is effective, applicable, and motivating in promoting the participants' use of listening strategies. Each of these three issues will be discussed in the following sections.

5.1.1 Aspects of the software that make it effective

Overall, the findings indicated that the software enabled the participants, Thai high school EFL students, to develop their ability to use the target listening strategies to enhance their listening comprehension. In this study, nine aspects of the software that make it effective are identified and examined. The four listening strategies taught by the software are designed to use those nine aspects to the advantage of the participants.

5.1.1.1 The CLSTS provides activities for training the ear to listen to cues that facilitate the understanding of oral passages. The cues accomplish this by activating background knowledge and providing relevant vocabulary.

As mentioned in the title of this section, the CLSTS provides activities for sensitizing the ear to cues that provide listeners with shortcuts that make understanding of the passages easier. At the beginning of each unit, the participants were directed by the software to listen to four short sentences. They then had the opportunity to answer how many words in each sentence. This gave them a preliminary understanding of listening that they could build on when moving to the more complex exercises. This is because the number- of words exercise trains the listeners' ears to discriminate and separate words in passages.

Some participants (37.03%) commented about the listening to four short sentences and providing answers activity. They agreed that this activity was helpful in developing their use of listening strategies.

Participant 13:

...Pre- listening activities are also good because I had chances to see the answers and listen again. I did this many times to be familiar with the sounds of words...

Participant 27:

...I like listening to four sentences before starting each unit. They helped me warm up my ears before listening to long exercises...

After the first activity, the participants were equipped with vocabulary to help them understand the content of each listening text. The vocabulary was shown in English with Thai meanings they already knew.

Participant 13:

...I like the variety of the listening exercises. They made me enjoy learning. I had also learned new vocabulary before I listened to the text. That was good for me because I had known only a few words before. If I hadn't known the meaning of words, I could not use the strategies that I had learned...

Following this, the software guided the students to study listening strategies.

In addition, data from the semi-structured interview shows that pre-listening activities used in the CLSTS help the participants use listening strategies to improve their English listening comprehension. One such activity involved activating background knowledge. This activity exposed the participants to new terms, explaining them with words the participants were already familiar with. Moreover, the new terms were in the context of topics the participants had already read about in Thai. From the study, the participants can recall their background knowledge to

practice listening and learn the related vocabulary. Every function in the background knowledge pre-listening activity had meaning to them.

Participant 13's response reveals the satisfaction the background knowledge listening activity instilled. This satisfaction, in turn, made listening comprehension much more rewarding for the participants. The rewarding nature of listening comprehension, when reinforced by software instilled strategies, streamlined the learning process and engendered favorable feelings towards English listening itself. Favorable feelings towards English listening reinforce the student's motivation to take on listening activities.

5.1.1.2 Variations in the content and accents of the listening texts

About half of the participants (59.25%) liked practicing exercises in the CLSTS because of the variations in the content and accents.

In every unit the CLSTS offered four exercises to the participants. They can choose to do or to review the exercise that they like (see step 5 in Chapter 3). For example,

Participant 13:

...I like the variety of the listening exercises. They made me enjoy learning.

Moreover, a multiplicity of topics stimulates the participants' interest in studying the target listening strategies. The topics of the exercises in the CLSTS are related to: (1) food; (2) daily life; (3) recreation; and (4) jobs and occupations. Under each topic, interesting listening texts are drawn from websites to make the subject matter more compelling. The CLSTS also provides both monologue and dialogue.

In addition, the different accents presented in the various exercises motivate participants to do more practice. For example,

Participant 20:

...A variety of accents in the listening texts makes me want to practice using listening strategies with other foreign accents...

From the questionnaire on each strategy's training, participants claimed that they could apply listening strategies they learned from the lesson to the exercises. A total of 23 participants (85.18%) thought that the first and the second units were effective at developing their ability to use the target listening strategies. A total of 24 participants (88.88%) stated that the third and the fourth units were good for developing their listening ability. And a total of 22 participants (81.48%) agreed that the fifth and the sixth units were good for developing their listening ability.

5.1.1.3 The illustrations, pictures, videos, and the names of listening texts were effective in strengthening the participants' English listening strategies

The software in this study attempted to give the students a thorough understanding of the English material in the lessons by providing vivid pictures to explain English terms. The software was geared to pace, repetition of key vocabulary, visual aids, and more in order to enable the participants to remain engaged in the CLSTS.

Illustrations, pictures, videos, and the names of listening texts were also provided for participants in order to help them understand listening texts better. Participants can make use of these supports to help them more easily use listening strategies with the texts. Prediction strategy and elaboration strategy are especially

more effectively taught and applied when supported by the aforementioned media.

For example,

Participant 26:

...When I saw pictures about each occupation such as janitor and nurse, I could imagine the story that I would hear. This helped me a lot in practicing listening strategies...

The CLSTS provided highlighting words in the vocabulary sections and highlighting phrases in the listening strategy study activities. The participants can make use of these supports to help them more easily use listening strategies with listening texts. For example,

Participant 6:

...I sometimes did not pay attention to pictures or bold/italic words in student's textbook. It looked like usual data. However, in the CLSTS, I had to pay attention to emphasized words, phrases, or pictures to make myself understand listening texts and remember them. I had changed my style of learning when I participated in the CLSTS...

Moreover, some related synonyms and antonyms were also provided for participants in the vocabulary sections. To make certain the participants would not be hindered by their lack of vocabulary knowledge from/for using the target listening strategies, the researcher had selected listening texts with appropriate level of vocabulary for the participants. Supplanting possible deficiencies in these, the researcher created the glossary to help. This may mean that vocabulary activities are necessary for software aiming to teach listening strategy.

Therefore, this study confirmed that relevant **illustrations, pictures, videos, and the names of listening texts** in the training software facilitate the use of the targeted listening strategies. Compared to conventional teaching methods that use textbooks and cassettes, the variegated media offered by the software offer the students a more sensory integrated means of learning.

5.1.1.4 The use of L1 in the software helped the participants better apply them when listening to exercises in L2.

In this study, participants learned four listening strategies explicitly. Oxford (1994) stated that strategy training should be explicit, overt, relevant, and should provide plenty of practice with varied tasks involving authentic materials. The software uses L1 as a medium to train four listening strategies explicitly. From previous research of Cook (2001), Tang (2002), Case (2008a), Case (2008b), International Teacher Training Organization (2001), and Morahan (n.d.), the use of L1 in the L2 classroom by teachers can be beneficial in the language learning process and may even be necessary for increase comprehension and acceptance of the new language by the language learners.

The results of a small group implementation also suggested that only L1 explanations worked for this group of students. All of the five participants in the second try-out agreed that the overall activity seemed to use the English language too much even though they were learning English. They suggested that the researcher should try to explain how to use each listening strategy in their L1. The researcher then decided to explain how to use each listening strategy in Thai with the hope that it would satisfy the participants' need to flawlessly understand how to use the strategies to help them listen.

After the training with the CLSTS, participants confirmed that learning the concepts, purposes, and how to use the listening strategies in their L1 made them understand the material more effectively. In their L1, there was little ambiguity about the explanation of the strategies and the time saved from learning these in L1 could be better spent on approaching the actual lessons in L2. Most of the time was used efficiently performing exercises in L2, as the same time required for pre-listening activities was minimized by having them in L1. For example,

Participant 15:

...Teachers had never taught learning strategies in Thai. I think for me learning listening strategies in Thai is much easier to understand...

Participant 17:

...Now I understood the exact meaning of the four listening strategies in Thai language because the CLSTS provided them to me...

To clarify the way the software trained the participants in listening strategies, the software started by showing the name and how to use the targeted listening strategy in order to get the participants to focus on it. Then the software asked the participants to practice using it. Next, the software reviewed how to use that targeted listening strategy before participants started doing a new listening exercise. Compared to the traditional way of teaching listening strategies, teachers using this method follow steps in the teacher's guide book. Teaching listening strategies is one part of those steps. The participants may or may not pay attention to it. However, if they do not pay attention, they quickly discover how difficult the listening exercises are without listening strategy reinforcement.

As Chen (2005) noted, listening strategy training also created more opportunities for learners to discern between the target strategies. This can be seen in the way learners compare their listening experiences prior to and while executing the software. Participants 14, 16, and 25 noted that they lacked awareness of listening strategies before the training with the CLSTS, and that strategy training in the CLSTS made a difference.

Therefore, this study confirmed a notion that explicit training by using students' L1 in the software helps the participants better understand the targeted listening strategies. Moreover, learning listening strategies in the L1 focused the students on practicing listening strategies in the L2.

5.1.1.5 Feedback helps improve the use of listening strategies

Data gained from semi-structured interviews and a final questionnaire of the CLSTS reveal that providing feedback (i.e. negative and positive feedback) help the participants learn listening strategies more effectively. Also, it allows the students to correct their errors because the feedback in the CLSTS provided the participants with information to improve their future answers. Most participants (62.96%) found the CLSTS to be valuable in terms of giving instant negative feedback on exercise errors, while 44.43% of the participants expressed that the CLSTS is valuable in terms of giving positive feedback on exercise corrections. The participants can apply their knowledge and ability to use the target listening strategies to improve their listening comprehension. This can be seen from a sample of semi-structured interview data:

Participant 7:

...Some feedback that I got makes me understand my errors. It makes me know what to focus on when I listen...

Participant 8:

...I enjoy getting feedback from listening exercises that the CLSTS provided for my answers and my friends' answers. Those answers stimulated my curiosity and motivated me to get good scores...

Participant 11:

...It seems that the software provided some discouraging feedback for me. Anyway, that feedback was good. It made me understand my errors sometimes...

The above examples of participants' opinions illustrates that negative feedback causes them to work on their errors. The negative feedback such as "Are you sure", "Go back and review how to use listening strategies", and "Carefully listen to the beginning of the story again" can help the participants understand their errors. They then reviewed the listening texts or listening strategy training in order to learn more. These findings support the previous studies of Brett (1997), Warschauer and Healey (1998), and Schulze (2003). The findings also support one of Chapelle's SLA principles as guidelines for the design of an effective CALL software. The principle emphasizes providing opportunities for learners to notice their errors (Chapelle, 1998).

By referring participants to relevant passages to discover the reasons for their errors, the software allows the participants to gain a fuller understanding of the questions in the exercises, as well as the passages themselves. Furthermore, the software also offers feedback after each section that directs them to do the section

again if the students answered less than 60% of the questions correctly. The fact that the feedback is also in Thai leaves the participants with little doubt as to the directions for correcting their errors.

However, most of the feedback from the CLSTS (100% for negative feedback and 50% for positive feedback) was provided in L1. From the semi-structured interview data, it shows that:

Participant 9:

...Thai feedback is easy to understand and follow...

As Aljaafreh & Lantoff (1994) mentioned, L2 students provided with negative feedback are said to outperform students given minimal or no negative input. The participants also asserted that it would be nice if the teacher provided verbal feedback.

On the other hand, weaknesses of the feedback, mentioned by two participants, are as follows:

Participant 7:

...It would be nice if the software provided feedback in both written and oral form. It would be nice if the teacher, not the machine, communicated to me...

Participant 19:

...I like the CLSTS. It made me want to practice English. I think it would be more interesting if the software had verbal feedback...

From the researcher's point of view, providing L1 voice feedback is beneficial. It can make the activities more interesting, more relaxing, and more stimulating. If L2 voice feedback were provided, not all participants would not understand or need more time to understand the material. Another possibility is

providing both L1 and L2 voice feedback to them in order to help them learn more L2.

Therefore, this study confirms that effective L1 feedback helps participants learn how to use listening strategies. The participants can understand the feedback more clearly in their L1.

5.1.1.6 The software helps participants produce comprehensible output

Swain's (1985, 1995, 2000) output hypothesis reveals that language production facilitates L2 learning. An important component of the output hypothesis involves pushing learners to produce appropriate, accurate, and complex language (Swain, 1993).

When the software was designed, the researcher tried to find ways to elicit comprehensible output from the participants' with the hypothesis that this output would help the participants learn the target listening strategies. The word "output" was used to indicate the outcome, or product of the language acquisition device. Output was synonymous with "what the learner has learned." Swain (1985, pp. 248-249) mentioned that being pushed for output is a concept parallel to that of the $i+1$ of comprehensible input. The CLSTS provided many kinds of exercises to help participants produce comprehensible output, (i.e., multiple choice, true-false, matching, and fill-in-the-blank.) From the observations, it was found that more than 50 percent of the participants tried to provide correct answers to the CLSTS by repeating the listening texts many times. If they could not answer the multiple choice, fill-in the blank, or other exercises, they would review the listening texts in order to

use the listening strategy to facilitate their understanding of the material more effectively.

Because the participants have to answer many of the questions in phrases or sentences, the participants cannot simply guess their way through to exercises to achieve a passing score. They have to type responses that are relevant and that truly show that they understand the passages.

After finishing every exercise, they compared their scores with their friends. Often learners may notice that they cannot express what they want to convey in the target language (Swain, 1995). Noticing this “hole” (Doughty and William, 1998) may be an important step to addressing deficiencies in language learning. By doing exercises, they can assess their strengths and weaknesses in respect to the target listening strategies used to understand listening texts. However, the limitation of the software used in the Moodle (i.e. Adobe Captivate CS4) is it cannot recognize all possible open-ended answers. This deficiency can discourage participants whose answer is almost correct. Other exercises should be used instead.

In the future, a researcher asking students to provide open-ended answers that CLSTS deficiently assesses as incorrect may: (1) ask students to submit their answer in the form of a short answer or long paragraph via email; (2) ask students to make sentences from key vocabulary provided; or (3) ask students to correctly order the words provided.

5.1.1.7 The software develops learners’ own individualized strategy systems

From the results of this study, it was found that the CLSTS can motivate learners to develop their own preferences in choosing listening strategies.

This result corresponded to the previous research result of Chen (2005) that the training developed the learners' own individualized strategy systems. Being equipped with four different listening strategies, the learners could use different strategies with different frequencies in accordance with the preference of their natural learning style. This allowed them a new level of comfort when approaching listening activities.

Participants' engagement in the CLSTS was observed through real-time observations. The participants (85.18%) seemed more anxious for the first lesson and then relaxed towards the final session as they gained more familiarity with the software. As the lessons progressed and drew to a close, they were more satisfied. In addition, a total of four participants (14.81%) who did not seem to like learning with the computer or learning from their friends, appeared to change their views of the learning conditions and felt more committed to the learning.

This study allowed the participants to participate in every activity of the CLSTS in order to realize their development. However, the data from Moodle, tracking completion of the exercises, shows that a total of 5 participants (18.52%) did not do all four exercises in units 1 and 4. A total of 7 participants (25.92%) did not do all four exercises in unit 2. A total of 3 participants (11.11%) did not do all four exercises in unit 3. And a total of 6 participants (22.22%) did not do all four exercises in units 5 and 6. Clearly different students worked through the exercises in different sequences. Moreover, the varying completeness of the exercises shows that not all the students were able to master the material as thoroughly as their classmates.

It can be assumed that the participants had their own individualized strategy systems to learn how to use each listening strategy, as different students struggled with some and thrived with other exercises, as revealed by the differential completion

rates. Moreover, the different degrees of completion of units featuring different strategies showed different students favored different strategies over others.

These findings supported Cohen (1998, p.70) that one of the three major objectives of strategy training is to promote learner autonomy and learner self-direction and self-evaluation. These three tendencies are cultivated by a rich variety of listening strategies and activities the students are free to choose from. With more ways to learn, the students are better able to gain more traction learning new material.

Having four learning strategies to pool from, learners using the CLSTS are able to choose a strategy that complements their learning style. If this strategy is not appropriate for the passage at hand, the learner can use another strategy to help them unearth the meaning. Learners may also choose to apply more than one learning strategy at a time to decipher passages.

5.1.1.8 The software encourages learner to take more responsibility for their own language learning

From the researcher's observation, a total of 20 participants (74.07%) paid attention to the CLSTS in each session. They choose to do each exercise at their own pace. Since the home page of the CLSTS does not provide any details about each listening text, the participants can click to view the pictures and illustrations before deciding to do or not to do that exercise. As a result of self-paced instruction, the participants were more engaged in their tasks. They consequently became more persistent towards successfully completing every listening exercise which they preferred. When the participants successfully completed initial exercises with good scores, they were motivated to complete new exercises to get good scores. This is clearly reflected by some participants.

Participant 10:

...I like the CLSTS because I can repeat, review, and skip forward through lessons and exercises. I think it would be nice if I can use it when I am home or when I need to practice listening...

Participant 12:

...The CLSTS is new to me, but I think the idea to teach listening this way is good. I can control the learning by myself.

Participant 21:

...This way of learning put me, not the teacher, in control of my learning. When I had problems, I had to review lessons by myself to understand them...

In contrast, a total of seven participants sometimes visited other web browsers such as Face Book and You Tube while they were listening to exercises. When the researcher or the teacher of the computer room asked them why they did so, they responded that they were listening and they would get back to the exercises when their listening texts ended. When the researcher asked them the reason to visit other websites, the main reasons are: (1) they were looking for information to support homework of another course (42.85%); (2) they just switched back and forth between the software and other websites (42.85%); and (3) they still listened while they visited other website for pleasure (14.28%).

However, the researcher realized that the way to attract every participant's attention all the time was quite difficult if students have so many distractions on the World Wide Web. Teaching and learning via the Internet is problematic for this very reason. Two computer teachers at the experimental room admitted that this is not a new problem. The researcher believed that even if the software allowed participants to

use only offline functions (i.e., not the Internet), this problem would still occur because participants can connect to the Internet all the time if they are sitting in the computer room. In order to fix the problem, teachers who want to use the software should limit web access to only relevant educational sites. In addition, teachers should deduct students' scores if they connect to irrelevant websites. On the other hand, students who do extra exercises should get extra credit, giving them a positive incentive to stay focused on the listening exercises.

5.1.1.9 The software promotes learner autonomy, self- direction, and self-evaluation

For learner autonomy, the function of the software makes the participants understand the purpose of the listening strategy training, execute learning activities, explicitly accept responsibility for their learning, and regularly review and evaluate their learning. The participants in this study achieved the goal of learner autonomy exemplified by the amount of time spent and rate of completion of the exercises.

While using the CLSTS, the participants work at the pace their abilities allow them to work at. The researcher does not shepherd them through the software. Therefore, the onus is on the students to finish the exercises without regard to satisfying the teacher's demand for completion. But more importantly, the CLSTS's negative feedback lets the participants know, in no uncertain terms, what passages to peruse to correct their errors. This makes the students responsible for having a thorough understanding of the questions and the texts. Moreover, if a participant fails to understand a question or the text it is referring to, it is likely due to either the

participant's failure to reference the text or her lack of English proficiency commensurate with her grade level.

From the researcher's observation, some participants talked with their friends about their friends' progress or compared scores. This evidence might be used to confirm that the software and the training promote learner autonomy.

For the self-evaluations, the software informed the participants of their scores after they finished or stopped working on each exercise. From the tracking activities on Moodle, most participants (51.85% for unit 1; 44.44% for unit 2; 66.65% for unit 3; 59.26% for unit 4; 55.55% for unit 5; and 48.15% for unit 6) redid the exercises more than one time after they finished that exercise with an unsatisfactory score or when they needed to practice using that listening strategy.

However, the researcher further asked participants the reasons why they did not redo or repeat some exercises. The reasons are as follows: (1) most participants (66.65%) got good scores after they practiced a listening activity the first time; (2) few participants (7.40%) thought that their scores were acceptable even if they were less than 70%; (3) other participants (25.95%) wanted to move on and try other exercises in the same unit. Therefore, they skipped repeating some exercises.

The above discussed findings supported Cohen (1998, p70) that one of the three major objectives of strategy training is to promote learner autonomy and learner self-direction and self-evaluation. In this study, learner autonomy and self-direction are supported by the students working without the teacher's instruction at their own pace for the majority of the classroom time. Learner self-evaluation is supported by the students being able to review and strengthen their foundation of material they felt they were weak in. They could review by checking their mistakes and scores, as well

as by comparing them with their classmates. They could strengthen their foundation by redoing exercises in which they scored low.

It can be summarized that the various listening text types and various activities helped the participants ascertain the meaning of listening texts. They were helped by a full complement of listening strategies. The listening strategies cognitively equipped the students with the tools to feel confident being autonomous, self directed, and self-evaluating whilst undertaking the listening activities.

5.1.2 Aspects of the software that give it applicability

The listening strategies furnished by the software equip the students with the resources to complete exercises in the units. Therefore, the strategies are highly applicable to these and many other types of listening activities.

A critical strength of the software is that the applicability of the listening strategies it teaches is quickly demonstrated in the listening activities the students tackle. When undertaking the activities the students immediately witness how beneficial the listening strategies are. The training furnishes participants with four listening strategies to help them successfully complete the exercises. As a result, the participants had several strategies to choose from. If the researcher emphasized only one or two strategies that participants had difficulty applying, they may have considered the training useless.

Participant 4:

...When I knew the details of each strategy, I realized that some strategies, such as listening for main ideas and listening for specific details, are easy to use. I could catch the main idea of the listening text, which leads to understanding the whole text...

Participant 26:

...I tried to use four of them. The easiest one is listening for the main idea. Predicting from the topic and pictures helps to understand the listening text quickly though...

The participants quickly discover the relevance of the listening strategies when they use them successfully to complete the exercises. A couple participants even commented that they would use these strategies in English listening activities in the future. These comments recognize the software's potential to improve English listening scores, as well as overall comprehension, among Thai participants.

From the questionnaires on the strategies trained by the CLSTS, a total of 21 participants (77.77%) indicated they will use listening for main idea and listening for specific details when they listen to English. A total of 20 participants (74.07%) indicated they will use the prediction strategy when they listen to English. However, only 18 participants (66.66%) indicated they will use elaboration strategy when they listen to English.

Participants who indicated that they will use listening for the main idea and listening for specific details do so because those strategies are easy to understand how to use and to follow. When the participants used them, they could understand the listening text more effectively. For example:

Participant 4:

...When I knew the details of each strategy, I realized that some strategies such as listening for main ideas and listening for specific details are easy to use. I could catch the main idea of the listening text which leads to understanding the whole text...

Listening for main idea and listening for specific details are easy to use because of samples of phrases and keywords that the software pointed out. The software also mentioned them in detail to remember. After the participants memorized and practiced them, they could use them. However, the rest of the participants answered that they have a neutral attitude towards whether they will use or not to use these two strategies.

For elaboration strategy, this strategy will be used by the majority of participants (66.66%) because the CLSTS trained the participants how to recall their background knowledge by giving them familiar illustrations, pictures, videos, and names of listening texts. Therefore, they are capable of using elaboration strategy to have more understanding of the text.

In contrast to elaboration strategy, from the semi-structured interview data, a total of three participants (11.11%) mentioned that they preferred not to use prediction strategy. One of them mentioned that what s/he predicted using the strategy was often wrong. The interview data shows the reasons as follows.

Participant 23:

...I disliked prediction strategy because, when I knew that my idea did not match the listening text, it made me confused. I preferred using elaboration strategy...

Participant 26:

...Prediction strategy is the most difficult strategy for me because, before I listened, I could not predict the right story to match the text...

For the two problems above, the researcher tried to find out why prediction strategy, above all others, proved to be the most challenging for the participants. In

the absence of any other corroborating data, the researcher could only conclude that the media used in the prediction strategy unit did not properly prepare the participants to make correct predictions when prompted to do so by the software.

This finding supports the study of Sooksripanich (1991) that 26% of the students could not apply prediction strategies. She pointed out that two factors might have influenced their application of prediction strategies: the number of times for learning to make predictions was limited, and they simply wanted to stop learning because it was near their lunch time. By contrast Rixon (1986) states that students who are encouraged to form their own expectation about what they will hear seem to recognize and understand much more than those who come to a listening passage without any preparation. While the researcher's results more closely mirrors those of Sooksripanich's than Rixon's, the reason for the failure to apply the strategy in the researcher's study was quite different from those of Sooksripanich's. In the researcher's study, it was the concept and application of prediction strategy that the participants had difficulty grasping. This difficulty can be addressed by clearer explanations and more exercises in the prediction strategy section of a future version of the software.

Therefore, this study affirmed that providing participants with a set of multiple listening strategies facilitates the participants' use of the listening strategies. With more strategies being taught, there is a better chance that the learner will have access to a strategy that conforms to the individual's learning style. Also, different learning strategies exhibit different degrees of effectiveness with different passages. Having more than one learning strategy is useful if one encounters a passage ill suited for the learning strategy that conforms to one's learning style. And finally, having multiple

learning strategies allows the learner to use more than one simultaneously to approach a passage from different angles. Obviously, it is more fruitful to extract information using more than one tool, and listening comprehension is no exception to this.

5.1.3 Aspects of the software that make it motivating

Motivation is defined primarily in terms of ‘motivational intensity’ (i.e. the effort learners are prepared to make to learn a language and their persistence in learning it (Ellis, 2005)). In this study, students’ learning motivation seems to result from the fact that (a) the learners realize the benefits and effectiveness of using the target listening strategies; and (b) they want to improve their listening ability.

On its introduction page, the software raises the awareness of the participants by providing short passages to convince participants of the benefits of using listening strategies. In addition to the above passages, the researcher and research assistants had explained the importance of practicing the new listening strategy with the software in order to become better at listening to English. The researcher and assistants did this before the participants started lessons on a new listening strategy.

The questionnaire and interview data show that participants enjoyed doing the exercises in the CLSTS. Most participants (85.18%) responded that they like learning via the computer and the internet. After the training with the CLSTS, a total of 22 participants (81.48%) indicated that they liked the training in the first two, a total of 23 participants (85.18%) responded that they liked training in the third and fourth, and a total of 19 participants (70.37%) responded that they liked training in the last two units. Moreover, the data in the final questionnaire indicates that 72.8% of the participants liked the lessons in the CLSTS (as shown in Table 4.7). It indicated that participants regard the use of the CLSTS as effective, motivating, and applicable.

However, the level of effectiveness, applicability, and motivation of the participants might vary, depending on many factors (see details in sections 5.1.1-5.1.3)

The information derived from the personal and academic questionnaire indicated that, before they were presented with the CLSTS, the participants had apathetic attitudes towards listening to English. In other words, the participants did not care whether they could listen to and understand English texts. According to 25% of the participants', it was because of the dearth of listening practice at their school and at their homes. The limited time spent on listening activities did not equip these participants with the tools to allow them to listen effectively. Moreover, information from the final questionnaire about the CLSTS, distributed after the post-listening comprehension test, illustrated that participants had changed their apathetic feelings about listening to English. They claimed that they could realize their development in English listening after learning with the CLSTS. By learning how to use listening strategies to help them understand the listening texts, they became more confident listening to English. This, in turn, motivated them to do well on the exercises in the unit. Moreover, the qualities of the software that made it effective in furnishing listening strategies requisite to success engendered positive perceptions about its ability to motivate students to undertake English listening activities.

The CLSTS's ability to motivate is supported by 62.95% of participants who agree that they would like to have web activities to learn how to use listening strategies with similar software as a regular part of their language course. Some participants (37.03%) would like to continue using the CLSTS at their home, as it is appropriate for their individual needs. For example,

Participant 5:

...I still want to attend the CLSTS while I am home because it can help me improve my listening...

This suggests that a variety of the CLSTS activities (pre-listening activities, listening strategy study, related vocabulary review, listening ability practice, demonstration of the use of listening strategies in other tasks, listening ability practice, listening script review, and self assessment) should be developed not only for use in the class, but also for self-directed learning. This finding also supports the results of studies by Johnson (2003), Thanarak (1992), and Sooksripanich (1991) which show that students have a positive attitude towards listening strategy training.

Therefore, from the questionnaire data, it was found that most participants (74.07%) tried to practice listening strategies with the CLSTS. And from the semi-structured interview, it was found that these participants tried to do the provided activities because they wanted to improve their English listening. This can be seen from the examples.

Participant 17:

...It is interesting to continue practicing listening strategies because, when I used them, I had more understanding about the content...

Participant 22:

...The CLSTS makes me realize the importance of listening comprehension and listening strategies. It motivates me to practice listening strategies in order to understand listening texts...

However, the duty of the researcher and researcher assistants was greeting the participants before starting a new lesson. After greeting them, the researcher emphasized the importance of practicing with the software. In particular, the

researcher emphasized the importance of the listening strategies in guiding the participants to become better at listening to English. These may be only duties that the researcher can do in order to make participants feel familiar with the researcher and the software.

The listening strategies taught by the software are motivating because they endow learners with tools that allow them better footing when approaching listening exercises. The listening strategies give the participants a road map to understand the passages by tuning the students into cues to listen for. This keeps the participants from being overwhelmed by attempting to apprehend passages in their entirety. Furthermore, the cues to listen for and variation of strategies are empowering to the participants, giving them a level of comfort with the passages that better motivates them to undertake listening activities.

5.1.4 Shortcomings of the training software

Various suggestions for improvement of the software were found from the semi-structured interview data. One suggestion was to eliminate the background noises in the passages, as the participants found the noises to be distracting. Another was to have a script accompanying the video, so the participants can read and print out the text after they have completed the exercise. Other participants expressed a wish that a voice accompanying the scripted feedback be provided for answers. This will allow two channels, both visual and aural, to facilitate comprehension of the text. Still others wanted the vocabulary to be read by the software voice, so the participants could learn how to pronounce the new words. The most pronounced shortcoming of the software is the all- or nothing nature of the answers. The fact that a participant

who types an answer that is 99% correct gets zero credit is a serious defect, and one that needs to be corrected in the next version of the software.

5.2 Conclusion

There are two positive outcomes reached by this study. One is demonstrable development of EFL high school students' listening ability, and this development is measured by the improvement between their pre and post- listening comprehension scores. Furthermore, the statistically significant difference in score improvement of the experimental over the control group is a testament to the effectiveness of the targeting listening strategies taught by the CLSTS. The difference between the CLSTS and the CLTS is the former's use of listening strategies. Considering this, it is safe to attribute the difference in listening comprehension improvement between the experimental and control groups to the listening strategies taught by the CLSTS. Another result of the study indicated that a total of 20 participants (74.07%) from the experimental group and a total of 22 participants (73.33%) from the control group had never studied listening strategies before participating in the training. This means that only 25.93% from the experimental group and 26.67% from the control group studied and used listening strategies before the training. These participants could consciously and unconsciously use previously embedded strategies while they did the exercises. However, the control group did not enhance their knowledge about listening strategies while participating in this study.

The software's effectiveness in teaching the targeted listening strategies wrests in the ability of the activities in the software to help participants learn how to use listening strategies. It accomplishes this with pre- listening activities that teach

participants how to use the strategies and exercises that allow the participants to apply the strategies. The pre- listening activities were in text, video and audio. In addition, the activities were in the learners' own language to expedite comprehension. The exercises offered detailed feedback that gave the students a passage to reference to discover the reason behind their mistakes.

From the present study, it was found that the CLSTS enables Thai high school EFL participants to develop their ability to use the target listening strategies to enhance their listening comprehension. Nine main aspects of the CLSTS that makes it effective are: (1) activities for practicing ear training, activating background knowledge, and providing relevant vocabulary knowledge; (2) variations and accents of the listening texts; (3) illustrations, pictures, videos, and the name of listening texts strengthening the participants' English listening strategies; (4) the use of L1 in teaching the target listening strategies; (5) feedback helps improve the use of listening strategies; (6) the software helps participants produce comprehensible output; (7) the software develops learners' own individualized strategy system; (8) the software encourages learner to take more responsibility for their own language learning; (9) the software promotes learner autonomy and learner self-direction and self evaluation. There are three main aspects that make the CLSTS applicable and motivating.

5.3 Limitations of the study

The present study aimed to assess the extent of the effectiveness of the CLSTP software in developing Thai high school EFL students' ability to use four target listening strategies to enhance their listening comprehension. However, in conducting this study, certain limitations have emerged, and future research involving software to

promote EFL students' ability to use listening strategies should take these limitations into consideration.

First, the participants in the present study were limited to those EFL students with medium English proficiency who studied in Grade 10 in a Thai high school in Bangkok. Therefore, the findings may not be applicable to students with different backgrounds. This might include students in other parts of Thailand, students with different abilities, or students outside of Thailand.

Finally, fill-in-the-blank exercises do not always reliably measure the participants' listening comprehension. Although Moodle can record the participants' answers, only five possible correct answers were kept in the software. The researcher was limited in determining if the participants provided nearly correct answers, but these nearly correct answers did not get any score. The software itself had no way to give partial credit for nearly correct answers. This means students who gave nearly correct responses received as much credit for a question as those who weren't even remotely correct. A future program following a similar study should provide partial credit for partially correct responses. This can be done if the programmer allows it to recognize keywords in key phrases.

5.4 Pedagogical implications

Based on the results found in the present study, the following are the recommendations for teaching listening strategies via software in the future.

First, to develop software for teaching listening strategies successfully, teachers have to be aware of the importance of individualized instruction. The software used in this study is not tailored to the individualized learning styles of

different students. Another program in the future might address this shortcoming with an aptitude test at the beginning of the software to assess the student's strengths and weaknesses. The program could use the results to assess which listening strategies need more reinforcement and which need less. Accordingly, the program would spend more time on listening strategies in which a given student is weak and less time on those which she is strong in. The time would vary with the number of questions in each unit and the length of the lecture at the beginning of the unit. For example, a student who scored low on the prediction strategy would be furnished with more software content teaching that strategy. She would have to complete more exercises involving prediction strategy. However, if she got a high score on the elaboration strategy pretest, then elaboration strategy would be de-emphasized and she would have to complete fewer exercises in that section.

Second, the CLSTS provides four listening exercises per unit (See Figure 3.4). However, only four exercises for each unit may not be enough, so learners should have more options to choose from. In addition, teachers should realize that one type of exercise cannot fit all learning styles.

Third, teachers who would like to use CALL (computer assisted language learning) in their listening strategy training should be aware of the limitation of the software. Fill-in-the-blank exercises may not be suitable for all learners, especially learners whose vocabulary is not strong. In addition, fill-in-the-blank exercises do not always accurately assess comprehension of a listening text. This is because a student providing a less than perfect answer will get the same credit as one who didn't understand the question at all.

Fourth, instant positive and negative feedback is important for learners to promote their learning. Learners should receive positive or negative feedback from the software while they answer each question. This can help them realize their mistakes in their learning strategies they use. However, the feedback in most software is very limited and is usually relegated to telling the student whether she chose the correct response. To be effective CALL software should give more specific feedback by referring students to the relevant part of the passage when an incorrect response is given.

Fifth, knowing the meaning of vocabulary is important for learners to understand the listening text. Learners should have a chance to review their unknown vocabulary by providing them with an online dictionary. When they would like to know a given word, they can find it on the online dictionary.

Sixth, teachers who would like to use CALL software in their teaching should not limit the time in which their students can use it. In this study, learners needed to learn within the time frame of class periods, and they could not develop their ability to the extent that the teacher expected. Allowing them to use the software outside of the classroom would allow the students more time to grasp and successfully apply the listening strategies.

Lastly, teachers who would like to use CALL software as a medium for teaching listening strategy may be challenged to maintain students' attention. Video files should be used instead of sounds with pictures. Even though making videos costs more time and money, videos can better help the teachers keep a hold on students' attention.

5.5 Recommendations for future research

Based on the results found in the present study, the following suggestions are recommended for future research.

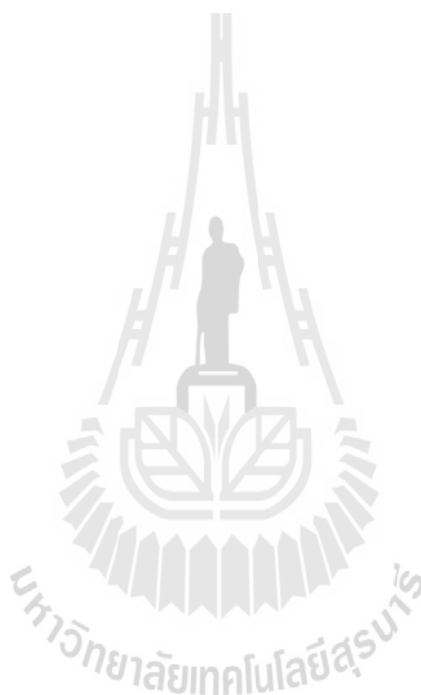
Firstly, researchers who would like to implement web-based training should include a function to track whether or not learners do each exercise. This research merely included a function to track the time learners spent using the software. Knowing the completion rate for the various exercises would give the researcher a clearer idea whether she should allow more or less time per exercise. The completion rate might also let the researcher know if additional instructional content should be added to the units with comparatively low completion rates.

Secondly, software developing teachers who want to assess their software's effectiveness should not neglect the comprehensible output that learners produce even if this output does not exactly answer the exercise question. That is the teachers should first examine the output for its comprehensibility and relevance before they check the answer for mere grammatical accuracy.

Thirdly, researchers who would like to continue using this kind of software should provide more time for participants to learn the content and complete the units.

Fourthly, software for teaching listening strategy should include both L1 and L2 instruction. Furthermore, the participants should be able to switch between L1 and L2 at their leisure. Having this option would satisfy all learners. This is because instruction in L1 only may not be enough for high proficiency students, while instruction in L2 only may not be enough for intermediate students to understand the meaning well.

Lastly, researchers who would like to offer a variety of exercises should provide participants with chunks of vocabulary. Participants can select words from the chunks to answer fill-in-the-blank, short answer, and writing exercises. By including this format, researchers would know the actual vocabulary aptitude that participants achieved to build on their understanding.



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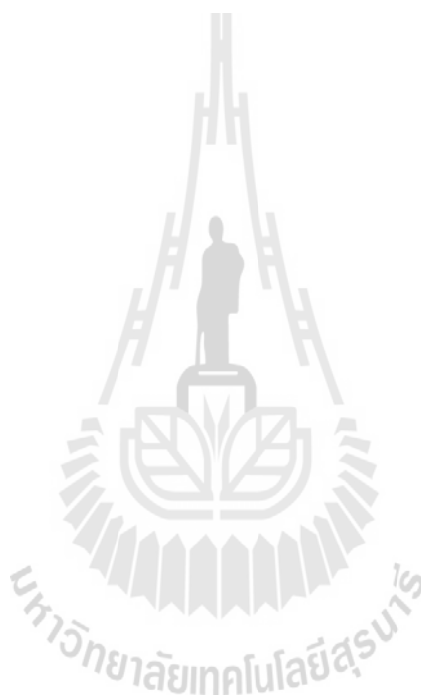
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APPENDIX A

Letter to the department head of foreign languages of high school

Dear Ajarn Dusadee Hehapoolsert

I am a Ph.D. student at Suranaree University of Technology, school of English. I am conducting a research study on the effects of web-based listening strategy training on Thai high school EFL students' listening ability. I would like to ask for your permission to invite 70 of your Mathayom Suksa 4 students to participate in my study. These students should have intermediate level English proficiency.

The students who are interested in taking part in this study will:

1. Do an English proficiency test to determine whether their English proficiency is in line with their grades for English courses in the previous semester. The time and date will be informed later.
2. From the group of students identified as being suitable for the study, 35 will be assigned to participate in one group; another 35 will be assigned to participate in another group.

One group will practice listening strategies and listening exercises for 50 minutes twice a week. They will be required to complete a questionnaire at the end of each unit of study. They will participate in a pre-training unit (i.e. do a pre-listening comprehension test) two days before the training and will participate in a post-training unit (i.e. do a post-listening comprehension test and post-questionnaires) two days after the training.

The second group will practice the same listening comprehension exercises as the first group but will be given no training in listening strategies. They will also participate in a pre-training unit (i.e. do a pre-listening comprehension test) two days before the training and will participate in a post-training unit (i.e. do a post-listening comprehension test) two days after the training.

Participants in the study will receive their evaluation within one month after the last date of training.

Student participation in this study is voluntary. If they decide to participate, they are free to withdraw at any time by informing the headmaster or by informing me at my email

account in the computer program. Their involvement in the study will be strictly confidential. Every reasonable effort will be made to ensure their privacy; their identities will be concealed by a number in analyzing and reporting the results of the research and any information that will identify them will be removed.

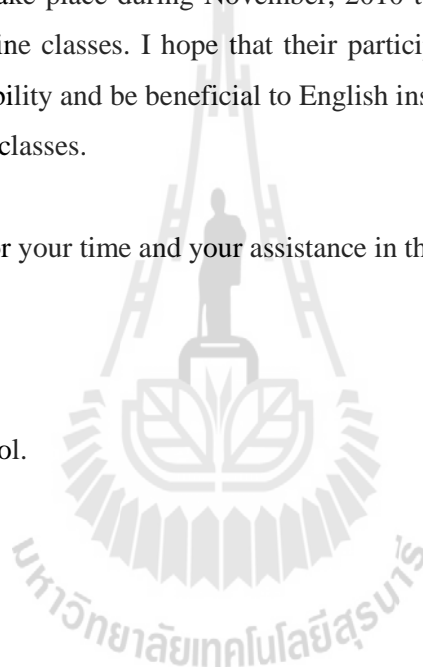
The units of training will be delivered by the computer with Internet connectivity. I would like to ask for your permission to use a computer lab with Internet connectivity and headphones available for each computer four times a week for 50 minutes each time. To carry out the study the computer lab would need to accommodate 35 students at the same time, each student using an individual computer.

The study can take place during November, 2010 to January, 2011. I will try not to interfere with their routine classes. I hope that their participation in this study will enhance their English listening ability and be beneficial to English instructors who may wish to use the study method with their classes.

Thank you very much for your time and your assistance in this study.

Sincerely yours,

Wachiraporn Kijpoonphol.



APPENDIX B

Letter to the department head of foreign languages of high school (Thai)

เรียน อาจารย์ ดุษฎี เทพุลเสริฐ

หัวหน้ากลุ่มสาระการเรียนรู้ภาษาต่างประเทศ ฝ่ายมัธยม

เรื่อง ขอความอนุเคราะห์นักเรียนและห้องปฏิบัติการทางภาษาเพื่อดำเนินงานวิจัย

ดิฉัน นางสาวชัชวราภรณ์ กิจพูนผล นักศึกษาปริญญาเอก สาขาวิชาภาษาอังกฤษศึกษา สำนักวิชาเทคโนโลยีสังคมมหาวิทยาลัยเทคโนโลยีสุรนารี ขณะนี้กำลังทำวิทยานิพนธ์เพื่อศึกษาเรื่อง “ผลกระทบของการฝึกอบรมการใช้กลวิธีการฟังภาษาอังกฤษผ่านทางเว็บไซต์ เพื่อความเข้าใจภาษาอังกฤษของนักเรียนไทยระดับมัธยมศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ” ทั้งนี้ การศึกษาดังกล่าวต้องการความร่วมมือจากนักเรียนมัธยมศึกษาชั้นปีที่ 4 ปีการศึกษา 2553 ที่มีผลการเรียนภาษาอังกฤษในระดับปานกลาง จำนวน 70 คน โดยนักเรียนที่เข้าร่วมกิจกรรมจะได้รับการดำเนินการ ดังนี้

1. รับการทดสอบวัดระดับพื้นฐานความรู้ภาษาอังกฤษ เพื่อยืนยันกับผลคะแนนที่นักเรียนกรอกในใบตอบรับ
โดยจะแจ้งวันและเวลาที่แน่นอนให้ทราบในโอกาสต่อไป
2. นักเรียนที่ผ่านการคัดเลือกจากการสอบวัดระดับพื้นฐานความรู้ภาษาอังกฤษจะถูกแบ่งเป็นสองกลุ่ม เพื่อ

2.1 กลุ่มที่ 1 เข้ารับการอบรมกลวิธีการฟังและการฝึกฟังภาษาอังกฤษ 6 บทเรียน โดยรับการอบรม สัปดาห์ละ 2 บท ใช้เวลาบทละ 50 นาที ทั้งนี้ ก่อนและหลังการฝึกอบรม นักเรียนจะได้ทำแบบทดสอบเพื่อดู พัฒนาการนักเรียน ซึ่งการทดสอบแต่ละครั้งจะดำเนินการล่วงหน้า 2 วันก่อนการฝึกอบรม และ 2 วันหลังจาก การฝึกอบรม

2.2 กลุ่มที่ 2 เข้ารับการอบรมกลวิธีการฟังและการฝึกฟังภาษาอังกฤษ 6 บทเรียน โดยรับการอบรม สัปดาห์ละ 2 บท ใช้เวลาบทละ 50 นาที ทั้งนี้ ก่อนและหลังการฝึกอบรม นักเรียนจะได้ทำแบบทดสอบเพื่อดู พัฒนาการนักเรียน ซึ่งการทดสอบแต่ละครั้งจะ

ดำเนินการล่วงหน้า 2 วันก่อนการฝึกอบรม และ 2 วันหลังจาก การฝึกอบรม

3. นักเรียนที่เข้ารับการฝึกอบรมจะได้รับทราบผลการประเมินภายในเวลา 1 เดือน หลังการฝึกอบรม

ในการฝึกอบรมและการทดสอบ จะดำเนินการผ่านห้องเรียนออนไลน์และใช้การเชื่อมโยงทางอินเทอร์เน็ต ซึ่งจะเริ่มดำเนินการตั้งแต่เดือน พฤศจิกายน 2553 ถึง เดือน มกราคม 2554 ทั้งนี้ การฝึกอบรมดังกล่าวจะไม่กระทบต่อการเรียนการสอนในชั้นเรียนปกติ

อนึ่ง การเข้าร่วมกิจกรรมเป็นไปตามความสมัครใจของนักเรียนซึ่งนักเรียนสามารถขอยกเลิกการเข้าร่วมกิจกรรมโดยแจ้งกับอาจารย์ผู้ให้การฝึกอบรมหรือแจ้งมายังดิฉันทางอีเมลในระบบมูเดิ้ล ผลการฝึกอบรมของนักเรียนจะถูกเก็บไว้เป็นความลับ โดยจะใช้หมายเลขแทนชื่อเพื่อการเปรียบเทียบผลการศึกษาเท่านั้น

เพื่อให้การดำเนินการศึกษาวิจัยบรรลุตามจุดมุ่งหมาย ดิฉันใคร่ขอความอนุเคราะห์ดังต่อไปนี้

1. ขอความอนุเคราะห์เพื่อเชิญชวนนักเรียนมัธยมศึกษาชั้นปีที่ 4 ปีการศึกษา 2553 ที่มีผลการเรียนภาษาอังกฤษในระดับปานกลาง ตามความสมัครใจ จำนวน 70 คน
2. ขอความอนุเคราะห์ใช้ห้องปฏิบัติการคอมพิวเตอร์และอินเทอร์เน็ต โดยจะใช้คอมพิวเตอร์ครั้งละ 35 ชุดพร้อมหูฟัง เป็นเวลา 4 สัปดาห์ละ 4 ครั้ง ครั้งละ 50 นาที (นักเรียนหนึ่งคนต่อคอมพิวเตอร์หนึ่งชุด)

ดิฉันหวังเป็นอย่างยิ่งว่าการฝึกอบรมในครั้งนี้ จะยังประโยชน์ต่อตัวนักเรียนในการพัฒนาความสามารถ

ด้านการฟังภาษาอังกฤษ และก่อให้เกิดความคิดสร้างสรรค์และการนำไปประยุกต์ใช้ในชั้นเรียนของครูผู้สอนภาษาอังกฤษเพิ่มขึ้น

จึงเรียนมาเพื่อ โปรดพิจารณาให้ความอนุเคราะห์ และขอขอบพระคุณมา ณ โอกาสนี้

ขอแสดงความนับถือ

(นางสาวชिरาภรณ์ กิจพูนผล)

APPENDIX C

Letter to seek participants

Dear students:

I would like to invite you to participate in my research study. I am a Ph.D. student at Suranaree University of Technology, majoring in English. I am willing to help Mathayom Suksa level 4 students develop their English listening ability.

If you are interested in taking part in this study, you will:

1. Do an English proficiency test. The time and date will be announced later.
2. Participate in one of two groups with different timetables. Both groups will complete six units, lasting about 50 minutes each. Two units will be completed each week. You will participate in a pre-training unit which involves a pre-listening comprehension test two days before the training and will participate in post-training unit involving a post-listening comprehension test two days after the training. Only 70 students can participate – two classes of 35 students per class. If you are not chosen for this study, I will keep your names for the next time a study is done.
3. Receive an evaluation within one month after the last date of training.

Your participation in this study is voluntary. It will not affect your English grade in any English class. If you decide to participate, you are free to withdraw at any time by informing the headmaster or by informing me at my email account in the program. Your involvement in the study will be strictly confidential. Every reasonable effort will be made to ensure your privacy; your identity will be concealed by a number in analyzing the results of the research.

The study will take place from November, 2010 to January, 2011 during your free time. You can also review lessons after class time. I will set the study times so as not to interfere with your routine classes. I hope that your participation in this study will enhance your English listening ability in your English classes and in your daily life.

Ms. X, the department head of foreign languages in secondary school, has reviewed the details of the study and permitted me to ask for your participation.

Please indicate your interest in participating in this training by completing the attached form and returning it to your headmaster.

Sincerely,

Wachiraporn Kijpoonphol

.....

Dear Miss Wachiraporn,

I have read your letter describing the study you are conducting on the learning of English.

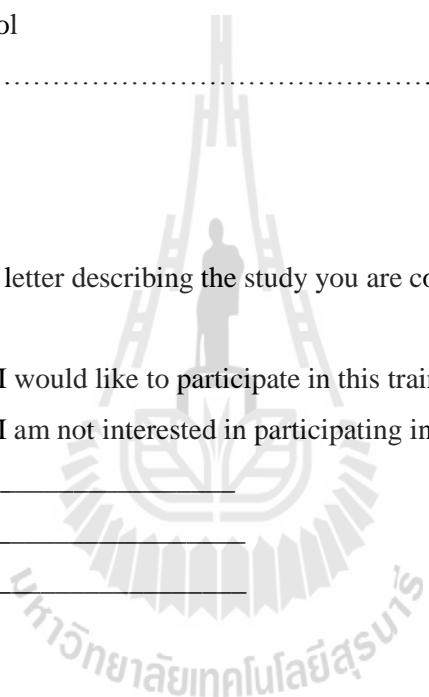
_____ I would like to participate in this training.

_____ I am not interested in participating in this training.

Name: _____

Class: _____

Telephone number: _____



APPENDIX D

Letter to seek participants (Thai)

เรียน นักเรียนมัธยมศึกษาปีที่ 4

ดิฉัน นางสาวชิราภรณ์ กิจพูนผล นักศึกษาปริญญาเอก สาขาวิชาภาษาอังกฤษศึกษา สำนักวิชาเทคโนโลยีสังคมมหาวิทยาลัยเทคโนโลยีสุรนารี ขณะนี้กำลังทำวิทยานิพนธ์เพื่อศึกษาเรื่อง “ผลกระทบของการฝึกอบรมการใช้กลวิธีการฟังภาษาอังกฤษผ่านทางเว็บไซต์ เพื่อความเข้าใจภาษาอังกฤษของนักเรียนไทยระดับมัธยมศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ” จึงใคร่ขอเชิญชวนนักเรียนที่มีความสนใจและต้องการพัฒนาความสามารถในการฟังภาษาอังกฤษเข้าร่วมเป็นส่วนหนึ่งของการทำวิทยานิพนธ์ในครั้งนี้ โดยนักเรียนที่สนใจจะได้เข้าร่วมกิจกรรม ดังนี้

1. รับการทดสอบวัดระดับพื้นฐานความรู้ภาษาอังกฤษ เพื่อยืนยันกับผลคะแนนที่นักเรียนกรอกในใบตอบรับ
โดยจะแจ้งวันและเวลาที่แน่นอนให้ทราบในโอกาสต่อไป
2. นักเรียนที่ผ่านการคัดเลือกจากการสอบวัดระดับพื้นฐานความรู้ภาษาอังกฤษจะถูกแบ่งเป็นสองกลุ่ม เพื่อเข้ารับการอบรมกลวิธีการฟังภาษาอังกฤษ 6 บทเรียน เรียนสัปดาห์ละ 2 บท บทละ 50 นาที และนักเรียนจะได้รับการฝึกความสามารถในการฟัง ทั้งนี้ ก่อนและหลังการอบรมนักเรียนจะได้ทำแบบทดสอบเพื่อดูพัฒนาการนักเรียน ซึ่งการทดสอบแต่ละครั้งจะดำเนินการล่วงหน้า 2 วันก่อนการฝึกอบรม และ 2 วันหลังจากการฝึกอบรม หากมีจำนวนนักเรียนที่ต้องการเข้าร่วมกิจกรรมมากเกินไป 70 คน จะทำการจับฉลากเพื่อให้ได้จำนวน 70 คนก่อนเนื่องจากระบบมูเดิ้ลที่ใช้ในครั้งนี้ สามารถรองรับนักเรียนได้ไม่เกิน 35 คนต่อห้อง ซึ่งหากมีจำนวนนักเรียนเกินจากที่ระบุไว้นี้ รายชื่อนักเรียนที่ยังไม่ได้รับให้เข้าร่วมกิจกรรมในครั้งนี้จะเก็บไว้เพื่อขออนุมัติดำเนินกิจกรรมในครั้งต่อไป
3. นักเรียนที่เข้ารับการฝึกอบรมจะได้รับทราบผลการประเมินภายในเวลา 1 เดือน หลังการฝึกอบรม

การเข้าร่วมอบรมในครั้งนี้เป็นไปตามความสมัครใจของนักเรียน และจะไม่ส่งผลกระทบต่อคะแนนการเรียนภาษาอังกฤษในชั้นเรียนปกติ หากนักเรียนต้องการยกเลิกการเข้าร่วมกิจกรรม

นักเรียนสามารถทำได้โดยแจ้งที่อาจารย์ผู้ดูแลโครงการนี้ ผลการฝึกอบรมของนักเรียนจะถูกเก็บไว้เป็นความลับ โดยจะใช้หมายเลขแทนชื่อเพื่อการเปรียบเทียบผลการศึกษาเท่านั้น

กิจกรรมการพัฒนาความสามารถในการฟังภาษาอังกฤษครั้งนี้จะดำเนินการตั้งแต่เดือนพฤศจิกายน 2553 ถึง เดือนมกราคม 2554 นักเรียนยังสามารถทบทวนบทเรียนได้ด้วยตนเอง นอกจากเวลาที่กำหนด ตารางเวลาที่รับการฝึกอบรมจะไม่กระทบการเรียนในชั้นเรียนปกติ และหวังเป็นอย่างยิ่งว่ากิจกรรมที่จัดขึ้นนี้ จะสามารถพัฒนาความสามารถในการฟังภาษาอังกฤษทั้งในห้องเรียนและในชีวิตประจำวันของนักเรียนให้ดียิ่งขึ้น

การดำเนินงานในครั้งนี้ ดิฉัน ได้ขออนุญาตจากอาจารย์หัวหน้ากลุ่มสาระการเรียนรู้ภาษาต่างประเทศ ฝ่ายมัธยม (อาจารย์.....) เรียบร้อยแล้ว

นักเรียนที่มีความสนใจจะเข้าร่วมกิจกรรมดังกล่าว กรุณากรอกและส่งใบตอบรับ พร้อมข้อมูลประวัติส่วนตัวและพื้นฐานความรู้ภาษาอังกฤษที่แนบมา ที่อาจารย์ประจำชั้น

ขอแสดงความนับถือ

(นางสาวชิราภรณ์ กิจพูนผล)

เรียน คุณวชิราภรณ์ กิจพูนผล

ผม/ดิฉัน ได้อ่านจดหมายเกี่ยวกับกิจกรรมการพัฒนาความสามารถในการฟังภาษาอังกฤษแล้ว

_____ กระผม/ดิฉันยินดีที่จะเข้าร่วมกิจกรรม

_____ กระผม/ดิฉัน ไม่ยินดีเข้าร่วมกิจกรรม

ลงชื่อ _____

วันที่ _____

APPENDIX E

Personal and academic questionnaire

- Please read carefully and answer truly. Your answer will be useful for developing English listening activity
- Your answer will be kept as secret and be used for this research only.
- Questionnaire is divided into two sections as follows:

Section 1 Personal data

Instruction: Please complete this form.

1. Name-Surname.....

2. Grades of English courses from previous semester

<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	From (subject).....
<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	From (subject).....
<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	From (subject).....

3. Please rate your English ability in the following skills

- Listening skill	<input type="checkbox"/> very skillful	<input type="checkbox"/> skillful	<input type="checkbox"/> moderate	<input type="checkbox"/> weak	<input type="checkbox"/> very weak
- Speaking skill	<input type="checkbox"/> very skillful	<input type="checkbox"/> skillful	<input type="checkbox"/> moderate	<input type="checkbox"/> weak	<input type="checkbox"/> very weak
- Reading skill	<input type="checkbox"/> very skillful	<input type="checkbox"/> skillful	<input type="checkbox"/> moderate	<input type="checkbox"/> weak	<input type="checkbox"/> very weak
- Writing skill	<input type="checkbox"/> very skillful	<input type="checkbox"/> skillful	<input type="checkbox"/> moderate	<input type="checkbox"/> weak	<input type="checkbox"/> very weak

4. Have you ever studied English abroad? ☐ Yes ☐ No

5. If yes, do these experiences help you learn English? ☐ Yes ☐ No

6. Besides studying in classroom, do you take extra English course(s) ☐ Yes ☐ No

From 6, if 'yes', total of.....Hours/week

7. Have you ever learned English on the Internet? ☐ Yes ☐ No

From 7, if 'yes', total of.....Months or.....Hours/week

8. Have you ever studied English listening strategies? ☐ Yes ☐ No

9. Do you listen to music, watch TV, and other media in English? ☐ Yes ☐ No

From 9, if 'yes' approximately.....Hour/week

10. Please rate your computer skills ☐ skillful ☐ moderate ☐ weak

11. Please rate your internet skill ☐ skillful ☐ moderate ☐ weak

12. Do you like English listening skill? ☐ Like ☐

Dislike

Section 2: Listening Strategy Inventory

Instruction Please mark ✓ in the box that is as much congruent as your opinion.

- | | | |
|---|-------|--|
| 4 | means | I use this method and like it. |
| 3 | means | I have tried this method and would use it again. |
| 2 | means | I have never used this method but am interested in it. |
| 1 | means | This method doesn't fit for me. |

Questions	Opinion			
	4	3	2	1
1. Listen in on people who are having conversations in the target language to try to catch the gist of what they are saying.				
2. Try to predict what the other person is going to say based on what has been said so far.				
3. Prepare for talks and performances I will hear in the target language by reading some background materials beforehand.				
4. Listen for key words that seem to carry the bulk of the meaning.				
5. Listen for word and sentence stress to see what native speakers emphasize when they speak.				
6. Practice "skim listening" by paying attention to some parts and ignoring others.				
7. Focus on the context of what people are saying.				
8. Listen for specific details to see whether I can understand them.				
9. Make educated guesses about the topic based on what has already been said.				
10. Draw on my general background knowledge to get the main idea.				

☺ Thank you very much for your kind cooperation ☺

APPENDIX F

Personal and academic questionnaire (Thai)

- กรุณาอ่านข้อความอย่างละเอียดและตอบตามความเป็นจริง เพราะคำตอบของนักเรียนทุกคำตอบจะเป็นประโยชน์ในการจัดเตรียมกิจกรรมการพัฒนาความสามารถในการฟังภาษาอังกฤษ
- แบบสอบถามชุดนี้แบ่งออกเป็น 2 ตอน ดังนี้

ตอนที่ 1 ข้อมูลส่วนตัว

คำชี้แจง โปรดกรอกข้อความต่อไปนี้ลงในช่องว่างตามความเป็นจริง

1. ชื่อ-นามสกุล.....

2. เกรดวิชาภาษาอังกฤษในภาคเรียนที่ผ่านมา

<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	จากวิชา.....
<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	จากวิชา.....
<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0	จากวิชา.....

3. นักเรียนคิดว่า ตนเองมีความสามารถในการฟังดังต่อไปนี้ มากน้อยเพียงใด

การฟังภาษาอังกฤษ	<input type="checkbox"/> มากที่สุด	<input type="checkbox"/> มาก	<input type="checkbox"/> ปานกลาง	<input type="checkbox"/> น้อย	<input type="checkbox"/> น้อยที่สุด
การพูดภาษาอังกฤษ	<input type="checkbox"/> มากที่สุด	<input type="checkbox"/> มาก	<input type="checkbox"/> ปานกลาง	<input type="checkbox"/> น้อย	<input type="checkbox"/> น้อยที่สุด
การอ่านภาษาอังกฤษ	<input type="checkbox"/> มากที่สุด	<input type="checkbox"/> มาก	<input type="checkbox"/> ปานกลาง	<input type="checkbox"/> น้อย	<input type="checkbox"/> น้อยที่สุด
การเขียนภาษาอังกฤษ	<input type="checkbox"/> มากที่สุด	<input type="checkbox"/> มาก	<input type="checkbox"/> ปานกลาง	<input type="checkbox"/> น้อย	<input type="checkbox"/> น้อยที่สุด

4. นักเรียนเคยไปเรียนภาษาอังกฤษที่ต่างประเทศ ☐ เคย ☐ ไม่เคย

5. หากตอบว่า เคย ในข้อ 4 ประสบการณ์เหล่านั้นช่วยนักเรียนในการเรียนภาษาอังกฤษ ☐ ใช่ ☐ ไม่ใช่

6. นักเรียนเรียนพิเศษภาษาอังกฤษนอกจากการเรียนในห้อง ☐ ใช่ ☐ ไม่ใช่
หากตอบว่า “ใช่” ในข้อ 6 รวมจำนวนเรียนทั้งหมด..... ชั่วโมง/สัปดาห์

7. นักเรียนเรียน/เคยเรียนภาษาอังกฤษจากอินเทอร์เน็ต ☐ เคย ☐ ไม่เคย
หากตอบว่า “เรียน, เคยเรียน” ในข้อ 7 รวมเวลาเรียน/เคยเรียน.....เดือน โดยเรียนสัปดาห์ละ..... ชั่วโมง

8. นักเรียนเคยได้รับการสอนเกี่ยวกับกลวิธีการฟังภาษาอังกฤษ ☐ เคย ☐ ไม่เคย

9. นักเรียนฟังเพลง ดูข่าว โทรทัศน์ ภาพยนตร์ สื่อต่างๆ ที่ใช้ภาษาอังกฤษ ☐ ใช่ ☐ ไม่ใช่
หากตอบว่า “ใช่” ในข้อ 9 จำนวนชั่วโมงทั้งสิ้น..... ชั่วโมง/สัปดาห์

10. นักเรียนมีทักษะการใช้คอมพิวเตอร์ ☐ ดี ☐ ปานกลาง ☐ พอใช้
☐ ☐

11. นักเรียนมีทักษะการใช้อินเทอร์เน็ต ☐ ดี ☐ ปานกลาง ☐ พอใช้
12. นักเรียนชอบทักษะการฟังภาษาอังกฤษ ☐ ชอบ ☐ ไม่ชอบ

ตอนที่ 2 แบบสอบถามการใช้กลวิธีการฟังภาษาอังกฤษ

คำชี้แจง จงกาเครื่องหมาย ✓ ลงในช่องที่ตรงกับความคิดเห็นของนักเรียนมากที่สุดและตามความเป็นจริง

- 4 หมายถึง นักเรียนใช้กลวิธีนี้ในการฟังภาษาอังกฤษและชอบที่จะใช้
- 3 หมายถึง นักเรียนเคยใช้กลวิธีนี้ในการฟังภาษาอังกฤษและพยายามจะใช้
- 2 หมายถึง นักเรียนไม่เคยใช้กลวิธีนี้ในการฟังภาษาอังกฤษ แต่สนใจที่จะใช้
- 1 หมายถึง กลวิธีในการฟังนี้ไม่เหมาะกับนักเรียน

คำถาม	ความคิดเห็น			
	4	3	2	1
1. นักเรียนฟังการสนทนาที่เป็นภาษาอังกฤษและพยายามจับใจความสำคัญของบทสนทนานั้น ๆ				
2. นักเรียนสามารถทำแบบทดสอบบทสนทนาของกลุ่มสนทนาได้				
3. นักเรียนเตรียมฟังการสนทนาหรือการแสดงต่างๆที่เป็นภาษาอังกฤษ โดยอ่านเนื้อหาที่เกี่ยวข้องก่อน				
4. นักเรียนฟังคำสำคัญต่างๆที่สื่อความหมายถึงเนื้อหาส่วนใหญ่ได้				
5. นักเรียนเลือกฟังการเน้นคำหรือประโยคเพื่อสังเกตว่าผู้พูดเน้นสิ่งที่ต้องการพูดอย่างไร				
6. นักเรียนฝึกการฟัง โดยเน้นความสนใจไปยังเนื้อหาบางส่วนและไม่สนใจเนื้อหาที่เหลือ				
7. นักเรียนเน้นการฟังเนื้อหาทั้งหมด				
8. นักเรียนฟังรายละเอียดเฉพาะบางส่วนของเนื้อหา เพื่อประกอบการเข้าใจเนื้อเรื่องที่ฟังทุกครั้ง				
9. นักเรียนเดาเนื้อเรื่องอย่างมีหลักการจากสิ่งที่ผู้พูดพูดไปแล้ว				
10. นักเรียนนำความรู้ทั่วไปที่มีมาใช้จับใจความหลักของเรื่องโดยการฟังได้				

☺ ขอขอบคุณในความร่วมมือมา ณ โอกาสนี้ ☺

APPENDIX G

Pre-listening comprehension test

Part 1

Questions 1-7

There are 7 questions in this part.

For each question, there are 3 pictures and a short recording.

Choose the correct picture and put a tick (✓) in the box below it.

Example:

0 What time are they meeting?



A ☐

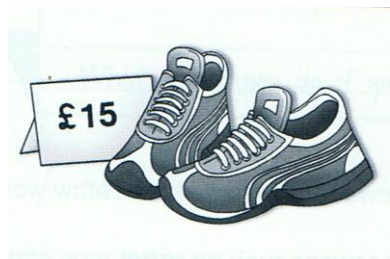


B ☐



C ☐

1 How much did the women pay for her new trainers?



A ☐



B ☐

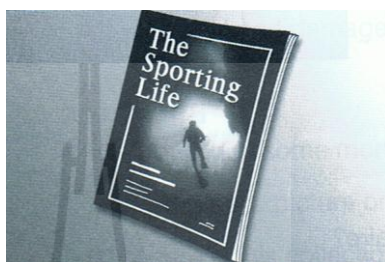
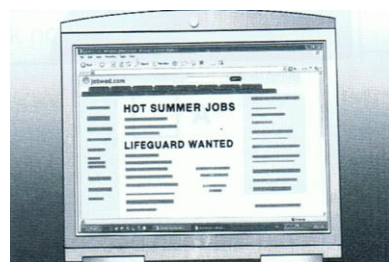


C ☐

2 What is the woman going to wear to the football club party?

A ☐B ☐C ☐

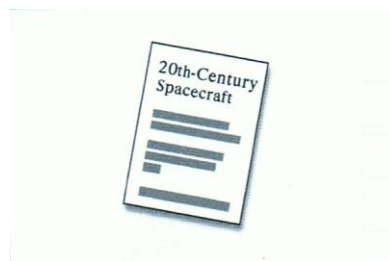
3 Where did the man see the advertisement for a lifeguard?

A ☐B ☐C ☐

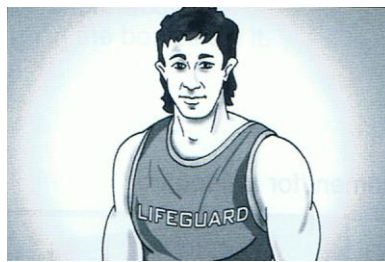
4 How will they pay for the coffee?

A ☐B ☐C ☐

5 What did the man write for his English class?

A ☐B ☐C ☐

6 Who rescued the man from the building?

A ☐B ☐C ☐

7 How did the man become a millionaire?

A ☐B ☐C ☐

Part 2

Question 8 – 13

You will hear a man talking about problems with money.

For each question, put a tick (✓) in the correct box.

8 The speaker is going to talk about

A money as 'the root of all evil'.

☐

B how the Bank of England prints money.

☐

C forged and damaged bank notes.

☐

9 What does the speaker ask the audience to do?

A give him some money

☐

B look for a picture on a £5 note

☐

C look at his collection of forged notes

☐

10 A forged banknote will usually

A look extremely dirty.

☐

B not have the words 'Bank of England'.

☐

C feel completely smooth.

☐

11 A £10 note is definitely a forgery if the broken metal line

A disappears when the note is held up to the light.

☐

B appears broken when the note is held up to the light.

☐

C appears solid when the note is held up to the light.

☐

- 12 If you examine part of a £20 note with a magnifying glass, you will see
- A the name of the Queen of England.
B the number '20' and the word 'twenty'.
C the word 'Queen' under a picture.
- 13 The most usual way in which banknotes are ruined is by being
- A washed.
B heated.
C eaten.

☐☐☐☐☐☐

Part 3

Questions 14-19

You will hear a woman talking about a training programme for firefighters.

For each question, fill in the missing information in the numbered space.

FIREFIGHTER TRAINING PROGRAMME

Duration
The course lasts for 3 months and includes training in how to use ladders, fire hoses and other (14) equipment.

Programme
The goal of the course is to provide students with practice in putting out fires on trains, in (15) and at petrol stations. The course helps students to become accustomed to working in very hot, (16) places.

Who can apply
Applicants must be at least (17) of age and have a full driving licence. You must also be very (18) and know how to be a good team member.

Remember: You will often be working when your friends are enjoying (19)

Hints on answering Listening, Part 3

In this part you must fill in 6 gaps in a page of notes. The answers are usually numbers, single words (adjectives or nouns) or short noun phrases (1-2 words).

Before you listen

- Take notice of the headings in the test booklet. They will help you to focus on what to listen for.

- Read the notes quickly and answer yourself what's missing: a number? an adjective? a noun or noun phrase?

As you listen

- Look at each heading, and listen for the information that relates to it.
- Answer as many questions as you can the first time you listen.
- On the second listening, check the questions you already answered and fill in remaining gaps.

Remember:

- You will hear the words or phrases you need in the recording. You will not need to change the form of any words.
- The questions follow the same order as the information you hear.

Part 4

Questions 20 -25

Look at the 6 sentences for this part.

You will hear a conversation between a woman, Anna, and a man, Anthony, about shopping on the Internet. Decide if each sentence is correct or incorrect.

If it is correct, put a tick (✓) in the box under **A** for **YES**. If it is not correct, put a tick (✓) in the box under **B** for **NO**.

	A	B
	YES	NO
20 Anna thinks that the Internet is only good for buying electrical goods.	<input type="checkbox"/>	<input type="checkbox"/>
21 Anthony thinks Anna has a lot of clothes.	<input type="checkbox"/>	<input type="checkbox"/>
22 Anthony thinks order forms are difficult to fill in.	<input type="checkbox"/>	<input type="checkbox"/>
23 Anna would never order clothes over the phone.	<input type="checkbox"/>	<input type="checkbox"/>
24 Anthony doesn't like buying CDs online.	<input type="checkbox"/>	<input type="checkbox"/>
25 Anna is impressed by what Mark tells her.	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX H

Post-listening comprehension test

Part 1

Questions 1-7

There are 7 questions in this part.

For each question, there are 3 pictures and a short recording.

Choose the correct picture and put a tick (✓) in the box below it.

Example:

0 What time are they meeting?



A ☐



B ☐

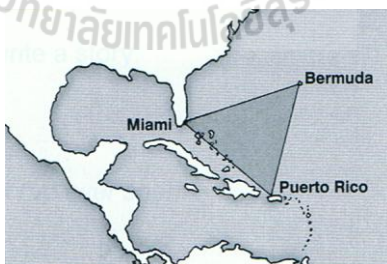


C ☐

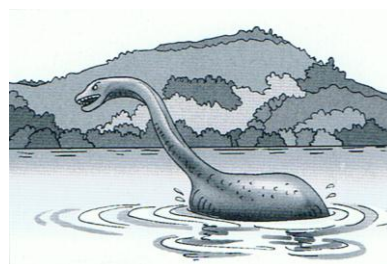
1 What will the subject of next week's magazine article be?



A ☐



B ☐



C ☐

2 Which volunteer programme will the man join?

A ☐B ☐C ☐

3 What time is the man's appointment?

A ☐B ☐C ☐

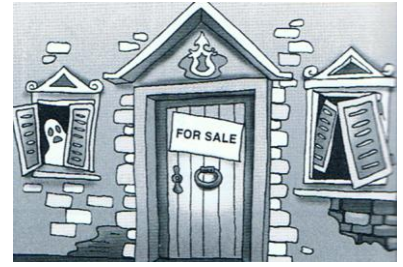
4 What did the man want to be when he was younger?

A ☐B ☐C ☐

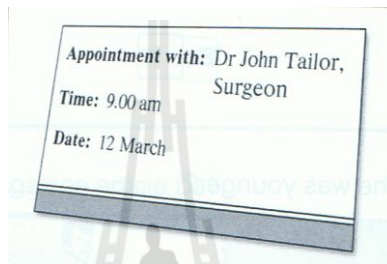
5 What made the woman feel uncomfortable?

A ☐B ☐C ☐

6 What was the previous week's story about?

A ☐B ☐C ☐

7 What does the doctor give the woman?

A ☐B ☐C ☐

Part 2

Question 8 – 13

You will hear a man called Jeremy being interviewed on the radio about his company, Made to Measure Mysteries. For each question, put a tick (✓) in the correct box.

- 8 What did Jeremy and his friends arrange as a present for a friend's birthday
their first murder mystery party?
- A as a present for a friend's birthday ☐
B to start their business ☐
C to save money to go to Hollywood ☐

- 9 What gave Jeremy the idea for murder
mystery parties?
- A mystery books written by a 62-year-old author ☐
B 62 short stories he read when he was young ☐
C the mystery books he read when he was young ☐

- 10 Who usually attends Made to Measure
Mystery parties?
- A university and college students ☐
B people of all ages ☐
C real detectives ☐

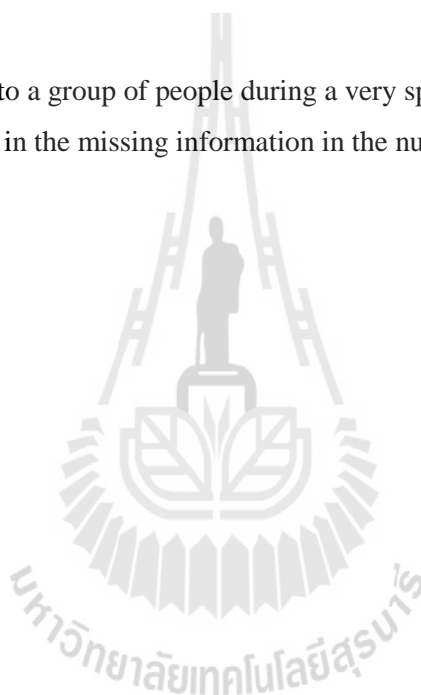
- 11 How many people are most of Jeremy's
parties for?
- A a few dozen ☐
B several hundred ☐
C between 30 and 80 ☐

- 12 Each time the company has a party they
- A try to get people to cooperate. ☐
 - B ask clients for ideas. ☐
 - C create a different script. ☐
- 13 Most of the company's parties
- A carry on for much more than 7 days. ☐
 - B are only for customers who are extremely rich. ☐
 - C are cheaper than taking friends out to eat. ☐

Part 3

Questions 14-19

You will hear a woman talking to a group of people during a very special visiting day at Fairfield Hospital. For each question, fill in the missing information in the numbered space.



FOUR-FOOTED FRIENDS VISITING DAY AT FAIRFIELD HOSPITAL

Background

Visits by dogs can make patients feel less alone and less frightened. It gives the patients something to (14) to.

Dogs make patients feel better. Even discouraged patients look happier when they see their dog (15)

Training programme

Our visiting dogs are trained to become familiar with the unusual sights, sounds and (16) of hospitals.

They are also trained to (17) things for patients (such as toys, TV (18), and cases for glasses).

Our dogs cannot visit a real hospital until they are taught these skills at our special college.

Use common sense

Volunteers should always make sure that their patients are not (19) to dogs.

Part 4

Questions 20 -25

Look at the 6 sentences for this part.

You will hear a conversation between a man, Joe, and his friend, Debbie, about exercising.

Decide if each sentence is correct or incorrect.

If it is correct, put a tick (✓) in the box under **A** for **YES**. If it is not correct, put a tick (✓) in the box under **B** for **NO**.

	A	B
	YES	NO
20 Joe isn't happy about his appearance.	<input type="checkbox"/>	<input type="checkbox"/>
21 Debbie agrees that Joe doesn't look good.	<input type="checkbox"/>	<input type="checkbox"/>
22 Joe thinks that going to a gym might be fun.	<input type="checkbox"/>	<input type="checkbox"/>
23 According to Debbie, going to a gym is not a waste of money.	<input type="checkbox"/>	<input type="checkbox"/>
24 Joe promises that he'll think about joining the gym.	<input type="checkbox"/>	<input type="checkbox"/>
25 Debbie is interested in starting an exercise routine with Joe.	<input type="checkbox"/>	<input type="checkbox"/>

Hints on answering Listening, Part 4

In this part you will hear a conversation between a man and a woman in which they express their attitudes and opinions about a certain topic. Your task is to decide whether 6 statements are true or false, according to what you hear.

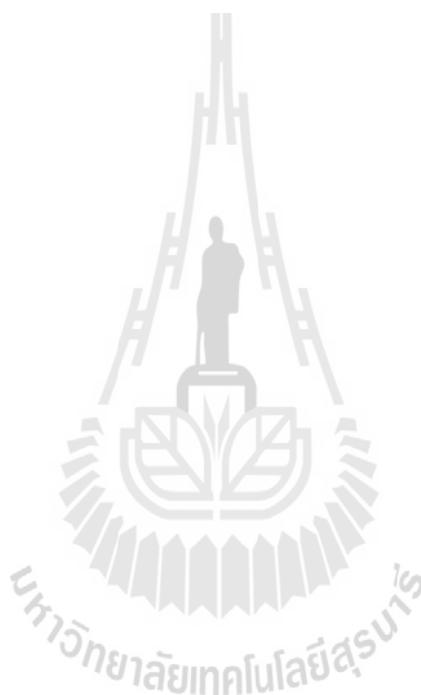
Before you listen

- Be sure to read the second sentence of the instructions so you know (a) what the conversation is about and (b) what the names of the man and woman are.
- Read the 6 statements in your test booklet and underline the key information that comes after words/phrases like thinks, believes, agrees, disagrees, and according to. Also, be sure to circle negative words like not, isn't, doesn't, won't, and never. This helps you to know what to listen for.

As you listen

- Remember that the statements follow the order of what you hear.
- Look at each statement, and listen for information that relates to the words and phrases you've underlined and circled.

- Don't expect to hear the exact words in the statements. Remember that you are being tested on your ability to understand the overall meaning of what the speakers are saying.
- Answer as many questions as you can on the first listening.
- On the second listening, check your answers and fill in anything that you left blank on the first listening.
- If you are not sure, guess! You have a 50-50 chance of getting each question right.



APPENDIX I

A questionnaire on each unit of the CLSTP

Unit 1 & 2 Listening Strategies Survey: “Elaboration strategy”

Instructions: Please circle your response to the following statements.

1 Unit 1&2 helped me to use background knowledge to understand what I will hear when I listen to English.

Strongly agree Agree Neutral disagree strongly disagree

2. The lesson about elaboration helps me use this strategy when I listen to English language.

Strongly agree Agree Neutral disagree strongly disagree

3. I used my background knowledge to help me understand the texts while I work on the exercises in the unit.

Strongly agree Agree Neutral disagree strongly disagree

4. I used the setting and environment of the text to help me better understood the texts while I work on the exercises of the unit.

Strongly agree Agree Neutral disagree strongly disagree

5. I used my common sense to understand the texts while I work on the exercises of the unit.

Strongly agree Agree Neutral disagree strongly disagree

6. In general, unit 1 and 2 effectively develop my ability to use listening strategies to help me comprehend spoken English.

Strongly agree Agree Neutral disagree strongly disagree

7. I ☐ like this unit
☐ do not like this unit

because

.....

.....

☺ Thank you very much for your feedback ☺

Unit 3 Listening Strategies Survey: “Listening for main idea”

Instructions: Please circle your response to the following statements.

1 This unit helps me to more effectively listen for main ideas in the text.

Strongly agree Agree Neutral disagree strongly disagree

2. Viewing the lesson about listening for main ideas helps me use this strategy when I listen to spoken English.

Strongly agree Agree Neutral disagree strongly disagree

3. I tried to catch the start or end of a talk in order to comprehend the main idea of the text.

Strongly agree Agree Neutral disagree strongly disagree

4. I pay attention to statements that start with phrases such as “My point is...” or “The thing to remember is...” in order to understand the main idea of the text.

Strongly agree Agree Neutral disagree strongly disagree

5. I listen for critical information and ignore less important information.

Strongly agree Agree Neutral disagree strongly disagree

6. In general, this unit is good for developing my listening ability.

Strongly agree Agree Neutral disagree strongly disagree

7. I ☐ like this unit
☐ do not like this unit

because

.....

.....

☺ Thank you very much for your feedback ☺

Unit 4 Listening Strategies Survey: “Listening for specific details”

Instructions: Please circle your response to the following statements.

1 This unit helped me to better listening for the specific details of the text.

Strongly agree Agree Neutral disagree strongly disagree

2. Viewing the lesson about listening for specific details helps me to use this strategy when I listen to spoken English.

Strongly agree Agree Neutral disagree strongly disagree

3. I pay attention to the information that came after the main idea of the texts.

Strongly agree Agree Neutral disagree strongly disagree

4. Specific details like numbers, names, dates, reasons, events, etc. are very helpful in listening for specific details.

Strongly agree Agree Neutral disagree strongly disagree

5. Sometimes important information occurs right at the beginning of the dialogue.

Strongly agree Agree Neutral disagree strongly disagree

6. In general, this unit is good for developing listening ability.

Strongly agree Agree Neutral disagree strongly disagree

7. I ☐ like this unit

☐ do not like this unit

because

.....

.....

☺ Thank you very much for your feedback ☺

Unit 5 & 6 Listening Strategies Survey: “Prediction strategy”

Instructions: Please circle your response to the following statements.

1 Unit 5 & 6 helps me to better predict what I hear when I listen to spoken messages.

Strongly agree Agree Neutral disagree strongly disagree

2. Viewing the lesson about predicting helps me to use this strategy when I listen to spoken English.

Strongly agree Agree Neutral disagree strongly disagree

3. I used pictures and a topic to guess what I hear before I listen to the texts.

Strongly agree Agree Neutral disagree strongly disagree

4. I pay attention to transitional markers (e.g. change of direction, cause & effect, additional information, sequence) as they help in predicting what came next.

Strongly agree Agree Neutral disagree strongly disagree

5. I tried to predict what the other person says based on what has been said.

Strongly agree

Agree

Neutral

disagree

strongly disagree

6. In general, unit 5 & 6 are good for developing listening ability.

Strongly agree

Agree

Neutral

disagree

strongly disagree

7. I ☐ like this unit

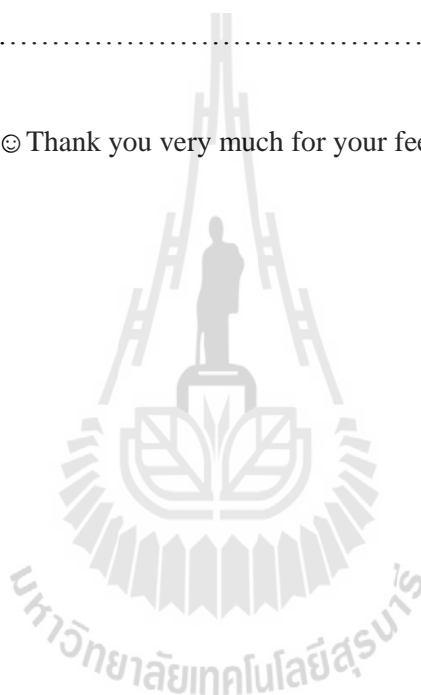
☐ do not like this unit

because

.....

.....

☺ Thank you very much for your feedback ☺



APPENDIX J

A questionnaire on each unit of the CLSTP (Thai)

บทที่ 1 และ 2 แบบสอบถามเรื่องกลวิธีสร้างเครือข่ายความรู้ในสมอง

(Elaboration strategy)

คำสั่ง โปรดวงกลมรอบความคิดเห็นที่ตรงกับความคิดเห็นของนักเรียนมากที่สุด

1. บทเรียนนี้ทำให้นักเรียนสามารถใช้กระบวนการนำความรู้พื้นฐานภาษาอังกฤษเดิมที่มีอยู่มาใช้ เพื่อให้เข้าใจสิ่งที่นักเรียนได้ฟังมากยิ่งขึ้น

เห็นด้วยอย่างยิ่ง

เห็นด้วย

เฉยๆ

ไม่เห็นด้วย

ไม่เห็นด้วยอย่างยิ่ง

2. การเรียนในบทเรียนเกี่ยวกับ “กลวิธีสร้างเครือข่ายความรู้ในสมอง” หรือ “Elaboration Strategy” ช่วยให้นักเรียนนำกลวิธีนี้มาใช้ในการฟังภาษาอังกฤษเพื่อความเข้าใจ

เห็นด้วยอย่างยิ่ง

เห็นด้วย

เฉยๆ

ไม่เห็นด้วย

ไม่เห็นด้วยอย่างยิ่ง

3. นักเรียนได้ใช้ความรู้พื้นฐานภาษาอังกฤษที่มีอยู่ช่วยให้เข้าใจเรื่องที่ฟัง

เห็นด้วยอย่างยิ่ง

เห็นด้วย

เฉยๆ

ไม่เห็นด้วย

ไม่เห็นด้วยอย่างยิ่ง

4. สิ่งแวดล้อมและบรรยากาศของเรื่องที่ฟังช่วยให้นักเรียนเข้าใจเนื้อหามากขึ้น

เห็นด้วยอย่างยิ่ง

เห็นด้วย

เฉยๆ

ไม่เห็นด้วย

ไม่เห็นด้วยอย่างยิ่ง

5. นักเรียนใช้สามัญสำนึกเพื่อเข้าใจเนื้อหาที่ฟัง

เห็นด้วยอย่างยิ่ง

เห็นด้วย

เฉยๆ

ไม่เห็นด้วย

ไม่เห็นด้วยอย่างยิ่ง

6. โดยทั่วไปแล้ว บทเรียนนี้ช่วยการพัฒนาความสามารถในการฟัง

เห็นด้วยอย่างยิ่ง

เห็นด้วย

เฉยๆ

ไม่เห็นด้วย

ไม่เห็นด้วยอย่างยิ่ง

7. นักเรียน ☐ ชอบบทเรียนในวันนี้
☐ ไม่ชอบบทเรียนในวันนี้

เพราะ

.....

.....

😊 ขอขอบคุณในความร่วมมือ 😊

บทที่ 3 แบบสอบถามเรื่องกลวิธีฟังเพื่อจับใจความสำคัญ (Listening for main idea)

คำสั่ง โปรดวงกลมรอบความคิดเห็นที่ตรงกับความคิดเห็นของนักเรียนมากที่สุด

1. บทเรียนนี้ช่วยให้นักเรียนเข้าใจถึงขั้นตอนของกลวิธีการฟังเพื่อจับใจความสำคัญของเรื่องมากยิ่งขึ้น

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

2. การเรียนในบทเรียนเกี่ยวกับ “กลวิธีฟังเพื่อจับใจความสำคัญของเรื่อง” หรือ “Listening for main idea” ช่วยให้นักเรียนนำกลวิธีนี้มาใช้ในการฟังภาษาอังกฤษ

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

3. นักเรียนพยายามจับประเด็นในตอนเริ่มต้นหรือตอนท้ายของเรื่องเพื่อจะได้เข้าใจใจความสำคัญของเรื่อง

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

4. นักเรียนพยายามฟังสิ่งที่ขึ้นต้นประโยค เช่น “จุดประสงค์ของผมนะ...” หรือ “สิ่งที่ต้องจำไว้คือ...” เพื่อใช้ทำความเข้าใจใจความสำคัญของเรื่องที่ฟัง

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

5. นักเรียนให้ความสนใจกับข้อมูลที่สำคัญมาก และละเลยข้อมูลที่มีความสำคัญน้อยกว่า

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

6. โดยทั่วไปแล้ว บทเรียนบทนี้เหมาะสำหรับพัฒนาความสามารถในการฟัง

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

7. นักเรียน ☐ ชอบบทเรียนในวันนี้
☐ ไม่ชอบบทเรียนในวันนี้

เพราะ

.....

.....

😊 ขอขอบคุณในความร่วมมือ 😊

บทที่ 4 แบบสอบถามเรื่องกลวิธีฟังเพื่อเก็บรายละเอียด (Listening for specific details)

คำสั่ง โปรดวงกลมรอบความคิดเห็นที่ตรงกับความคิดเห็นของนักเรียนมากที่สุด

1. บทเรียนนี้ช่วยให้นักเรียนเข้าใจถึงขั้นตอนของกลวิธีการฟังเพื่อเก็บรายละเอียดเฉพาะของเรื่องมากยิ่งขึ้น

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

2. การเรียนในบทเรียนเกี่ยวกับ “กลวิธีฟังเพื่อเก็บรายละเอียด” หรือ “Listening for specific details” ช่วยนักเรียนในการนำกลวิธีนี้มาใช้ในการฟังภาษาอังกฤษ

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

3. นักเรียนให้ความสนใจข้อมูลที่สุดที่ผู้พูดกล่าวต่อจากใจความสำคัญของเรื่อง

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

4. รายละเอียดเฉพาะต่างๆ เช่น ตัวเลข ชื่อ วันที่ เหตุผล เหตุการณ์ มีประโยชน์มากในการฟังเพื่อเก็บรายละเอียด

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

5. บางครั้งข้อมูลสำคัญต่างๆ ก็อยู่ในตอนต้นของบทสนทนา

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

6. โดยทั่วไปแล้ว บทเรียนบทนี้เหมาะสำหรับพัฒนาความสามารถในการฟัง

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

7. นักเรียน ☐ ชอบบทเรียนในวันนี้
☐ ไม่ชอบบทเรียนในวันนี้

เพราะ

.....

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😊 ขอขอบคุณในความร่วมมือ 😊

บทที่ 5 และ 6 แบบสอบถามเรื่องกลวิธีเดาอย่างมีหลักการ (Prediction strategy)

คำสั่ง โปรดวงกลมรอบความคิดเห็นที่ตรงกับความคิดเห็นของนักเรียนมากที่สุด

1. บทเรียนนี้ช่วยให้นักเรียนเข้าใจถึงขั้นตอนของกลวิธีเดาอย่างมีหลักการมากยิ่งขึ้น

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

2. การเรียนในบทเรียนเกี่ยวกับ “กลวิธีเดาอย่างมีหลักการ” หรือ “Prediction strategy” ช่วยนักเรียนในการนำกลวิธีนี้มาใช้ในการฟังภาษาอังกฤษ

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

3. นักเรียนใช้รูปภาพต่างๆและชื่อเรื่อง เพื่อคาดเดาส่งที่จะได้ยินก่อนที่จะเริ่มฟัง

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

4. นักเรียนให้ความสนใจเรื่องบ่งชี้ต่างๆ (เช่น การเปลี่ยนทิศทาง เหตุและผล เนื้อหาเพิ่มเติม และ ลำดับเรื่อง) เพราะสิ่งเหล่านี้ช่วยในการคาดเดาส่งที่จะตามมา

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

5. นักเรียนพยายามคาดเดาส่งที่ผู้พูดจะพูดต่อไป โดยใช้ข้อมูลจากเนื้อหาที่ได้พูดไปแล้ว

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

6. โดยทั่วไปแล้ว บทเรียนบทนี้เหมาะสำหรับพัฒนาความสามารถในการฟัง

เห็นด้วยอย่างยิ่ง เห็นด้วย เฉยๆ ไม่เห็นด้วย ไม่เห็นด้วยอย่างยิ่ง

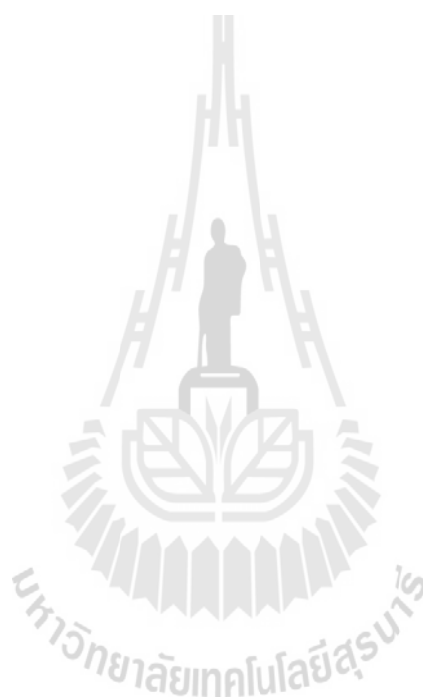
7. นักเรียน ☐ ชอบบทเรียนในวันนี้
☐ ไม่ชอบบทเรียนในวันนี้

เพราะ

.....

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😊 ขอขอบคุณในความร่วมมือ 😊



APPENDIX K

A final questionnaire on the CLSTP

Directions: This questionnaire is used to investigate your opinions regarding the CLSTP, its usefulness, and the effects of the CLSTP on your use of general language learning strategies.

- Please read the statements carefully and answer honestly.
- Your answer will be kept a secret and be used for this research only.

Instructions: Please mark ✓ in the box that matches your opinion.

- 5 means strongly agree
 4 means agree
 3 means neutral
 2 means disagree
 1 means strongly disagree

Items	Opinion				
	5	4	3	2	1
1. I have a positive attitude towards the use of CLSTP.					
2. Lessons in CLSTP help me develop English listening ability.					
3. CLSTP helps me better understand other listening texts.					
4. I feel that CLSTP is a useful learning tool for developing English listening ability.					
5. CLSTP motivates me to develop my listening skill.					
6. Listening strategy learning is new for me.					
7. I gained more knowledge about English listening strategies while participating in CLSTP.					
8. I can apply listening strategies learned from CLSTP to other English listening texts such as TV, radio, and other media.					
9. I am aware of the importance of language learning strategies after I participated in CLSTP.					
10. I would like to know more about other listening strategies.					
11. I was comfortable using CLSTP during the CLSTP activities.					

12. Positive feedback helps me learn more about the lesson.					
13. Negative feedback helps me learn more about the lesson.					
14. Pictures and videos used are appropriate to the lessons.					
15. Time used is appropriate to the lessons.					

16. Any other opinions towards the CLSTP?

.....

17. Any other suggestions on the CLSTP?

.....

☺ Thank you very much for your kind cooperation ☺



APPENDIX L

A final questionnaire about the CLSTP (Thai)

คำชี้แจง แบบสอบถามนี้ใช้เพื่อสำรวจความเห็นของนักเรียนต่อโปรแกรมการฝึกอบรมกลวิธีการฟังโดยผ่านทางเว็บไซต์
ประโยชน์ของโปรแกรมนี้อะไร และผลของกิจกรรมนี้ต่อการใช้กลวิธีการเรียนภาษาอังกฤษ

- กรุณาอ่านอย่างตั้งใจและตอบคำถามตามความเป็นจริง
- คำตอบของนักเรียนแต่ละคนจะถือเป็นความลับและใช้เพื่อการปรับปรุงบทเรียนเท่านั้น

คำสั่ง กรุณาทำเครื่องหมาย ✓ หน้าข้อความที่ตรงกับความคิดเห็นของท่านมากที่สุด

5	หมายถึง	เห็นด้วยมากที่สุด
4	หมายถึง	เห็นด้วยมาก
3	หมายถึง	เห็นด้วยปานกลาง
2	หมายถึง	เห็นด้วยน้อย
1	หมายถึง	เห็นด้วยน้อยที่สุด

ข้อความ	ระดับความคิดเห็น				
	5	4	3	2	1
1. นักเรียนมีทัศนคติด้านบวกกับการเรียนกับ CLSTP					
2. บทเรียนแต่ละบทมีเนื้อหาช่วยพัฒนาการฟังภาษาอังกฤษเพื่อความเข้าใจ					
3. CLSTP ช่วยให้นักเรียนมีความเข้าใจเรื่องอื่นที่ได้ฟังมากขึ้น					
4. นักเรียนรู้สึกว่าการ CLSTP เป็นเครื่องมือที่มีประสิทธิภาพเหมาะสมในการพัฒนาทักษะการฟังภาษาอังกฤษ					
5. CLSTP กระตุ้นให้นักเรียนอยากพัฒนาทักษะในการฟังภาษาอังกฤษ					
6. การเรียนกลวิธีการฟังภาษาอังกฤษเป็นเรื่องใหม่สำหรับนักเรียน					
7. นักเรียนได้รับความรู้เกี่ยวกับกลวิธีฟังภาษาอังกฤษมากขึ้นหลังจากที่ได้เข้าเรียนใน CLSTP					
8. นักเรียนสามารถประยุกต์ใช้กลวิธีการฟังที่ได้จากการเรียนจาก CLSTP กับ การฟังภาษาอังกฤษ เช่น รายการวิทยุ ดุทีวี และสื่ออื่นๆ					
9. นักเรียนตระหนักถึงความสำคัญของกลวิธีการเรียนหลังจากเข้าร่วมใน CLSTP					
10. นักเรียนต้องการเรียนรู้เกี่ยวกับกลวิธีการฟังอื่นๆ					
11. นักเรียนรู้สึกสะดวกสบายเมื่อใช้ CLSTP ทำกิจกรรมบน CLSTP					
12. การประเมินผลในเชิงบวกช่วยให้นักเรียนเรียนรู้บทเรียนมากขึ้น					

13. การประเมินผลในเชิงลบช่วยให้นักเรียนเรียนรู้บทเรียนมากขึ้น					
14. ภาพประกอบและวิดีโอที่ใช้ใน CLSTP มีความเหมาะสมกับบทเรียน					
15. เวลาที่ใช้ใน CLSTP มีความเหมาะสมกับบทเรียน					

16. นักเรียนมีข้อคิดเห็นเพิ่มเติมเกี่ยวกับกิจกรรมการพัฒนาทักษะการฟังนี้อย่างไรบ้าง

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15. นักเรียนมีข้อเสนอแนะเพิ่มเติมเกี่ยวกับการประยุกต์ใช้กลวิธีการฟังกับการเรียนภาษาอย่างไรบ้าง.....

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☺ ขอขอบคุณในความร่วมมือ ☺



APPENDIX M

Interview questions

The questions to use in the semi-structured interview are similar to the following questions.

Q1: After the participants were trained with the CLSTS, what did they think about their listening ability? Had it improved?

Q2: How did the participants feel about the CLSTS?

Q3: Did the participants think they would use the target listening strategies in the future? If yes, could they tell the researcher what factors motivate them? If no, why can't they?

Q4: The participants were trained in four listening strategies. Did they try to use all of them? If they did, what effect did these strategies have on their listening? If they didn't, why did they eschew the strategies?

Q5: Are there any suggestions about the software itself or the training?

More questions will arise according to students' opinions in the questionnaires. The researcher will probe to elicit more data.

APPENDIX N

Participants' scores of the pre-/post-listening comprehension tests

No. of participants	Experimental group (Group A)		Control group (Group B)	
	Pre-listening comprehension test	Post- listening comprehension test	Pre- listening comprehension test	Post- listening comprehension test
1	10	13	10	14
2	11	13	11	13
3	12	11	16	18
4	11	14	19	17
5	10	16	19	18
6	13	15	16	18
7	12	15	10	9
8	19	22	19	19
9	14	16	12	15
10	9	9	14	14
11	9	12	19	20
12	11	16	13	12
13	13	18	10	14
14	10	15	11	14
15	11	16	14	10
16	9	15	14	15
17	14	19	12	12
18	19	21	9	11
19	13	17	10	14

Participants' scores of the pre-/post-listening comprehension tests (cont.)

No. of participants	Experimental group (Group A)		Control group (Group B)	
	Pre-listening comprehension test	Post- listening comprehension test	Pre- listening comprehension test	Post- listening comprehension test
20	14	18	11	13
21	11	16	8	9
22	15	20	10	10
23	13	17	10	14
24	16	19	9	9
25	12	14	12	10
26	17	19	13	15
27	11	14	13	14
28			13	16
29			11	13
30			9	10

APPENDIX O

Common European Framework of Reference for Languages (CEFR)

level	description	Cambridge Exam
A1	Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.	No scored
A2	Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.	KET
B1	Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes & ambitions and briefly give reasons and explanations for opinions and plans.	PET

Common European Framework of Reference for Languages (CEFR) (Cont.)

level	description	Cambridge Exam
B2	Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialization. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.	FCE
C1	Can understand a wide range of demanding, longer texts, and recognize implicit meaning. Can express him/herself fluently and spontaneously without much obvious searching for expressions. Can use language flexibly and effectively for social, academic and professional purposes. Can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organizational patterns, connectors and cohesive devices.	CAE, FCE
C2	Can understand with ease virtually everything heard or read. Can summarize information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in the most complex situations.	CPE / CAE

APPENDIX P

Letter to solicit research instrument analysis expert

To:..... (Invited research instrument analysis expert)

I am a Ph.D. student at Suranaree University of Technology, school of English. I am conducting a research study on the effects of web-based listening strategy training on Thai high school EFL students' listening comprehension. I would like to invite you to be an expert to analyze one set of questions on a research questionnaire (a personal and academic questionnaire, questionnaires on listening strategy training of the CLSTS, and a final questionnaire on the CLSTS).

The purposes of research instrument analysis are:

1. To make it more concise in order to collect the data for the present study
2. To correct the grammar and spelling, including providing ideas and comments

Please kindly be informed that a set of research questionnaire is an instrument of the research. Please feel free to make and write your corrections or comments on the hardcopy and send it back to me.

Thank you very much for your kind cooperation.

Sincerely yours,

Wachiraporn Kijpoonphol.

APPENDIX Q

Letter to solicit research instrument analysis expert (Thai)

ที่ ศธ.5612(3)/

มหาวิทยาลัยเทคโนโลยีสุรนารี

111 ถนนมหาวิทยาลัย

ตำบลสุรนารี อำเภอเมือง

จังหวัดนครราชสีมา 30000

7 มกราคม 2552

เรื่อง ขอความอนุเคราะห์เป็นผู้พิจารณา และประเมินคุณภาพเครื่องมือวิจัย

เรียน อ. ผศ.ดร. สมศักดิ์ บุญสาร

สิ่งที่ส่งมาด้วย 1. แบบสรุปโครงร่างวิทยานิพนธ์ จำนวน 1 ชุด
2. เครื่องมือวิจัย จำนวน 1 ชุด
3. ซองตอบกลับพร้อมแนตมป์ จำนวน 1 ชุด

ด้วย นางสาวชिरาภรณ์ กิจพูนผล นักศึกษาระดับปริญญาเอก หลักสูตรศิลปศาสตรดุษฎีบัณฑิต (สาขาภาษาอังกฤษศึกษา) สำนักวิชาเทคโนโลยีสังคม มหาวิทยาลัยเทคโนโลยีสุรนารี กำลังดำเนินการทำวิทยานิพนธ์ เรื่อง ผลของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ ที่มีต่อความเข้าใจในการฟังของนักเรียนไทยระดับมัธยมศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE EFFECTS OF WEB-BASED LISTENING STRATEGY TRAINING ON THAI HIGH SCHOOL EFL STUDENTS' LISTENING COMPREHENSION)

ในการนี้ สาขาวิชาภาษาอังกฤษ พิจารณาแล้วเห็นว่าท่านมีความรู้ความสามารถ และเชี่ยวชาญในการสอนและการวิจัยด้านภาษาอังกฤษเป็นอย่างดี ดังนั้น สาขาวิชา จึงขอความอนุเคราะห์ท่านเป็นผู้พิจารณาประเมินคุณภาพเครื่องมือวิจัย ตามที่ส่งมาพร้อมนี้ อนึ่ง สาขาวิชา ขอความกรุณาส่งผลการประเมินโดยใส่ซองตอบกลับที่แนบมาด้วยนี้ ภายในวันที่ 22 มกราคม 2552 ด้วย จักขอบคุณยิ่ง

จึงเรียนมาเพื่อโปรดพิจารณา

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ดร.อัญชลี วรรณรักษ์)

หัวหน้าสาขาวิชาภาษาอังกฤษ

สาขาวิชาภาษาอังกฤษ โทร. 044-4213-4

โทรสาร 044-224215

ที่ ศธ.5612(3)/

มหาวิทยาลัยเทคโนโลยีสุรนารี

111 ถนนมหาวิทยาลัย

ตำบลสุรนารี อำเภอเมือง

จังหวัดนครราชสีมา 30000

7 มกราคม 2552

เรื่อง ขอความอนุเคราะห์เป็นผู้พิจารณา และประเมินคุณภาพเครื่องมือวิจัย

เรียน อ. ผศ.ดร. เสน่ห์ ทองรินทร์

สิ่งที่ส่งมาด้วย	1. แบบสรุปโครงร่างวิทยานิพนธ์	จำนวน 1 ชุด
	2. เครื่องมือวิจัย	จำนวน 1 ชุด
	3. ของตอบกลับพร้อมแนบ	จำนวน 1 ชุด

ด้วย นางสาวชัชวราภรณ์ กิจพูนผล นักศึกษาระดับปริญญาเอก หลักสูตรศิลปศาสตรดุษฎีบัณฑิต (สาขาภาษาอังกฤษศึกษา) สำนักวิชาเทคโนโลยีสังคม มหาวิทยาลัยเทคโนโลยีสุรนารี กำลังดำเนินการทำวิทยานิพนธ์ เรื่อง ผลของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ ที่มีต่อความเข้าใจในการฟังของนักเรียนไทยระดับมัธยมศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE EFFECTS OF WEB-BASED LISTENING STRATEGY TRAINING ON THAI HIGH SCHOOL EFL STUDENTS' LISTENING COMPREHENSION)

ในการนี้ สาขาวิชาภาษาอังกฤษ พิจารณาแล้วเห็นว่าท่านมีความรู้ความสามารถ และเชี่ยวชาญในการสอนและการวิจัยด้านภาษาอังกฤษเป็นอย่างดี ดังนั้น สาขาวิชาฯ จึงขอความอนุเคราะห์ที่ท่านเป็นผู้พิจารณาประเมินคุณภาพเครื่องมือวิจัย ตามที่ส่งมาพร้อมนี้ อนึ่ง สาขาวิชาฯ ขอความกรุณาส่งผลการประเมินโดยใส่ของตอบกลับที่แนบมาด้วยนี้ ภายในวันที่ 22 มกราคม 2552 ด้วย จักขอบคุณยิ่ง

จึงเรียนมาเพื่อโปรดพิจารณา

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ดร.อัญชลี วรรณรักษ์)

หัวหน้าสาขาวิชาภาษาอังกฤษ

สาขาวิชาภาษาอังกฤษ

โทร.044-224213-4 โทรสาร 044

ที่ ศธ.5612(3)/

มหาวิทยาลัยเทคโนโลยีสุรนารี

111 ถนนมหาวิทยาลัย

ตำบลสุรนารี อำเภอเมือง

จังหวัดนครราชสีมา 30000

7 มกราคม 2552

เรื่อง ขอความอนุเคราะห์เป็นผู้พิจารณา และประเมินคุณภาพเครื่องมือวิจัย

เรียน ผศ.ดร. ศักดิ์สิทธิ์ แสงบุญ

สิ่งที่ส่งมาด้วย	1. แบบสรุปโครงร่างวิทยานิพนธ์	จำนวน 1 ชุด
	2. เครื่องมือวิจัย	จำนวน 1 ชุด
	3. ของตอบกลับพร้อมแนบ	จำนวน 1 ชุด

ด้วย นางสาวชัชวราภรณ์ กิจพูนผล นักศึกษาระดับปริญญาเอก หลักสูตรศิลปศาสตรดุษฎีบัณฑิต (สาขาภาษาอังกฤษศึกษา) สำนักวิชาเทคโนโลยีสังคม มหาวิทยาลัยเทคโนโลยีสุรนารี กำลังดำเนินการทำวิทยานิพนธ์ เรื่อง ผลของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ ที่มีต่อความเข้าใจในการฟังของนักเรียนไทยระดับมัธยมศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE EFFECTS OF WEB-BASED LISTENING STRATEGY TRAINING ON THAI HIGH SCHOOL EFL STUDENTS' LISTENING COMPREHENSION)

ในการนี้ สาขาวิชาภาษาอังกฤษ พิจารณาแล้วเห็นว่าท่านมีความรู้ความสามารถ และเชี่ยวชาญในการสอนและการวิจัยด้านภาษาอังกฤษเป็นอย่างดี ดังนั้น สาขาวิชาฯ จึงขอความอนุเคราะห์ท่านเป็นผู้พิจารณาประเมินคุณภาพเครื่องมือวิจัย ตามที่ส่งมาพร้อมนี้ อนึ่ง สาขาวิชาฯ ขอความกรุณาส่งผลการประเมินโดยใส่ของตอบกลับที่แนบมาด้วยนี้ ภายในวันที่ 22 มกราคม 2552 ด้วย จักขอบคุณยิ่ง

จึงเรียนมาเพื่อโปรดพิจารณา

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ดร.อัญชลี วรรณรักษ์)

หัวหน้าสาขาวิชาภาษาอังกฤษ

สาขาวิชาภาษาอังกฤษ

โทร.044-224213-4 โทรสาร 044-224215

ที่ ศธ.5612(3)/

มหาวิทยาลัยเทคโนโลยีสุรนารี

111 ถนนมหาวิทยาลัย

ตำบลสุรนารี อำเภอเมือง

จังหวัดนครราชสีมา 30000

7 มกราคม 2552

เรื่อง ขอความอนุเคราะห์เป็นผู้พิจารณา และประเมินคุณภาพเครื่องมือวิจัย

เรียน ดร. วัฒนา พัฒนพงศ์

สิ่งที่ส่งมาด้วย	1. แบบสรุปโครงร่างวิทยานิพนธ์	จำนวน 1 ชุด
	2. เครื่องมือวิจัย	จำนวน 1 ชุด
	3. ของตอบกลับพร้อมแนบ	จำนวน 1 ชุด

ด้วย นางสาวชัชวราภรณ์ กิจพูนผล นักศึกษาระดับปริญญาเอก หลักสูตรศิลปศาสตรดุษฎีบัณฑิต (สาขาภาษาอังกฤษศึกษา) สำนักวิชาเทคโนโลยีสังคม มหาวิทยาลัยเทคโนโลยีสุรนารี กำลังดำเนินการทำวิทยานิพนธ์ เรื่อง ผลของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ ที่มีต่อความเข้าใจในการฟังของนักเรียนไทยระดับมัธยมศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE EFFECTS OF WEB-BASED LISTENING STRATEGY TRAINING ON THAI HIGH SCHOOL EFL STUDENTS' LISTENING COMPREHENSION)

ในการนี้ สาขาวิชาภาษาอังกฤษ พิจารณาแล้วเห็นว่าท่านมีความรู้ความสามารถ และเชี่ยวชาญในการสอนและการวิจัยด้านภาษาอังกฤษเป็นอย่างดี ดังนั้น สาขาวิชาฯ จึงขอความอนุเคราะห์ท่านเป็นผู้พิจารณาประเมินคุณภาพเครื่องมือวิจัย ตามที่ส่งมาพร้อมนี้ อนึ่ง สาขาวิชาฯ ขอความกรุณาส่งผลการประเมินโดยใส่ของตอบกลับที่แนบมาด้วยนี้ ภายในวันที่ 22 มกราคม 2552 ด้วย จักขอบคุณยิ่ง

จึงเรียนมาเพื่อโปรดพิจารณา

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ดร.อัญชลี วรรณรักษ์)

หัวหน้าสาขาวิชาภาษาอังกฤษ

สาขาวิชาภาษาอังกฤษ

โทร.044-224213-4 โทรสาร 044-224215

ที่ ศธ.5612(3)/

มหาวิทยาลัยเทคโนโลยีสุรนารี

111 ถนนมหาวิทยาลัย

ตำบลสุรนารี อำเภอเมือง

จังหวัดนครราชสีมา 30000

7 มกราคม 2552

เรื่อง ขอบความอนุเคราะห์เป็นผู้พิจารณา และประเมินคุณภาพเครื่องมือวิจัย

เรียน ดร. พิมประไพ อินทวิทักษ์

สิ่งที่ส่งมาด้วย	1. แบบสรุปโครงร่างวิทยานิพนธ์	จำนวน 1 ชุด
	2. เครื่องมือวิจัย	จำนวน 1 ชุด
	3. ของตอบกลับพร้อมแนบปี	จำนวน 1 ชุด

ด้วย นางสาวชัชวราภรณ์ กิจพูนผล นักศึกษาระดับปริญญาเอก หลักสูตรศิลปศาสตรดุษฎีบัณฑิต (สาขาภาษาอังกฤษศึกษา) สำนักวิชาเทคโนโลยีสังคม มหาวิทยาลัยเทคโนโลยีสุรนารี กำลังดำเนินการทำวิทยานิพนธ์ เรื่อง ผลของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ ที่มีต่อความเข้าใจในการฟังของนักเรียนไทยระดับมัธยมศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE EFFECTS OF WEB-BASED LISTENING STRATEGY TRAINING ON THAI HIGH SCHOOL EFL STUDENTS' LISTENING COMPREHENSION)

ในการนี้ สาขาวิชาภาษาอังกฤษ พิจารณาแล้วเห็นว่าท่านมีความรู้ความสามารถ และเชี่ยวชาญในการสอนและการวิจัยด้านภาษาอังกฤษเป็นอย่างดี ดังนั้น สาขาวิชาฯ จึงขอความอนุเคราะห์ที่ท่านเป็นผู้พิจารณาประเมินคุณภาพเครื่องมือวิจัย ตามที่ส่งมาพร้อมนี้ อนึ่ง สาขาวิชาฯ ขอความกรุณาส่งผลการประเมินโดยใส่ของตอบกลับที่แนบมาด้วยนี้ ภายในวันที่ 22 มกราคม 2552 ด้วย จักขอบคุณยิ่ง

จึงเรียนมาเพื่อโปรดพิจารณา

ขอแสดงความนับถือ

(ผู้ช่วยศาสตราจารย์ ดร.อัญชลี วรรณรักษ์)

หัวหน้าสาขาวิชาภาษาอังกฤษ

สาขาวิชาภาษาอังกฤษ

โทร.044-224213-4 โทรสาร 044-224215

APPENDIX R

Letter to solicit research treatment analysis

To:..... (Invited research treatment analysis expert)

I am a Ph.D. student at Suranaree University of Technology, school of English. I am conducting a research study on the effects of web-based listening strategy training on Thai high school EFL students' listening comprehension. I would like to invite you to be an expert to analyze 6 units of a CLSTS (Computer Assisted Listening Strategy Training Software) created by myself. They are

Unit 1 & 2: All about food

Unit 3: Daily life

Unit 4: Recreation

Unit 5 & 6: Jobs and occupations

The purposes of research treatment analysis are:

1. To make it more concise in order to make it suitable for Thai high school EFL students to study
2. To correct the grammar, expression, and spelling, including providing ideas and comments
3. To prove whether the lessons are suitable for Thai high school EFL students who are studying in Grade 10

Please kindly be informed that 6 units of a CLSTS is an instrument of the study. Please feel free to make and write your corrections or comments on the hardcopy and send it back to me.

Thank you very much for your kind cooperation.

Sincerely yours,

Wachiraporn Kijpoonphol.

APPENDIX S

Letter to solicit research treatment analysis expert

มหาวิทยาลัยเทคโนโลยีสุรนารี

111 ถนนมหาวิทยาลัย

ตำบลสุรนารี อำเภอเมือง

จังหวัดนครราชสีมา 30000

10 ตุลาคม 2552

เรื่อง ขอความอนุเคราะห์เป็นผู้เชี่ยวชาญประเมินเนื้อหาแบบฝึกบทเรียนคอมพิวเตอร์ช่วยสอน

เรียน อ. เดชธนู ชาท่าไม้

เนื่องด้วย ดิฉันนางสาววชิราภรณ์ กิจพูนผล นักศึกษาระดับปริญญาเอก หลักสูตรศิลปศาสตรดุษฎีบัณฑิต (สาขาภาษาอังกฤษศึกษา) สำนักวิชาเทคโนโลยีสังคม มหาวิทยาลัยเทคโนโลยีสุรนารี ได้ทำบทเรียนคอมพิวเตอร์ช่วยสอนกลวิธีการฟังจำนวน 6 บท เพื่อใช้ในการทำวิทยานิพนธ์ เรื่อง ผลของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ ที่มีต่อความเข้าใจในการฟังของนักเรียนไทยระดับมัธยมศึกษาที่เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE EFFECTS OF WEB-BASED LISTENING STRATEGY TRAINING ON THAI HIGH SCHOOL EFL STUDENTS' LISTENING COMPREHENSION)

เพื่อให้บทเรียนคอมพิวเตอร์ช่วยสอนถูกต้องตามกระบวนการ ดิฉันพิจารณาแล้วเห็นว่าท่านเป็นผู้ที่มีความรู้ความสามารถและมีประสบการณ์ในเรื่องการสอนภาษาอังกฤษสำหรับนักเรียนในระดับมัธยมศึกษาชั้นปีที่ 4 เป็นอย่างดี จึงใคร่ขอความอนุเคราะห์จากท่านเป็นผู้เชี่ยวชาญตรวจสอบและประเมินบทเรียนคอมพิวเตอร์ช่วยสอนกลวิธีการฟังจำนวน 6 บทเรียนในครั้งนี้

จึงเรียนมาเพื่อโปรดพิจารณา ดิฉันหวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่านด้วยดี และขอขอบพระคุณมา ณ โอกาสนี้

ขอแสดงความนับถือ

(นางสาว วชิราภรณ์ กิจพูนผล)

มหาวิทยาลัยเทคโนโลยีสุรนารี

111 ถนนมหาวิทยาลัย

ตำบลสุรนารี อำเภอเมือง

จังหวัดนครราชสีมา 30000

10 ตุลาคม 2552

เรื่อง ขอความอนุเคราะห์เป็นผู้เชี่ยวชาญประเมินเนื้อหาแบบฝึกบทเรียนคอมพิวเตอร์ช่วยสอน
เรียน อ. วิศิษฐ์ สายพรหม

เนื่องด้วย ดิฉันนางสาววชิราภรณ์ กิจพูนผล นักศึกษาระดับปริญญาเอก หลักสูตร
ศิลปศาสตรดุษฎีบัณฑิต (สาขาภาษาอังกฤษศึกษา) สำนักวิชาเทคโนโลยีสังคม มหาวิทยาลัยเทคโนโลยี-
สุรนารี ได้ทำบทเรียนคอมพิวเตอร์ช่วยสอนกลวิธีการฟังจำนวน 6 บท เพื่อใช้ในการทำวิทยานิพนธ์ เรื่อง ผล
ของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ ที่มีต่อความเข้าใจในการฟังของนักเรียนไทยระดับมัธยมศึกษาที่
เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE EFFECTS OF WEB-BASED LISTENING STRATEGY
TRAINING ON THAI HIGH SCHOOL EFL STUDENTS' LISTENING COMPREHENSION)

เพื่อให้บทเรียนคอมพิวเตอร์ช่วยสอนถูกต้องตามกระบวนการ ดิฉันพิจารณาแล้วเห็นว่า
ท่านเป็นผู้ที่มีความรู้ความสามารถและมีประสบการณ์ในเรื่องการสอนภาษาอังกฤษสำหรับนักเรียนในระดับ
มัธยมศึกษาชั้นปีที่ 4 เป็นอย่างดี จึงใคร่ขอความอนุเคราะห์จากท่านเป็นผู้เชี่ยวชาญตรวจสอบและประเมิน
บทเรียนคอมพิวเตอร์ช่วยสอนกลวิธีการฟังจำนวน 6 บทเรียนในครั้งนี้

จึงเรียนมาเพื่อโปรดพิจารณา ดิฉันหวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน
ด้วยดี และขอขอบพระคุณมา ณ โอกาสนี้

ขอแสดงความนับถือ

(นางสาว วชิราภรณ์ กิจพูนผล)

มหาวิทยาลัยเทคโนโลยีสุรนารี

111 ถนนมหาวิทยาลัย

ตำบลสุรนารี อำเภอเมือง

จังหวัดนครราชสีมา 30000

10 ตุลาคม 2552

เรื่อง ขอความอนุเคราะห์เป็นผู้เชี่ยวชาญประเมินเนื้อหาแบบฝึกบทเรียนคอมพิวเตอร์ช่วยสอน
เรียน อ. วิไล ตันตินีรนาก

เนื่องด้วย ดิฉันนางสาววชิราภรณ์ กิจพูนผล นักศึกษาระดับปริญญาเอก หลักสูตร
ศิลปศาสตรดุษฎีบัณฑิต (สาขาภาษาอังกฤษศึกษา) สำนักวิชาเทคโนโลยีสังคม มหาวิทยาลัยเทคโนโลยี-
สุรนารี ได้ทำบทเรียนคอมพิวเตอร์ช่วยสอนกลวิธีการฟังจำนวน 6 บท เพื่อใช้ในการทำวิทยานิพนธ์ เรื่อง ผล
ของการฝึกกลวิธีการฟังโดยผ่านทางเว็บไซต์ ที่มีต่อความเข้าใจในการฟังของนักเรียนไทยระดับมัธยมศึกษาที่
เรียนภาษาอังกฤษเป็นภาษาต่างประเทศ (THE EFFECTS OF WEB-BASED LISTENING STRATEGY
TRAINING ON THAI HIGH SCHOOL EFL STUDENTS' LISTENING COMPREHENSION)

เพื่อให้บทเรียนคอมพิวเตอร์ช่วยสอนถูกต้องตามกระบวนการ ดิฉันพิจารณาแล้วเห็นว่า
ท่านเป็นผู้ที่มีความรู้ความสามารถและมีประสบการณ์ในเรื่องการสอนภาษาอังกฤษสำหรับนักเรียนในระดับ
มัธยมศึกษาชั้นปีที่ 4 เป็นอย่างดี จึงใคร่ขอความอนุเคราะห์จากท่านเป็นผู้เชี่ยวชาญตรวจสอบและประเมิน
บทเรียนคอมพิวเตอร์ช่วยสอนกลวิธีการฟังจำนวน 6 บทเรียนในครั้งนี้

จึงเรียนมาเพื่อโปรดพิจารณา ดิฉันหวังเป็นอย่างยิ่งว่าจะได้รับความอนุเคราะห์จากท่าน
ด้วยดี และขอขอบพระคุณมา ณ โอกาสนี้

ขอแสดงความนับถือ

(นางสาว วชิราภรณ์ กิจพูนผล)

APPENDIX T

Name list of experts

Name list of five experts who analyzed and proofread: (1) a personal and academic questionnaire; (2) questionnaires on each listening strategy training of the CLSTS; and (3) a final questionnaire on the CLSTS

1. Associate Professor Dr. Saksit Sangboon
Position: Dean - School of Language and Communication, National Institute
Development of Administration
2. Associate Professor Dr. Somsak Boonsathorn
Position: Instructor – Faculty of Liberal Arts, Mae Fah Luang University
3. Associate Professor Dr. Saneh Thongrin
Position: Instructor – Faculty of Liberal Arts, Thammasart University
4. Dr. Wattana Pattanapong
Position: Instructor: Faculty of Entrepreneurship Management, King
Mongkut's University of Technology Thonburi
5. Dr. Pimprapai Intaravitak
Former instructor – School of Language and Communication, National
Development of Administration

Name list of three experts who analyzed and proofread contents of research treatment

1. Ajarn Wilai Tanthineeranat: Ratchawinit Bangkae Pankham
2. Ajarn Dejtanu Sathamai: Ratchawinit Bangkae Pankham
3. Ajarn Wisit Saiprom: former instructor at St. John School

CURRICULUM VITAE

Wachiraporn Kijpoonphol is a lecturer at the Department of Western Languages and Literature, Faculty of Liberal Arts, Ubon Ratchathani University, Thailand. She received a B.F.A. in Fine and Applied Arts from Bangkok University, an M.A. in Language and Communication from National Institute of Development Administration, and an M.A. in English from Naresuan University, Thailand. She undertook the co-supervision program between the School of English, Institute of Social Technology, Suranaree University of Technology, Thailand and the School of Education, the University at Albany, the United States, for a Degree of Doctor of Philosophy in English Language Studies. She was a holder of the Thai government scholarship. Her interests include language learning strategies and Computer Assisted Language Learning (CALL).

