

CHAPTER 3

METHODOLOGY

3.1 Introduction

This study aimed to investigate the effects of metacognitive strategies on the performance of ESL learners in an IELTS listening preparatory course. The aforementioned strategies have been considered to be appropriate for promoting independent learning of English as a second or foreign language.

To achieve the objectives and answer the research questions, both the quantitative and qualitative research design were employed. Subsequently, adopting the mentioned research approach for this research would enable detailed descriptions of the processes and analytical outcomes (Manvender 2014). In the current chapter, the research population, samples, instruments, as well as data collection and analysis are described. Table 3.1 summarises the research questions and instruments, methodology, as well as the data collection and analysis.

Table 3.1: Summary of research questions, research instruments, methods, and data analysis techniques

Research Objective	Method	Research Question	Instrument	Data Analysis Technique
1) To examine the level of awareness on metacognitive strategies among Malaysian ESL learners	Quantitative	i) What is the level of awareness on metacognitive strategies between the participants in the experimental group and control group?	Main data: Metacognitive Awareness Listening Questionnaire (MALQ) Supporting data: Learners' strategy checklist	Frequency analysis Frequency analysis

Research Objective	Method	Research Question	Instrument	Data Analysis Technique
2) To assess the IELTS listening test scores of Malaysian ESL learners	Quantitative	ii) How do the IELTS listening test scores of the participants in the experiment group differ from the IELTS listening scores of the participants in the control group?	Main data: IELTS listening test scores Supporting data: Learner's exercises	T-test One-way repeated measures ANOVA
3) To explore the perspectives of Malaysian ESL learners on the use of metacognitive strategies in the IELTS listening preparatory course	Qualitative	iii) What do the participants think about the use of metacognitive strategies in the IELTS listening preparatory course?	Main data: Interviews Supporting data: Learners' group discussions	Thematic coding Thematic coding

3.2 Research Design

Both the quantitative and qualitative approaches were utilised in this study. The study, in which investigations were conducted to determine the effectiveness of metacognitive strategies on the listening skills of ESL learners (specifically, Malaysian participants in an IELTS preparatory course). The purpose of such employment of methods was to address the research objectives and research questions of the present study separately.

Employing the quantitative and qualitative approach separately then allowed the researcher to triangulate the collected data from the pre and post experimental stages with the intervention stage and ascertain how learners use the metacognitive

strategies during the acquisition of IELTS listening skill. As mentioned, the present study comprised 3 stages - pre-experimental, intervention stage, and post-experimental.

It was important to establish on whether the learners, i.e. participants employed the metacognitive strategies, namely planning, monitoring, evaluating, and problem solving, when acquiring IELTS listening skill during intervention stage. Furthermore, this method allowed the researcher to determine the differences in the participants' awareness levels on metacognitive strategies and their IELTS listening performance during the pre and post experimental stages. Following the data collection stage, the data was categorised into the main and supporting data. Hence, these data complemented each other in establishing solid evidences to answer the research objectives and research questions of the present study.

In essence, while the MALQ, IELTS Listening tests, The learners' checklist and the learner's IELTS listening exercises scores were quantitatively analysed to measure the effectiveness and the level of awareness of the metacognitive strategies among the participants in the pre and post experimental stages allowed the researcher to ascertain the degree of progress that took place,

In comparison, data gathered from the interview and the learners' discussion were then qualitatively analysed to gain in-depth understanding of how the participants perceived the outcomes of using metacognitive strategies when acquiring IELTS Listening skills.

Accordingly, both quantitative and qualitative approaches provided the researcher with a "complementary means of investigating such a complex phenomenon at work in the area of second language acquisition" (Mackey & Gass 2005, p. 44).

3.3 Data Triangulation

Triangulation of data is achieved through the different research instruments employed in collecting the data in this present study. Through the use of the different research approach, the data gained is ensured of its validity and robustness (Olsen 2004). Furthermore this method helps the researcher to understand the data collected from diverse points, hence shed useful insights into the effectiveness of the metacognitive strategies learned and used by the participants during the intervention phase.

For example, during the pre- and post-experimental stage, the main data were the MALQ and IELTS listening tests. Both of this data were further supported by the data from the Learners' Checklist, Learners' exercises. It was important to see the connection of the each of the stage by relating the data to one another. This was mainly because it was crucial for the researcher to establish the relationship of the effects of the metacognitive strategies in the form of an intervention on the participants' IELTS listening performance. The interview which was conducted during the post experimental stage were supported by the learners discussion. Besides that, by triangulating the main data (the MALQ, the IELTS Listening test and the interview) and the supporting data (the learner's checklist, the learner's exercise and the learner's group discussion), it allowed the researcher to have a better understanding on the outcomes derived from the findings. Furthermore, it also allowed the researcher to make logical inferences on the outcomes of the present study.

The following section elaborates the context of this research.

3.4 Research Context

This study was conducted at a higher education institution in Kampar, Perak, Malaysia where all courses are conducted in English language. English language is an essential second language for most Malaysian schools, but not a language of instruction. Hence, Malaysian school students have limited exposure to English language as well as to the different accents of native speakers, which were reportedly one of the challenges faced by ESL learners when they undergo the IELTS listening test as mentioned by Abbas & Mohammad Reza (2011). Similar to other institutions, this institution offers various diploma programmes in different faculties (e.g., Faculty of Social Science, Faculty of Business Studies, and Faculty of Science and Information Technology).

The course which has been given focussed in this study is the AHEL 3013 English for IELTS, which is a compulsory course for the participants of the present study, as fulfilment of the programme they are enrolled in. The course was taught as a preparatory course for IELTS. The main objective of the course is allow the participants to be able to familiarise with the four IELTS component and the test taking strategies. Besides that, the course aims to expose the participants to the English language spoken and used by the native speakers. The course comprised the four IELTS components which are Speaking, Listening, Reading and Writing. The course was conducted for 14 weeks in a semester and the total contact hours were 56 hours. The course was divided into two sessions which were 2 hours for practical and 2 hours for tutorial. The present study focuses on the practical hours done by the participants as they go through the IELTS Listening component from week 1 to week 8. The practical classes were conducted in the audio laboratory of the learning institution.

3.4.1 Research Participants

This study was conducted at a higher education institution in Kampar, Perak, Malaysia where all courses are conducted in English language. English language is an essential second language for most Malaysian schools, but not a language of instruction. Similar to other institutions, this institution offers various diploma programmes in different faculties (e.g., Faculty of Social Science, Faculty of Business Studies, and Faculty of Science and Information Technology).

For this study, 150 participants were selected to form an intact group using the convenience sampling method. The participants of the present study, were Malaysian ESL learners who have been exposed to English Language subject which is compulsory subject for them to take during their primary (Standard 1 until Standard 6, 6 years) and secondary level (Form 1 until Form 5, 5 years) of schooling.

At the point of the study, these students registered for the AHEL 3013 course, specifically known as “AHEL 3013 English for IELTS”. These students were divided into experimental group and control group. Each group comprised of 75 students. In order to control the internal validity of these two non-randomly-selected groups, this study employed the standardised teaching procedure, the conventional teaching practices were administered for the control group, while the intervention was performed for the experimental group. Table 3.2 presents the distribution of these students.

Table 3.2: Distribution of participants for study

	Class (Number of students)			Total number of students
	A	B	C	
Experimental Group	25	25	25	75
Control Group	25	25	25	75
TOTAL				150

Meanwhile, Table 3.3 presents the demographic profile of participants. Most of the participants in this study were Malay (22.67%), followed by Chinese (45.33%), and Indians (29.33%). The remaining 2.67% were from other ethnic groups. In addition, the participants for this study were mostly male (42.67%). In terms of age, 89.33% of the total participants were between the age of 18 and 23 years, while the remaining 10.67% were 24 years and above. This study involved participants from the first academic semester (58.67%) and second academic semester (41.33%).

Table 3.3: Demographic profile of participants

Demographic data	Frequency (n = 150)	Percentage (%)
<i>Race</i>		
Malay	34	22.67
Chinese	68	45.33
Indian	44	29.33
Others	4	2.67
<i>Gender</i>		
Male	64	42.67
Female	86	57.33
<i>Age (years)</i>		
18 – 23	134	89.33
24 and above	16	10.67
<i>Academic semester</i>		
Semester 1	88	58.67
Semester 2	62	41.33

Following that, 10 participants from the experimental group were conveniently sampled for the learners' group discussion and the interview. The profile of the participants is presented in Table 3.4. Each participant was given a code. For instance, "LA1" denotes the first learner from the tutorial group A. As for the learners' group discussions, there were three groups in total, which were coded as GLA (involved LA1–LA3), GLB (involved LB1–LB3), and GLC (involved LC1–LC4).

Table 3.4: Profile of Participants for the interview and learners' discussion

No.	Code for participants	Age (years)	Course of Study (Diploma)	Code for Group for Discussion
1	LA1	18	Business	GLA
2	LA2	18	IT	
3	LA3	20	Marketing	
4	LB1	19	Hospitality	GLB
5	LB2	19	Event management	
6	LB3	20	Business	
7	LC1	18	IT	GLC
8	LC2	19	IT	
9	LC3	18	Food services	
10	LC4	20	Food services	

3.4.2 The AHEL 3013 English for IELTS

The present study focused on the AHEL 3013 English for IELTS course, which is a compulsory course to be taken by all students who have enrolled into the institution. Besides, the mentioned course is taught as a preparatory course for the students to prepare themselves to further their studies abroad. It is taken by the students during their 3rd semester of study at the institution. The course syllabus covers the four skills of the English Language which are speaking, listening, reading, and writing. The course is being conducted for 14 weeks in a semester, 2 hours per week. While the listening skill syllabus is being taught between 7 to 8 weeks, with a total of 7 to 8 hours in a semester. Each listening skill lessons are being conducted for an hour on a weekly basis. The listening skill lessons are being conducted as a practical mode. Notably, there is no lecture conducted for the mentioned course as per required by the syllabus of the course. By the end of the course, the learners are expected to be able to comprehend the English language spoken by the native speakers.

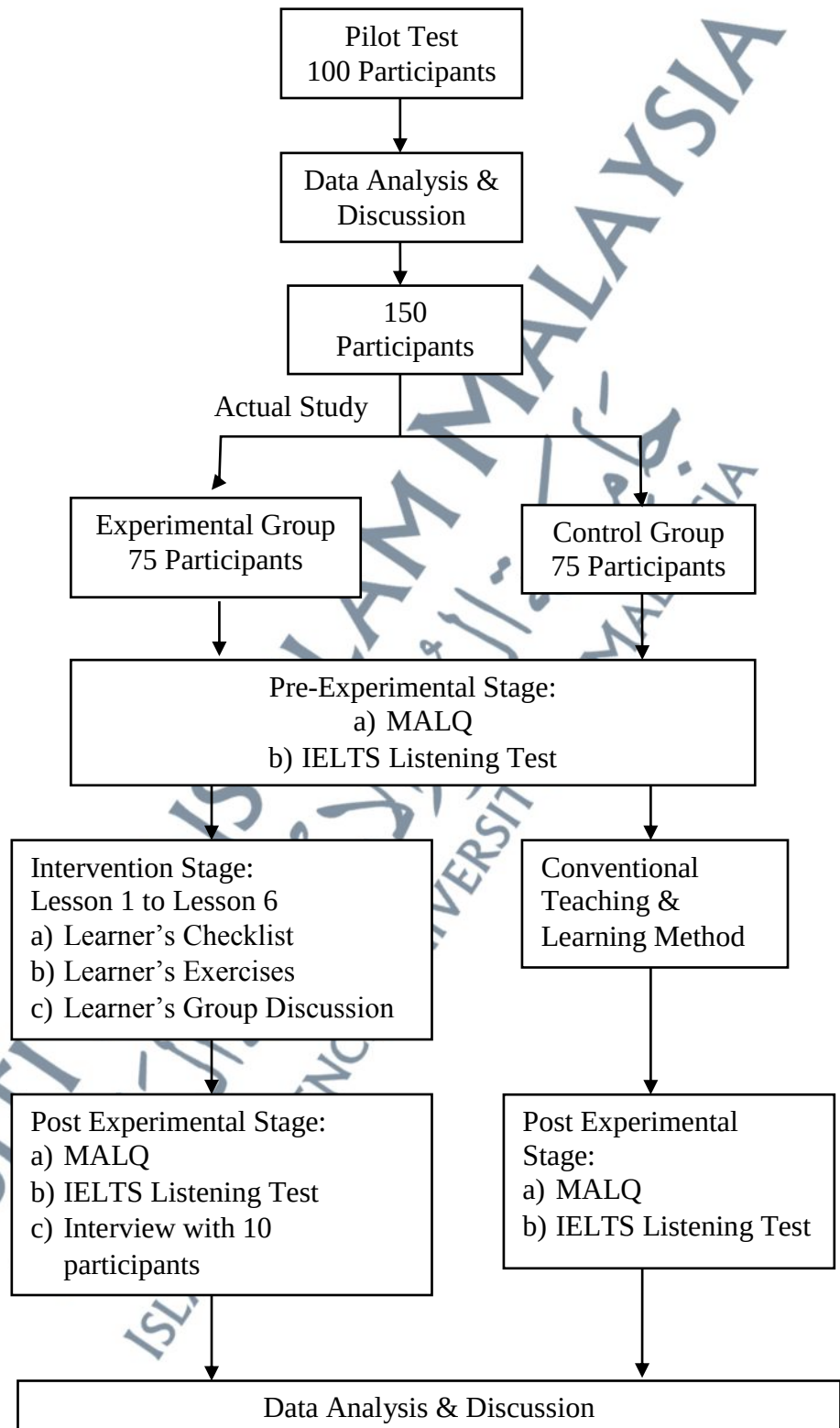
3.4.3 The Lecturers

Three lecturers were involved in teaching of AHEL 3013 English for IELTS to the experimental group. Prior to the intervention, the lecturers were briefed on the execution of the intervention as per lesson plan, which was based on Goh (1997; 1998; 2006). All of them agreed to allow the researcher to observe the teaching sessions. The purpose of this exercise was to ensure the educators' compliance with the lesson plans (a checklist was created and utilised here). The educators' backgrounds with their pseudonyms are as specified in Table 3.5.

Table 3.5: Profile of the Lecturers

Teacher	Background
Miss Nancy (pseudonym)	- Teaching English Language subjects in TAR UC since 2004. - Attended IELTS teaching course in 2010 organised by TAR UC. - Has been teaching IELTS since 2010. - Has a Master degree from University of Malaya in English as a Second Language.
Miss Lisa (pseudonym)	- Teaching English Language subjects in TAR UC since 2008. - Attended IELTS teaching course in 2010 organised by TAR UC. - Has been teaching IELTS since 2010. - Has a Bachelor degree from University of Malaya in English Language Studies.
Miss Irene (pseudonym)	- Teaching English Language subjects in TAR UC since 2009. - Attended IELTS teaching course in 2010 organised by TAR UC. - Has been teaching IELTS since 2010. - Has a Bachelor degree from University of Selangor in Teaching English as Second Language.

3.5 Research Procedure



The research was conducted within experimental research design. It began with the selection of the participants for the study. A total of 150 learners participated in the study. The participants were divided into two groups, which were the experimental group and the control group. The experimental group consisted of 75 participants, and the control group consisted of 75 participants. The study was conducted in three phases; the pre-experimental stage, the intervention stage, and the post-experimental stage.

3.5.1 The Pilot Study

A pilot study was also conducted prior to the main data collection. The pilot study conducted provided an invaluable foundation to this investigation since it allowed the researcher to refine the instruments and procedures for data collection and analysis. Additionally, it provided also insights of the extent in which learners comprehend the MALQ questions as well as to determine the extent to which listening skills were a problem for the IELTS candidates in this institution. Hence, a pilot study that employed the MALQ was carried out (refer Appendix D) and focused on the different metacognitive strategies employed by the participants in their attempt to comprehend the listening texts.

A total of 100 students at the institution of the present study were recruited for the pilot study. They were subjected to an IELTS listening test prior to the administration of the MALQ, the latter of which required them to reflect on the test and the strategies utilised by them. The students were informed about the items in the questionnaire, and that they were being tested because the educators/lecturers were interested to determine their awareness of the strategies used during the IELTS listening sessions.

The results of the questionnaire indicated that the students were generally incompetent in listening comprehension, which demonstrated that they may lack

metacognitive awareness. The results are listed below (Appendix D provide further details of the results for each strategy):

- i. Planning and evaluation: Before listening, more than 45% of the participants did not have a mental picture of or focus on the things to be listened. Also, 40% of them were not able to connect the listening topics to similar texts in their schemata.
- ii. Directed attention: 48% were not able to check or monitor their attention during listening, while 55% found it difficult to come back on track when their minds wandered. Another 37% declined to proceed and gave up listening when they faced any hurdles in their attempts to understanding the listening texts.
- iii. Person knowledge: 75% reported that listening to English articles was more difficult than reading, speaking, or writing in English. Likewise, they also felt that listening comprehension in English was a challenge; only 16% did not feel nervous when engaging in this exercise.
- iv. Mental translation: 55% of the students translated word-by-word as they listened.
- v. Problem-solving: 60% lacked the ability to refine their interpretations when they made mistakes. Besides 80% failed to make use of the general ideas of the texts to guess the meanings of difficult terminologies.

The results of these findings have prompted the researcher to investigate the effects of metacognitive strategies on the listening performance of Malaysian ESL learners during an IELTS preparatory course. Furthermore, the researcher was in a view that there is a necessity to have a strategy for ESL learners when acquiring IELTS listening skill. Based on the literature study done, it was found that Goh's (1997, 1998 & 2006) research on suggesting the use of a metacognitive strategies, such as planning, monitoring, evaluating,

and problem solving should be implemented. Based on the mentioned studies by Goh, these strategies were deemed to be suitable in the context of ESL learners. Therefore, the researcher decided to use the suggested strategies in the form of an intervention to determine the outcomes of the mentioned strategies and their effects on ESL learner's IELTS listening performance.

3.5.2 Procedures for data collection

Data were collected by the researcher at 3 stages which was divided into the pre-experimental stage, the intervention stage and the post experimental stage over 2 months period. As detailed below, the data collection sessions took place in 3 groups.

3.5.2.1 The Pre-experimental Stage

During the pre-experimental stage, 150 participants from both the experimental group and control group were asked to answer the MALQ and the IELTS Listening Test. The purpose of the administration of the MALQ was to measure the level of metacognitive awareness among the participants. The purpose of the administration of IELTS Listening Test was to record the participants' performance level. The data gained would then later be compared to the post-experimental stage.

3.5.3 The Intervention Stage

During the intervention stage, it is notable that only the data from the experimental group were obtained as the present study utilises the experimental approach. The intervention was done for six weeks based on the lesson plans shown in Table 3.6. The 75 participants were given a checklist that enabled the researcher to observe the way they used the metacognitive strategies, particularly the planning and monitoring strategies, in

order to acquire the IELTS listening skill. The checklist allowed the researcher to determine whether the participants did apply the planning and monitoring strategy during the lessons. The checklist was completed during the exercise given as per mentioned in the lesson plan. After they completed the checklist, participants were told to discuss, in their assigned group, the completed exercise. During the discussion, they were expected to discuss on how they applied the metacognitive strategies namely the planning, monitoring, evaluating and problem solving strategy. The discussions were recorded and were transcribed verbatim for the analysis purpose.

3.5.3.1 The Lesson Plans for the Intervention Stage

The intervention was conducted in the form of instructions on metacognitive strategies. The lesson plans were based on Goh's (1997, 1998 & 2006) research, which suggested on the methods to implement metacognitive strategies in listening skill lessons. There were six lessons altogether and were taught by the educators/lecturers selected for this study. Lesson 1 consisted of an introductory lesson on metacognitive strategies for listening. Lessons 2 to 6 consisted of the lessons of the constructs involved in this study, which are planning, monitoring, evaluating, and problem solving. The lesson plans can be referred to appendix L.

Lesson 1:

The instructions were given to the students before a guided listening lesson using metacognitive strategies was conducted. The lecturer employed the think-aloud strategy, which learners were prompted to verbalise what he/she was thinking before, during, and after the listening activities. Verbalising the thoughts are fundamental in encouraging the use of metacognitive strategies. The students were then guided step-by-step in using metacognitive strategies and encouraged to discuss and seek clarification.

Lessons 2 to 6:

The exercises for the listening lessons were prepared based on the IELTS syllabus of the AHEL 3013 course. The Kaplan's IELTS Premier Book was used as a reference text and as one of the research instruments for the intervention stage in this study. This book was chosen because it was written by qualified IELTS examiners, and this was to ensure that the reliability and validity of the chosen exercises was well observed. The genre of the exercises were focused on daily conversations, public speech, academic discussion, and academic lecture. Each exercise lasted between two to six minutes.

The listening lessons, with metacognitive instructions provided, were carried out in the classrooms. This is shown in Table 3.6.

Table 3.6: METACOGNITIVE INSTRUCTION IN L2 LISTENING SKILL

LESSON PLAN (Adapted from Goh 1997, 1998 & 2006)

STRATEGIES	STEPS	ACTIVITIES
PLANNING	Preparing in advance, setting objectives, developing an action plan • Predicting – anticipating content of the spoken text- predict vocabulary that probably appears in the listening text • Directed attention - maintaining attention while listening and ignoring distractions • Selective attention - deciding to pay attention to aspects of language or situational details that may help to understand the text.	Students are given the topic of the listening text and asked to predict vocabulary that they anticipate in the text. In the first listening, they listen to find out the global or main idea of the text. They focus attention on the aspects of the content that is to be focused and not word-by-word understanding.
MONITORING	• Checking, verifying or correcting the performance of the listening task • Comprehension checking global understanding of the text • Double-check monitoring • Checking the understanding during the second listen (noting difficult parts or expressions that may interfere with comprehension)	Check to see what they have understood. Determine what they have not understood and what to focus on the second listening to understand better.

EVALUATING	Evaluating strategies Evaluating the performance	Students assess the success of the strategy used and find out where they have gone wrong.
PROBLEM-SOLVING	Problem-solving strategies - Identifying what needs resolution in a listening task. - Using strategies to solve the problems	Select the right strategy to solve the listening problem that they have encountered.

The above lesson plans were adapted for the six listening lessons carried out during data collection (refer to appendix G for details).

3.5.4 The post-experimental stage

The intervention stage was followed by the post-experimental stage. In this stage, the MALQ and the IELTS Listening Test was administered to all 75 participants in experimental group and followed by semi-structured interview sessions with ten conveniently selected participants from the experimental group (Class A, B, and C). Each of the selected interviewees has an equal probability of being chosen. The semi-structured interview sessions were conducted during week 8. The purpose of these interviews was to explore the learners' views on the use of the metacognitive strategies in the IELTS listening course. During the interviews, semi-structured questions were asked. The consent of the participants was obtained before the interview session. After completing the interview session, the audio-recording of the participants was transcribed verbatim and then analysed for the emerging themes. To ensure the validity of the transcriptions, the interviewees were allowed to see and verify the transcripts.

3.6 Research Instruments

3.6.1 The Questionnaire (MALQ)

The MALQ (refer Appendix F) was used to investigate the participants' levels of awareness of metacognitive strategies. Permission for the utilisation of the MALQ was obtained from one of the authors, Prof Vandergrift, via email (a copy of the email is attached in Appendix B). This questionnaire consisted of 21 items with five factors related to L2 listening success. The five factors are as follows:

- 1) *Problem Solving*
- 2) *Planning and Evaluation*
- 3) *Mental Translation*
- 4) *Directed Attention*
- 5) *Person Knowledge*

Table 3.7 below shows the categorisation of the 21 items of MALQ according to the 5 aforementioned factors.

Table 3.7: Categorisation of MALQ items to the factors

FACTORS:	Problem Solving	Planning & Evaluation	Mental Translation	Directed Attention	Person Knowledge
Item Numbers	5	1	4	2	3
	7	10	11	6	8
	9	14	18	12	15
	13	20		16	
	17	21			
	19				

The MALQ was administered to 2 different groups of L2 instructional settings. By doing so, it will not only provide information on the students' perceptions and beliefs regarding the strategies used, it enhances the learners' awareness of the listening process, positively influences their approaches to the listening tasks, and promotes the self-

regulated utilisation of the strategies as well. The MALQ uses a 6-point Likert scale as follows:

1 = Strongly disagree

2 = Disagree

3 = Slightly disagree

4 = Partly agree

5 = Agree

6 = Strongly agree

The items found in the MALQ were organised to address the learners' categories of metacognitive awareness level for listening. These categories were identified by Prof. Emi. Dr Larry Vandergrift.

1. Problem solving strategies- Item no: 5, 7, 9, 13, 17, and 19. If one obtained a high score for this factor, it is suggested that one has the ability to monitor comprehension and solve difficulties.
2. Planning and Evaluation strategies – Item no: 1, 10, 14, 20, and 21. If one obtained a high score for this factor, it implies that one has the ability to plan before listening, reflect on the difficulties, and consider alternatives.
3. Mental Translation strategy – Item no: 4, 11, and 18. If one obtained a high score, it denotes the presence of effortful processing through the first language, which could reduce the attention to and overall processing of the input.
4. Directed Attention strategy- Item no: 2, 6, 12, and 16. If one obtained a high score for these items, it means that one has high level of attention and is able to be sustained in the process of listening.
5. Person Knowledge strategy- Item no: 3, 8, and 15. If one obtained a high score for these items then one has greater anxiety and lacks of confidence.

In order to address the issue of the validity and reliability of the MALQ, Vandergrift, Goh, Mareschal, and Tafaghodtari (2006) had conducted a test in their study entitled '*the Process of the Development of the MALQ*'. Specifically, the article concerned on the development and validation of a questionnaire for listeners whose English was the second language (L2). Assessments of metacognitive awareness and perceived use of strategies were conducted while the learners listened to oral texts. An exploratory factor analysis of the responses from a large number of language learners (N = 966), as well as a subsequent confirmatory factor analysis of those from another large but different group (N = 512), gave rise to a 21-item instrument with robust psychometric properties. Also, five distinct factors were generated, which were problem-solving, planning and evaluation, mental translation, person knowledge, and directed attention. The evidence for the reliability and factorial validity of the instrument was statistically-significant. In other words, there was a strong positive relationship between the L2 students' MALQ scores and the extent of comprehension of the listened texts. Therefore, MALQ may be the most suitable instrument for measuring the levels of awareness of the participants in this study.

3.6.2 The IELTS Listening Test

As mentioned, two sets of IELTS listening tests – which were extracted from the Take IELTS website (refer Appendix F) – were administered to every participant; each one during the pre- and post-experimental stage. The objective of this tests were to measure the participants' performance before and after the intervention.

For the purpose of the present study, the IELTS listening tests were in the form of Practice Tests that shared identical format with the actual IELTS test. There were 4 sections and 40 questions in each test that were deemed to comply with an actual IELTS listening test paper. Similar to that found in the IELTS listening test, every test was divided into four

sections with 10 questions each. This was done to ensure the test papers were reliable and valid to be used for this study.

3.6.3 The Learner's Checklist

A learner's checklist was used to check whether the participants were acquiring the listening skills appropriately with the metacognitive strategies, namely the planning and the monitoring strategies. The main purpose of the checklist is to address the third research objective, which is to identify the participants' experiences in using metacognitive strategies during the IELTS listening preparatory course. The checklist was adopted from Vandergrift and Goh's (2011) work entitled *Teaching and Learning Second Language Listening: Metacognition in-Action*.

This checklist was given to the participants in the experimental group. However, for the analysis purpose, the data was gathered from ten participants (refer to table 3.4). They were told to put a tick on their answers, which was "Yes" or "No" in the checklist and if possible, to provide a short remark, comments, or suggestions.

Before the checklist was finalised, an external moderator/inter-rater was consulted to examine the checklist and provide comments on whether the checklist serves the purpose of this study. According to the external moderator, the questions/ items should be close-ended, requiring learners to response either "Yes" or "No", so as to allow the learners to answer easily and quickly. With the checklist response time made shorter, the learners had more time to complete the exercises given. The addition of "remark/comment/suggestions" section was also done on the external moderator's recommendation (refer to appendix E), considering that the participants might want to share their views or thoughts. The learner's checklist is shown below in figure 3.1.

Before Listening	YES	NO	REMARK/COMMENT/ SUGGESTIONS
I understand what I have to do after listening and I have asked the teacher for clarifications as required.			
I have thought about the vocabulary of the topic of the text.			
I have thought about my knowledge about the topic of the text.			
I have made my predictions about what I think I might hear.			
I have prepared myself to pay attention and to concentrate on what I will hear.			
I have read the questions I need to answer, or any other material the teacher has given me.			
I have encouraged myself to listen.			
After Listening	YES	NO	REMARK/COMMENT/ SUGGESTIONS
I concentrated on the listening task.			
I tried to verify my predictions.			
I revised my predictions as required.			
I paid attention to key words that were stressed.			
I used my knowledge of the topic to help me guess the words I did not understand.			

Figure 3.1: Learner's Checklist

3.6.4 The Learners' IELTS listening exercises (Lesson 1-6)

The participants were given simple **IELTS listening** exercises for each intervention lesson. The exercises were completed by 75 participants of the experimental were analysed to monitor their performance on a weekly basis. The exercises were taken from the Kaplan's IELTS Premier Book (year). This book was a required text in the course syllabus. The exercises focused on the different sets of the IELTS Listening component for each lesson. The exercises consisted of seven to ten questions for each practice. The exercises and the answers can be referred to Appendix F.

3.6.5 The Learners' Discussions Cue Card

The participants were divided into groups of either three to four members for discussion activities. They were given a cue card (refer to appendix F) that contained the subjects they were required to discuss. The discussions were done once they had completed the exercises. The discussion was on the exercises they did individually, focusing on the way they used the metacognitive strategies to acquire listening skill in order for them to complete the exercises. The metacognitive strategies highlighted in the discussion were evaluation and problem-solving. Each discussion was recorded and transcribed. The purpose of conducting the discussion was to allow for a natural output from the participants without any facilitation from the teachers. Moreover, it would ensure that anxiety among the students as well as their affective responses to being audio-recorded was reduced.

3.6.6 The Semi-structured interview Questions

Semi-structured interviews were subsequently conducted with the aim of obtaining the perceptions of selected participants regarding the usage of metacognitive strategies in the acquisition of listening skills for the IELTS examinations. Thus, the interviews were executed in a flexible manner in order to adequately understand the views of the participants. Also, the interview questions were formulated with reference to the four components of metacognitive strategies used in this study (i.e. planning, monitoring, evaluation, and problem-solving). In turn, these components were based on a study on the employment of specific metacognitive strategies to improve the listening skills of ESL learners (Goh, 2008).

In this research, the abovementioned questions were also developed with respect to the interview protocol refinement (IPR) framework by Montoya (2016). Two participants were initially chosen to undergo the pilot interview. They were selected to participate in

the interview of the actual study. The pilot test for the interview was conducted during the 5th week of the intervention. This was necessary in order to allow the interviewees to experience a few sessions of the intervention and hence, have sufficient knowledge to answer the verbal questions. The following were the phases of the development of the interview questions that was adapted as accordingly from the IPR:

Phase 1: Ensuring the alignment of the interview questions with the research questions

Phase 2: Construction of an inquiry-based conversation

Phase 3: Piloting of the interview protocol

Phase 4: Receipt of feedback on the interview protocol

Phase I: Ensuring interview questions align with the research questions		Phase 2: Constructing an inquiry-based conversation	Phase 3: Piloting the interview	Phase 4: Receiving feedback on interview protocol
What were the learners' views on using the metacognitive strategies for the IELTS listening preparatory course?	1. What do you think about learning listening for English for IELTS through metacognitive strategies? 2. Based on this exercise can you describe: i. How do you start planning when learning listening?	To introduce the term metacognitive strategies to the learners. To investigate on the implementation of metacognitive strategies (Planning, Monitoring, Evaluating and Problem Solving) in their listening exercises. PLANNING	St1: I think it makes me easy to learn listening. St2: I find it a new way of learning. Q i: How do <u>you</u> start planning when learning listening? St1: I will prepare myself before the audio is played so that I know what type of audio will be played. St2: I will go through the questions before the audio starts.	Students are able to understand the purpose of the interview question. Students are able to describe on how they apply metacognitive strategies in their listening exercises.

	ii. How do you do monitoring after you have done with the planning stage?	MONITORING	Q ii. How do you do monitoring after you have done with the planning stage? St1: By checking back the completed question to see if I have made any mistake. St2: I will do checking on the answers I have written.	
	iii. How do you do evaluation when you have completed the monitoring stage?	EVALUATION	Q iii. How do you do evaluation when you have completed the monitoring stage? St1: I reflect back the entire exercises to see what went wrong. St2: I will check if my results improved from the exercises done before this.	
	iv. How do you do problem solving as the final stage of learning listening?	PROBLEM SOLVING	Q iv. How do you do problem solving as the final stage of learning listening? St1: I will see which section I need to practise more to improve my results. St2: I will discuss with my teacher to ask for opinion to improve my performance.	

	3. Do you follow by sequence of the stages involved in metacognitive strategies or do you skip any of the stages? Why?	To determine the necessity of the metacognitive strategies as a process.	St1: I must do all the steps, no means I will lost track to understand my weakness. St2: I got try to skip one step the evaluating but when I complete I forgot why I didn't do well on one section.	Students were able to understand the need of applying the metacognitive strategies as process rather than skipping the steps in the process.
	4. In your opinion, what are the advantages that you have experienced when listening using the metacognitive strategies?	To investigate students' view on the advantages of the metacognitive strategies	St1: I now got a way to overcome my listening problem. A way to learn. St2: I have a focus to improve my listening skill.	Students were able to state the advantages on the metacognitive strategies.
	5. What are the disadvantages that you have experienced when listening using the metacognitive strategies?	To investigate students' view on the disadvantages of the metacognitive strategies	St1: Sometimes, it is difficult to catch up with time to prepare planning for the next section. St2: I think not enough of time because the people speak Western English so sometimes need time to understand to apply the strategy	Students were able to state the disadvantages on the metacognitive strategies.
	6. Do you think using metacognitive strategies helped you to handle your problems efficiently when listening? Why?	To determine the role of metacognitive strategy as an aid to acquiring listening skill	St1: Yes. Because I now can understand on how to improve my listening skill. St2: Yes. It gives me a way to learn and improve my listening skill on my own.	Students were able to understand that metacognitive strategies do help them to improvise their listening skill.

	7. Do you have any suggestions or comments that you would like to share about listening using the metacognitive strategies?	To review students' suggestions and comments on metacognitive strategies	St1: I think I should have learnt this strategy before coming to college, like in school. St2: For me, I feel if given more time I can be a better learner with this strategy because time is very limited to apply some strategy.	Students were able to express their suggestions and comments on metacognitive strategies.
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According to Jacob and Furgeson (2012), the primary purpose of a qualitative research is to ascertain the insight, views, and thoughts of the participants as per their personal experiences. Thus, the utilisation of semi-structured questions in this study befitted its aim to obtain the participants' feedback on the usage of metacognitive strategies to enhance their listening skills.

3.7 Data Analysis

This study aims to investigate the effects of metacognitive strategies on Malaysian ESL learners' listening performance in an IELTS listening preparatory course. The data from the pre- and the post-experimental stage of this study were based on descriptive statistics of the MALQ, the scores of the IELTS Listening Tests, and the emerging themes from the interview sessions. While the data from the intervention stage of this study were quantitatively and qualitatively analysed, and based on the observation method applied. In this case, the researcher grouped the sets of data obtained from the learners' checklist, the learners' exercises, and the learners' discussion. Informational data was obtained from the researcher's application of both the quantitative and qualitative research.

The researcher decided to use the thematic coding method to qualitatively analyse the transcribed interviews. The analysis was focused on identifying the participants' views,

ideas, and thoughts regarding the use of metacognitive strategies while acquiring listening skills. According to Creswell (2018), thematic coding is a process that includes segmenting and labelling text to form descriptions. It also allows the researchers to synthesise and summarise the development of the collected data. The first basis of thematic coding is by linking and interpreting the data.

In essence, data collected using MALQ and IELTS Listening Test were analysed using the frequency and statistical analyses. On the other hand, the thematic coding method was used to analyse the emerging themes from the interviews

3.7.1 The Analysis of the Data Collected from the Pre and the Post Experimental stage

3.7.1.1 The Quantitative Data Analysis

In the present study, the quantitative analysis was conducted using the frequency analysis of the scores achieved from the MALQ during the pre-experimental stage and the post-experimental stage. The process of data analysis involved the item analysis of the MALQ and the interpretation of the frequency analysis to analyse the data obtained from the pre- and the post-experimental stage. The data gained was in the form of ordinal data. The rating scales in the MALQ were analysed according to the participants' responses to the items related to Problem-solving, Planning and Evaluation, Mental Translation and Directed Attention, and Personal Knowledge. The data collected using the IELTS Listening Test were analysed using the SPSS. The t-test was employed to analyse the scores for the IELTS Listening Test in both the pre-experimental and post-experimental stages.

“Quantitative research is a formal, objective, systematic process in which numerical data are used to attain information about the world. This research method is applied to describe

variables, to study relationships among variables, to determine cause-and-effect interactions between variables” (Burns & Grove 2005, p.23).

3.7.1.1.1 MALQ

The quantitative data analysis of the MALQ was conducted based on the mean scores achieved by the students. The mean score scoring was calculated using the scoring guide provided with the MALQ. The responses to each item were transferred to the scoring table as shown below. An example of the scoring calculation is shown in Table 3.8.

Table 3.8: The scoring table

FACTORS:	PS	Score	PE	Score	MT	Score	DA	Score	PK	Score
Item Numbers	5	5	1	2	4	2	2	6	3	3
	7	5	10	5	11	4	6	2	8	3
	9	5	14	3	18	4	12	6	15	5
	13	5	20	5			16	2		
	17	4	21	5						
	19	5								
Mean Score		4.83/6		4.00/6		3.33/6		4.00/6		3.66/6

Legend:

PS – Problem-solving

PE – Planning & Evaluation

MT – Mental Translation

DA – Directed Attention

PK – Person Knowledge

The following interpretation is provided by the developer of the MALQ:

1. Problem-Solving: High score likely suggests an ability to monitor comprehension and to solve difficulties as they arise.
2. Planning & Evaluation: High score suggests an ability to plan for listening, to reflect on difficulties and consider alternatives.
3. Mental Translation: High score suggests effortful processing through the first language, which may interfere with attention to overall processing of input.

4. Directed Attention: High score suggests an ability to sustain careful attention while listening.
5. Person Knowledge: High score suggests a high level of anxiety and a lack of confidence.

Once the mean score of the respondent had been determined, it was then interpreted according to the above criteria. The mean score represented the participants' responses regarding categorisation according to the factors of the metacognitive strategies. In the next chapter, Chapter 4, will further presents and discuss the outcomes of the mean score analysis according to the five factors. The quantitative analysis of the MALQ learning awareness is presented according to the pre- and post-experimental stage for the experimental group and the control group.

3.7.1.1.2 IELTS Listening Test

The test scores obtained from the IELTS Listening Test from the experimental and the control group were analysed using SPSS. T-test was conducted on the test scores to determine the significant differences between pre- and post-experimental for both groups. The independent samples T-test allows the researcher to compare the mean scores obtained by the experimental and the control group. Thus, for the present study, employed T-test was used to compared the mean scores obtained during the pre-experimental and the post experimental stages of both groups respectively in order determine the *p* Value. Furthermore, by employing this inferential statistical test, the researcher was able to determine whether the intervention did improvise the participants performance in IELTS Listening.

3.7.2 The Interview Transcriptions

The recorded interviews were transcribed and analysed to identify any emerging themes. A content approach to thematic coding analysis was employed for the interpretation of the obtained results. It was deemed as an essential method that gave the researcher of this study the mandate and permission to be directly involved in the tapping of valuable information from the transcribed data. Additionally, the act of recording and the recorded content alone were deemed insufficient to perform in-depth analysis (Arunsirot, 2013; Ibrahim, 2013; Park and Lu, 2015; Tonon, 2015). Hence, the interview transcripts were indispensable in the process of thematic coding analysis, which allowed systematic evaluation and examination of the results. In this case, the thematic coding analysis assisted the researcher with the evaluation of the responses given by the participants, which was found significant for this study. The illustration of how the interview transcripts were coded is shown in Figure 3.2. Firstly, the interview transcripts were coded based on the responses of the participants with respect to the interview questions. The obtained data were then classified according to the identified emerging theme.

Question 2.1	Themes/Issues	Responses
How do you start planning when learning listening?	Predicting	• I will start predicting on what type of audio will be played by looking at the questions. • For this exercise, I will look at the questions in this section A and I will predict on what I am about to listen. Like this one it will be a conversation. • Normally before the audio is being played I will be given time to go through the questions and by looking at the questions I will be able to predict on what I am going to listen for example here is a conversation.
	Analysing the type of audio	• I firstly look at the questions and analyse them on what I am going to listen, like here it is a conversation audio. Therefore, it makes me feel prepared to listen to an audio before it is played.

	Questions as guides	• <i>It's like setting my thoughts and mind on what I am about to listen like here it will be a conversation and it makes my listening process to the audio much better.</i> • <i>Before the teacher play the audio, I will plan by looking at the questions for this section and then start thinking of the possible answers.</i> • <i>Before the audio is played I will go through the questions quickly in order to know what I am about to listen for example here it am is a conversation.</i> • <i>I start reading the questions here and then I will plan on what I am about to listen like here it is a conversation, so it is more like a head start for me.</i> • <i>I go through all the questions in the first section to know what type of audio will be played like here it is a conversation. So, in my mind I will set myself that I am prepared to hear the audio which is going to be played.</i>
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Figure 3.2: Example of coding of the responses from the participants

3.7.3 The Data listening exercises in-Lessons 1-6

It must be notable that the data obtain from the intervention stage were used to triangulate data from the pre and post experimental stage, namely, the data obtained from the experimental group. The data obtained from the intervention stage were the Learners' checklist, the scores from the Learners' exercises, and the Learners' discussion. The learners' checklist was used to support the data obtained from the MALQ, the scores from the learners' exercises was used to support the scores from the IELTS Listening test, and finally the learners' discussion was used to support the data obtained from the semi-structured interview data which was obtained during the post experimental stage.

Firstly, the frequency analysis method was employed on the Learners' checklist. By employing this method, it allowed the researcher to identify the participants' feedback in the form whether they have by employing the metacognitive strategies during the acquisition of listening skill in an IELTS preparatory course. The data obtained were tabulated in form of percentage on weekly basis. Figure 3.3 below illustrates the tabulation of the responses by the participants. This checklist was observed on the process of applying the metacognitive strategies, during the listening process of the IELTS audio.

Before Listening	Lesson 1 (%)		Lesson 2 (%)		Lesson 3 (%)		Lesson 4 (%)		Lesson 5 (%)		Lesson 6 (%)		REMARK/ COMMENT/ SUGGESTION
	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	
Q1. I understand what I have to do after listening and I have asked the teacher for clarifications as required.	40	60	100		80	20	90	10	100		100		

Figure 3.3: Participants' responses from the learners' checklist from Lesson 1 to Lesson 6

Secondly, the learners' exercises data was analysed as according to the scores obtained from each exercise done by the participants from the experimental group on a weekly basis. A one-way ANOVA with repeated measures was conducted to evaluate the effect of metacognitive strategies during the intervention stage, specifically from Lesson 1 to Lesson 6, in terms of the listening test scores (based on the learners' exercise). The obtained results were expected to support the obtained main results of pre-test and post-test for the IELTS listening test scores. The differences in the mean scores were statistically analysed using the SPSS, to determine the significant effect of metacognitive strategies on the listening test scores by focusing into the Wilks' Lambda reading. In addition, the result of Mauchly's test of sphericity was statistically significant ($p < .001$); hence, the assumption of sphericity was not met. Referring to Greenhouse-Geisser correction, the results of one-way ANOVA with repeated measures reaffirmed that the mean scores of learners' exercise from Lesson 1 to Lesson 6 significantly differed ($F(3.399, 251.521) = 276.406, p < .001$).

Next, the learner's discussion were recorded and transcribed. The transcription were analysed to observe the responses given by the participants pertaining to the usage of the metacognitive strategies namely, the Planning, Monitoring, Evaluating and Problem

Solving strategies. Figure 3.4 below illustrates the analysis of the learners' discussion. As shown in figure 3.4, the responses were coded as following:

(T4, LA 3, GLA): T4= Transcript 4, LA 3: Respondent LA 3, GLA: Discussion Group A

Table 3.9 Analysis of the learners' discussion

Question	Responses
1. Based on today's exercise, please describe how did you apply the Planning strategy when you were doing the listening exercise?	<i>I was trying to read aloud in my mind all the questions before the audio was played. I found that it is easier to understand the questions and get the answers. (T4, LA 3, GLA)</i>

3.8 Ethics and Rigour

In analysing the participants' information, the researcher has strictly followed a standardised ethical consideration. This involved protecting the participants' privacy and confidentiality. Although information on the participants' demography was revealed, such as their age and education level, it did not at all compromise the privacy of the participants.

As different research approaches were used for interpreting personal thoughts and views of the participants, it was necessary for this study to request for permissions at every stage of the research process. In the beginning, invitation letters were sent to the participants of the research. These letters informed them of the different aspects of the research study, for example, the purpose of the study, the usefulness of the study, the nature of the study, methods used in the study, and the anticipated application of the results.

A meeting was also arranged with the participants and they were made aware of the fact that this research was not compulsory or part of any of their courses. The researcher

had no authority to force them to participate in the research as it was purely voluntary basis. They were also made clear that they can withdraw from the project at any point and time, and the researcher had no authority to stop them from doing so.

Participants were also assured of their privacy and confidentiality. An assurance was given that their names or any other identifying features would not be included in the research. Participants who agreed to participate in the research were given a consent letter and were asked to sign as an indication of their willingness (refer to appendix C).

With regards to the ethical treatment of the data, they were assured that data collected from them would be kept confidential and private, and it will be used solely for the current research. All of the transcribed recordings were given shown to the respective participants to validate the transcribed audio as this approach was important to ensure the credibility of the transcriptions. This was done in order to ensure the trustworthiness of the data. Once the transcriptions were checked and validated by the participants it was then used for the analysis purpose for the present study.

As for the interviews, they were assured that the audio recording would be used only for the present study and after the completion of the project, the recordings will be destroyed.

All participants were guaranteed that the data would not be used for any other purpose other than that agreed to by the participants. Finally, it was also promised that feedback would be provided to all participants upon request.

Besides that, in order to ensure the transferability of the instruments used in the present study, all of the instruments were given to an external validator to check the suitability of the instruments for the present study. The external validator was provided with a comment/feedback form to provide information on the need of amendments for the research instruments used in the present study (refer to appendix E). Once the

comments/feedbacks were returned back to the researcher, the instruments were amended accordingly as advised by the external moderator.

Finally all of the data analysed were shown to external researchers who were subject matter experts to ensure the conformability of the degree to which the findings of the research are acceptable and logic. This was as essential to ensure that the findings of the present study are clearly derived from the data which were collected.

3.9 Chapter Summary

This chapter described the methodology used in this study, including the research design, the participants of study, instruments, data collection, and data analysis. The validity and reliability of the instruments and the credibility of this study were also addressed in this chapter. Overall, this study incorporated both quantitative approach and qualitative approach to evaluate the impact of metacognitive strategies on the listening performance of Malaysian ESL learners in the IELTS listening preparatory course. This study involved 150 participants from a higher education institution in Kampar, Perak. The overall study was conducted in three stages in the following order: (1) pre-experimental stage; (2) intervention stage; (3) post-experimental stage. The obtained results were analysed to address the research questions of this study. The obtained results of this study are presented in the next chapter.