

## CHAPTER III

### RESEARCH DESIGN AND METHODOLOGY

#### Introduction

This chapter presents a description of the research study and the three groups of subjects selected for the population sample. This is followed by a detailed presentation of the various research instruments and procedures that were used to collect and analyze the data.

This study investigated the development of learner autonomy through the adoption of a direct instruction paradigm that involved providing treatment to an intact group of ESL (English as a Second Language) students. According to Seliger and Shohamy (1989), treatment refers to anything done under controlled circumstances to a group or groups in order to measure its effect. In this study the treatment provided was in the form of strategy training (known as the Strategy Training Programme) to the intact ESL class of 42 students. Thus, the potential impact of strategy training (cause) was examined so as to help students develop learner autonomy (effect).

The effect of the treatment (strategy training) was measured through the use of pre and post strategy training SILL (Strategy Inventory for Language Learning) scores. The SILL Questionnaire was administered prior to and after the 15 weeks of strategy training.

According to Seliger and Shohamy (1989), this one group pre-test and post-test design is efficient as it not only controls the loss of subjects but also "controls a number of extraneous variables which can affect the homogeneity of subjects when more than one group is involved" (p. 139). Furthermore, since the same group is used for both the pre-test and post-test, it does not need to be matched to another group.

Seliger and Shohamy (1989), however, note that the main disadvantage of such an approach is that, there is no certainty that the changes and differences experienced by the subjects are a direct result of the treatment provided. They assert that the pre-test may "sensitize the subjects to specific aspects of the treatment" and this can "confound what is measured by the post-test" (p. 139).

In this study, this shortcoming was addressed through the use of various other research instruments such as feedback forms, interviews, classroom observations and written documents like learning journals and learning contracts.

### **Setting**

The setting of this study was a Malaysian ESL classroom from an urban secondary girls' school. This school is located in the town of Petaling Jaya (P.J.), in the state of Selangor, West Malaysia. The P.J. Secondary Girls' School (not its real name) is about a kilometre from the town of Petaling Jaya, a suburban centre for economic and administrative activities.

The P.J. Secondary Girls' School was founded by a Catholic religious order, the Franciscan Missionaries of Mary (FMM) in 1958. Today the school has a staff of about a hundred teachers and approximately 2,300 students ranging from the ages of 13 to 19. The three main multiracial communities (Malays, Chinese and Indians) are well represented in the population of this school (Malays-39%, Chinese-33%, Indians-26%, Other minority groups-2%). About 55 per cent of the students in this school come from urban residential areas whilst another 35 per cent come from surrounding suburban areas. The remaining 10 per cent are fully sponsored government students brought in from the rural outskirts of the state of Selangor. These students live in student hostels in and around the town of Petaling Jaya.

### **Population Sample**

The study consisted of three main groups of participants - a TESL teacher, an intact ESL class of 42 students and six students who were used as case studies. The six students were selected from the identified ESL classroom of 42 students.

The participants selected were based on purposive sampling which rests on the assumption that since one wants to discover, understand and gain insight on a particular aspect, therefore, "one needs to select a sample from which one can learn the most" (Merriam, 1990, p. 48).

### The Teacher

This study required a TESL-trained (Teaching English as a Second Language) teacher who possessed a good understanding and knowledge of the "Learning-How-to-Learn" (LHTL) programme and was willing to work with the researcher for about six months.

The teacher selected for the study was Karen (not her real name). Karen is a graduate from a local university and a trained TESL teacher with more than 15 years of experience teaching ESL at the secondary school level. She was a participant of the five-day 'Learning-How-To-Learn' workshop conducted jointly by Terry Lamb (attached to the University of Nottingham, UK) and the English Language officers from the English Language unit of the Curriculum Development Centre (CDC) of the Malaysian Ministry of Education. Besides that, Karen was a trainer and facilitator of the LHTL workshop conducted for TESL teachers in the Petaling District.

Karen has been teaching English to students at the upper secondary level at the P.J. Secondary Girls' School for about eight years. She is also the Head of the English Language Panel in her school and the secretary of the Petaling District English Language Committee.

### The Students

As the study required the use of one intact ESL classroom of students, Karen's Secondary Four class (referred to as Form Four Orchid in this study) was chosen over her other Secondary Five and Secondary Three ESL classes. Students from the Form Three and Five classes were not chosen because the Malaysian Ministry of Education (MOE) does not encourage the use of examination classes for research purposes. In Malaysia, the Form Three and Form Five students have to sit for public examinations at the end of the year. Therefore, it was felt that since the Secondary Four students were not under any pressure of public exams they would be more willing and co-operative subjects.

Furthermore, O'Malley and Chamot (1990) point out that learners need to reach a certain level of language aptitude and maturity before they can engage themselves in learner autonomy projects. This study required students to respond to questionnaires and write documents such as learning contracts and learning journals. Since all the Form Four Orchid students had passed their PMR (*Penilaian Menengah Rendah* - Lower Secondary Assessment) English Language Test, it was felt that they had both the maturity and language aptitude needed to engage in this learner autonomy programme.

Karen's Form Four Orchid ESL class consisted of 42 girls (identified hitherto as Student 01 to Student 42). These students were between 15 and 16 years old. According to Karen, about 80 per cent of the girls in this class were from high-income earning urban families while another 20 per cent came from middle-income earning urban families living in and around the town of Petaling Jaya.

These 42 girls had been studying English as a second language for the past nine years. Since the medium of instruction in all Malaysian national schools is Bahasa Malaysia (National Malay language), English Language is taught as an individual subject for about 200 minutes over a five-day school week. Form Four Orchid had a total of five English Language lessons per week. They had double English Language periods on Tuesdays and Wednesdays and a single 40-minute period on Thursdays.

All these students sat for their PMR Examination in 1998 and obtained a pass in their English Language PMR Paper. Although a majority (70 %) of them obtained a Grade 'A' for their English Language paper, it was nevertheless a class of mixed abilities where English Language proficiency was concerned. This was evident in their Form Four mid-term English Language school-based examination, which was held two-weeks prior to the Strategy Training Programme. The average score obtained by the Form Four Orchid students for their mid-term English Language Test was 62 per cent. The test results also indicated that eight students (19 per cent) obtained distinctions (100% - 75%) whereas another 20 students (24 per cent) scored credits (74% - 60%). Meanwhile 10 students (9 per cent) obtained a pass (59% - 50%) while the remaining four students (9 per cent) failed their English Language paper (49% and below).

The 42 students' responses to the SILL (Strategy Inventory for Language Learning) Background Questionnaire, which was administered prior to the 15-week Strategy Training Programme, revealed that English Language was not the mother tongue of any student in this study. All students indicated that English Language was one language that they were learning. Approximately 30 (71.4%) of the 42 students rated their overall English Language proficiency as good, nine (21.4%) felt they were excellent whilst another three (7.2%) perceived they possessed a fair proficiency level. Nevertheless, a majority of them, that is 33 students (78.6%) perceived their proficiency to be only fair compared to the native speakers of the language. Seven (16.6%) felt they were good whereas another two (4.8%) felt they were poor compared to native speakers. All 42 students indicated that they liked language learning and felt it was very important for them to be proficient in the English Language. They indicated that they needed to work hard at learning English as it could secure them a good future career. All students also indicated that they hoped to pass the Form Five SPM (*Sijil Pelajaran Malaysia* - Malaysian High School Assessment) 1119 English Language Paper with a distinction.

### Case Studies

Out of the total 42 students in this study, a group of six students were chosen as the focus for case studies. The selection of this group was based on the students' performance on the pre and post strategy training scores obtained from the administration of the SILL Questionnaire. The SILL Questionnaire was administered twice in the study - once prior to strategy training and once again at the end of the 15-week Strategy Training Programme.

The six students were selected only at the end of the study as the researcher felt that if students were identified at the beginning of the study other students might feel left out and may subsequently lose interest and drop out of the training programme.

These six selected students were identified as Student A1, Student A2, Student A3, Student B1, Student B2 and Student B3. Students A1, A2 and A3 were students who recorded the largest difference in the increased frequency use of language learning strategies (LLS) between the pre and post strategy training SILL scores. On the other hand, Students B1, B2 and B3 were the only three students in this study who recorded a decrease in the frequency use of LLS between the pre and post strategy training SILL scores. Given below are the pre and post strategy training SILL scores obtained by the six students.



Table 5

Pre and Post Strategy Training SILL Scores

Student	Pre Strategy Training SILL Mean Score	Post Strategy Training SILL Mean Score	+ / -
Student A1	2.6	4.3	+ 1.7
Student A2	3.5	4.6	+ 1.1
Student A3	2.8	3.8	+1.0
Student B1	3.5	3.2	- 0.3
Student B2	3.2	3.0	- 0.2
Student B3	3.5	3.4	- 0.1

Key:

SILL Score of 5.0 - 3.5 (High Frequency Use of LLS)

SILL Score of 3.4 - 2.5 (Medium Frequency Use of LLS)

SILL Score of 2.4 - 1.0 (Low Frequency Use of LLS)

### Data Collection

This study involved the use of a variety of research procedures because researchers point out that a single approach to understanding the teaching and learning process yields only limited and sometimes misleading data (Cohen & Manion, 1989). Moreover, Fraenkel and Wallen (1993, p. 461) point out that a study's validity and

number of different instruments." They state that this kind of checking is referred to as 'triangulation.' Triangulation is viewed as a useful technique as it provides multiple perspectives on a single phenomenon (Cohen & Manion, 1989). Furthermore, it is one way of increasing confidence in one's findings (Thomas & Nelson, 1996, p. 332).

Hence, based on the three research questions raised in this study, a four-pronged system was used to collect the data. Data were obtained through questionnaires, interviews, written documents and classroom observations. The following section gives a detailed description of the data collection procedures.

### Classroom Observations of Training Sessions

Classroom observations were carried out to investigate how strategy training was implemented in the ESL classroom. According to Day (1990, p. 45), classroom observation is a "classic technique used in a qualitative approach" that "provides a rich, descriptive data about what happens in the second language classroom." He, however, stresses that the observer should sit "in a strategic position which allows the widest possible view of the entire proceedings of the classroom activities" (p. 45). Fraenkel and Wallen (1993, p. 452) point out that non-participant observers do not participate or directly involve themselves in any of the classroom activities but "rather sit on the sidelines and watch" to record things as they occur in the educational setting.

Though Form Four Orchid had two 80-minute periods of English per week, an English Language lesson in this study is described as a 65-70 minute lesson. The first 5

minutes for each lesson were spent on classroom management and the last 5 minutes were put aside for the writing of learning journals. During the strategy training lessons the teacher, Karen integrated explicit teaching of language learning strategies into regular English Language lessons. Every week, Karen provided strategy training to the 42 students in Form Four Orchid during two of their ESL lessons on Tuesdays and Wednesdays. Thus, the students received strategy training for a total of 30 lessons under the 15-week Strategy Training Programme.

The researcher was present during all the 30 strategy-training lessons. During these sessions the researcher sat at the back of the classroom and made relevant field-notes in order to get a holistic picture of how strategy training was implemented in the ESL classroom. According to Fraenkel and Wallen (1993), field notes are detailed notes that researchers take in educational settings when they observe what is going on. They are usually an "account of what they hear, see, experience and think in the course of collecting and reflecting on their data" (p. 459).

Karen was observed four times during the 15-week period - that is, during week 2 (Trial Lesson) week 3 (Lesson I), week 6 (Lesson II) and week 11 (Lesson III). To avoid what researchers like Alvermann, Brien and Dillon (1990), call the 'observer's paradox' (i.e. the teacher's language and students' responses may be affected when they know they are being observed), data obtained from the first observed lesson in week 2 was considered a trial observation. This enabled both teacher and students to grow accustomed to the presence of the researcher and the recording equipment in the classroom.

The three other observed lessons used for the data analysis are referred to as Lesson I, Lesson II and Lesson III in this study. Only data from these three lessons were used for data analysis. All the three classroom observations were recorded on audiocassette tape. These audiotaped lessons were later transcribed for analysis. Field-notes made during these three observations were also used to validate the audiotaped lessons and other findings.

### Written Documents

In this study, the 42 students were required to keep two written documents, i.e. learning journals and learning contracts. These two documents were used to investigate whether strategy training had an effect on developing learner autonomy among students with regards to managing their own learning. They helped to shed light as to the students' ability to plan, organize, monitor and evaluate their own learning process.

### Learning Journals

Brookfield (1990) notes that analysis of written autobiographical materials such as learning journals and diaries are "very effective methods of understanding how people learn to learn" (p. 338). O'Malley and Chamot (1990, p. 94), however, point out that written documents like learning diaries have the disadvantage of "containing far more information than is needed for a straightforward analysis." This shortcoming was

addressed in this study by providing respondents guidelines and a structured framework to the writing of learning journals.

The learning journal in this study was a diary in which students were required to 'record and react' personally to classroom activities or any other experience related to English Language learning under the 15-week Strategy Training Programme. Besides this, they were also required to record other details such as the topic and learning objectives of the lesson. Students were also encouraged to state the learning strategies introduced in each lesson and respond to or reflect upon how these strategies could help them to facilitate their own learning.

At the end of each journal entry, students were required to rate their understanding and perception of each classroom lesson based on a 4-point Likert scale ranging from 1 to 4. A score of 1 indicated that the students perceived the lessons as being 'least effective' and they had a 'very unclear' understanding of the day's lesson. A score of 4 however, meant the lesson was 'very effective' and the students had a 'very clear' and good understanding of the lesson.

Students were provided with guidelines and an example of a learning journal entry (Appendix 3). Students were given the last five minutes of each lesson to write their learning journals. Further elaboration regarding learning journals is provided in Chapter IV, page 173 of this study.

The learning journals of all students were read and relevant extracts of learning journal entries were used to substantiate the findings of this study. However, for Research Question 2 of this study only the learning journals of the six identified students were analyzed and discussed in detail.

## Learning Contracts

Students were also required to write individual learning contracts with the aim to foster learner autonomy. Nunan and Lamb (1996) emphasize that individual learning contracts are one practical way of giving individual learners the space for self-directed growth. The students' learning contracts showed the development of learner autonomy with regard to students' abilities to manage their learning process - that is, their abilities to plan, organize, monitor and evaluate their own learning process.

Prior to the Strategy Training Programme, students were given a detailed briefing as to the aims and benefits of preparing their own learning contracts. Students were also provided with ample practice in preparing learning contracts during the two-week ice-breaking sessions.

The learning contract framework used in this study required students to make decisions on a number of aspects involved in managing the learning process. It required students to determine and formulate learning objectives and to decide on suitable learning tasks and materials to accomplish the stated learning objectives. Students were also required to determine suitable target dates for the completion of learning tasks and self-evaluate their own performance. Guidelines on writing learning contracts and an example of a completed learning contract were also given to students (Appendix 4). Further elaboration on learning contracts is provided in Chapter IV, page 174 of this study.

All students were required to complete three compulsory learning contracts. Besides this, they were also encouraged to prepare their own learning contracts for self-study. In this study, only the learning contracts of the six identified students were analyzed for the data collection process.

### Interviews

Brookfield (1990, p. 332) notes that interviewing is the "most frequently used research method in exploring learners' phenomenological world" in the area of 'learning-how- to-learn.' According to Fraenkel and Wallen (1993, p. 372), face-to-face interviews are "probably the most effective way to enlist the co-operation of the respondents." They assert that interviews place less of a burden on the reading and writing skills of respondents and help to clarify unclear and incomplete questions and answers. More importantly, they are an important way through which a researcher can "check the accuracy of - to verify or refute - the impressions he or she has gained through observation" (p. 447).

In this study two different forms of interviews were carried out. Semi-structured interviews were carried out with the six identified students whilst open-ended interviews were conducted with the teacher, Karen.

Semi-structured interviews were conducted with the six students in order to investigate how successful strategy training was in developing learner autonomy with regards to learners taking more responsibility for their own learning. The six interviews with the students were conducted over a period of a week, at the end of the 15 weeks of

strategy training. During these interview sessions, a semi-structured interview guide was used. Students were first asked some warm-up questions regarding the study of English Language. Next, they were asked to provide feedback and insight as to their ability to manage their own learning. The students were asked to rate how successful strategy training was in helping them to plan, organize, monitor and evaluate their own learning. The interview sessions also investigated the students' awareness for learner autonomy and their perception of the Strategy Training Programme. A list of the questions used in these semi-structured interviews is presented in Appendix 5.

Open-ended interviews were conducted with the teacher, Karen, once every five weeks to investigate how she fostered and implemented learner autonomy in her ESL classroom. These three interviews are referred to as Interview I, Interview II and Interview III in this study.

Seliger and Shohamy (1989, p. 167) state that open-ended interviews provide the respondent with "broad freedom of expression and elaboration" and hence "allow greater depth." They stress that by allowing maximum freedom of expression usually ample and unexpected information emerges.

The main purpose of each of the three interview sessions was to get Karen's feedback as to what aspects of strategy training and learner autonomy she had implemented for each five-week period. More importantly, she was asked to report the changes she had seen in her students and how successful strategy training was in helping her students take responsibility for their own learning. The researcher also explored the problems she faced and the steps she took to remedy the situation.



The interview responses obtained from both the students and the teacher were audiotaped and later transcribed for further analysis.

### SILL Questionnaire

The SILL (Strategy Inventory for Language Learning) Questionnaire was used to investigate whether strategy training increased the use of language learning strategies needed for the development of learner autonomy. Seliger and Shohamy (1989) contend that questionnaires have many advantages as they are self-administered and can be given to large groups of subjects at the same time. The two main shortcomings pointed out by them, i.e. a relatively low response especially for mailed questionnaires and respondents having a limited knowledge or proficiency in the use of the target language do not arise in this study. The questionnaires used in this study were administered in the classroom during the students' ESL lessons and all the respondents obtained a pass in their PMR English Language Paper.

This SILL questionnaire was administered to the 42 students before and after the 15-week Strategy Training Programme. The pre and post strategy training SILL scores helped to indicate whether there had been any change in the use of language learning strategies among the students.

Oxford's 1989 Strategy Inventory for Language Learning (SILL) Version 7.0 questionnaire was used to assess how frequently the students used language learning strategies. Version 7.0 has been claimed by Oxford (1990) to be designed for speakers of other languages learning English, that is for ESL / EFL learners. This instrument

was chosen because it has been widely used for students of second and foreign languages in settings such as universities and schools all around the world including Malaysia (Joseph, 1998 and Rosna & Sharifah Azizah, 1994). According to Oxford and Burry-Stock (1995) approximately 40 to 50 major studies, including a dozen dissertations and theses have been carried out using the SILL Questionnaire. Research reports and articles published between 1990 and 2000, claim that "the SILL appears to be the only language learning strategy instrument that has been extensively checked for reliability and validated in multiple ways" (Oxford & Burry-Stock, 1995, p. 4).

Studies carried out by Nyikos and Oxford (1993) and Oxford and Burry-Stock (1995), revealed that the reliability (.87-. 96) and validity (.95) of the SILL was reported to be high and the internal consistency reliability (Cronbach's alpha) is .96 based on a 1,200 person sample (Purdue University) and a .95 based on independent raters. They also claim that construct validity is high, based on strong relationships between SILL factors and self-ratings of language proficiency and language motivation. Grainger (1997) stresses that the construct validity is high, based on strong relationships between SILL factors and self-ratings of language proficiency and language motivation

The SILL is a structured self-report questionnaire, which helps learners understand how often and what kind of learning strategies they are using to learn English. The SILL questionnaire requires respondents to report their frequency use of language learning strategies based on 50 given statements about learning English. Respondents report their answers in a multiple-choice fashion using a 5-point Likert-scale ranging from 1 to 5. A scale of 1 indicates that the statement is 'never or almost

never true' of the respondent whereas a scale of 5 shows that the statement is 'always or almost true' of the respondent.

The SILL questionnaire consists of the following six categories: Category A - memory strategies (9 items), Category B - cognitive strategies (14 items), Category C - compensating strategies (6 items), Category D - metacognitive strategies (9 items), Category E - affective strategies (6 items) and Category F - social strategies (6 items). According to Oxford (1990) these six strategies were drawn from a comprehensive taxonomy of language learning which covers all the four skills of language learning, that is, listening, speaking, reading and writing. A sample of the SILL questionnaire used in this study is provided in Appendix 6.

The SILL Questionnaire was administered twice to the 42 students with the cooperation of Karen, their ESL teacher. It was administered during an 80-minute English Language period. To ensure full participation, students were given advance notice that they would be taking the SILL on a certain day. They were also told about the benefits of participating in the study and that it was designed to help them understand how they could become better language learners. Prior to strategy training, the administration of the SILL Questionnaire was managed in the following manner:

Classroom management and logistics	10 minutes
Distribution and completion of Background Questionnaire	10 minutes
Distribution of Directions, SILL Items and Worksheet	05 minutes
Students read and complete SILL Questionnaire	30 minutes
Distribution of Profile of Results on the SILL	05 minutes
Scoring of results by students	15 minutes
Collection of all completed SILL Questionnaire components	05 minutes
<b>Total</b>	<b>80 minutes</b>

The same procedure was used to administer the SILL Questionnaire after the 15-week Strategy Training Programme. The Background Questionnaire was, however, not administered at the end of the training programme. During the administration of the questionnaire the students were reminded to give their honest response as it was not a test and there were no right or wrong answers on the SILL Questionnaire.

### Feedback Form

The students' perceptions of the effectiveness of the 15-week Strategy Training Programme was obtained through the administration of a self-constructed Feedback Form. It was administered at the end of the training programme during one of the students' 80-minute English Language periods. Students were reminded to give their honest responses as there were no right or wrong answers to the Feedback Form.

The Feedback Form looked into various aspects of learner autonomy. The 22 items in the Feedback Form were classified into three major categories. Items 1 to 3 and 13 to 16 in the Feedback Form investigated how effective strategy training was in creating awareness among students to take responsibility for their own learning. Meanwhile, items 4 to 12 helped to examine the students' success in managing their own learning process. Finally, items 17 to 22 helped to shed light on the students' perceptions of the 15-week Strategy Training Programme.

Section A of the Feedback Form which consisted of items 1 to 12 required respondents to rate how successful the 15-week Strategy Training Programme was in helping them to manage their own learning. Respondents were required to rate their

success using a 4-point Likert-scale ranging from 1 to 4. A score of 1 indicated that the students felt they were 'least successful' whilst a score of 4 reflected that the students perceived that they were 'most successful' in the mentioned aspect of learning. During the administration of the Feedback Form students were informed that 'success' referred to their ability to do something.

Section B consisted of four items, that is, items 13 to 16. In this section, respondents were required to read and rank statements according to importance based on a given scale.

Section C of the Feedback Form consisted of items 17 to 22. Here a total of six open-ended questions were posed to investigate students' perceptions of the Strategy Training Programme. Students were required to first read and answer the questions by ticking the given response, 'Yes' or 'No.' After that, students were required to give a reason for their choice. A copy of the Feedback Form is provided in Appendix 10 of this study.

### **Data Collection Schedule**

Since this research study involved a government-aided public school, permission was first sought from the Malaysian Ministry of Education to conduct the study. Once permission was obtained from both the Ministry of Education and the Selangor State Education Department, the data collection schedule was drawn up. This schedule took into consideration the P.J. Secondary Girls' School's activities and public holidays. A summary of the entire data collection process for this study is presented in Table 6.

Table 6

Data Collection Schedule

Week	Subjects	Task
1	42 Form 4 Orchid Students	Administration of Needs Analysis Questionnaire.
2	42 Form 4 Orchid Students	Administration of SILL Questionnaire
3 - 5	42 Form 4 Orchid Students	Ice-breaking Activities & Introduction to Strategy Training Programme
6 - 20	42 Form 4 Orchid Students	15 weeks of Strategy Training
7	Teacher	Observation of Trial Lesson
8	Teacher	Observation of Lesson I
9	42 Form 4 Orchid Students	Checking of Learning Contracts & Journals
10	Teacher	Interview I with Teacher
11	Teacher	Observation of Lesson II
14	42 Form 4 Orchid Students	Checking of Learning Contracts & Journals
15	Teacher	Interview II with teacher
16	Teacher	Observation of Lesson III
17	42 Form 4 Orchid Students	Checking of Learning Contracts & Journals
21	42 Form 4 Orchid Students	Administration of SILL Questionnaire Administration of Feedback Form Collection of Learning Journals
22	6 case study students	Interview with 6 students
23	Teacher	Interview III with teacher
24	6 case study students	Analysis of Learning Journals and Learning Contracts of 6 students

## Data Analysis

This section describes how the data from the various sources were analyzed according to five different instruments that were used to collect data in this study.

### Field-notes and Lesson Transcripts

Classroom observations were carried out to investigate how strategy training was implemented in the ESL classroom. The three observed lessons (Lessons I, II and III) were audiotaped and transcribed for data analysis. A descriptive-interpretive analysis was also conducted on field-notes taken during classroom observations. The field-notes were analyzed in tandem with the lesson transcripts and were subjected to both macro and micro level analysis following the procedures outlined by Alvermann et al. (1990). This process yielded the following four categories.

Category 1 looked into how the teacher managed the classroom learning activities. It recorded the different modes of instruction (such as whole-class instruction, individual learning and co-operative learning) and the amount of time spent on each of these observed modes of instruction.

Category 2 looked at the different types of classroom tasks and activities that were carried out in the class to encourage different levels of autonomy. Examples of such tasks included activities such as peer evaluation and question and answer sessions. These classroom activities were then subjected to further analysis based on Nunan's (1997) proposal of the five levels for encouraging and implementing learner autonomy.

The tasks were rated 1 to 5 for awareness, involvement, intervention, creation and transcendence respectively. The number of classroom activities recorded for each level of autonomy was then tallied and percentages were calculated. An example of the above mentioned analysis procedure is presented in Appendix 8.

Category 3 looked into the kinds of language learning strategies and how they were introduced in each lesson. At the macro level analysis, data were first analyzed to locate language learning strategies introduced in each lesson. These strategies were then analyzed to decide whether the strategy was introduced explicitly or implicitly to the students. At the microanalysis level, these strategies were further analyzed and sub-categorized using Oxford's (1990) categorization of Language Learning Strategies. A detailed list of these categories and the coding procedure used in this study is presented in Appendix 9. All the data on the kind of strategies introduced in each lesson were analyzed and presented in the form of percentages in a table.

Category 4 analyzed the data obtained from lesson transcripts to locate instances where students were either made aware of or allowed to apply aspects involved in managing the learning process. Managing the learning process in this study refers to instances where the teacher helped students to plan, organize, monitor and evaluate their learning process.

In order to carry out this procedure, lesson transcripts were first read to identify instances that helped students to plan their own learning. Planning in this study refers to helping students to plan their learning task, to formulate learning objectives and to propose suitable steps and strategies for handling an upcoming learning task. These identified instances were coded using the code PI and PII. The Roman numeral I



indicated an instance which showed awareness whereas the Roman numeral II indicated an instance displaying application. Hence, the code PII revealed an instance where the teacher encouraged students to apply their planning abilities.

Similarly, instances exhibiting the organization of the learning process were identified. In this study, organizing the learning process referred to instances where the teacher provided help and guidance to her students as to how they could determine suitable learning tasks, learning materials and when and how learning should be carried out. It also meant introducing students to the use of suitable learning strategies to accomplish a learning task. These instances were coded using the code OI and OII. Like planning, the code OI indicated an instance creating awareness whereas the code OII indicated an instance where students were provided with an opportunity to apply their organizing abilities.

On the other hand, instances depicting monitoring the learning process - that is making students aware of how to check and correct their own work was coded using the codes MI and MII. Likewise the codes EI and EII were used for identifying instances that showed evaluation of the learning process. The code EI exhibited an instance where the teacher made her students aware as to how they could self-assess their work whilst EII indicated an instance that helped students in evaluating their own or their peers' performance.

An example of this multiple coding procedure used is presented in Figure 8 (pp. 147-148). It shows the parallel coding according to categories 2, 3 and 4 mentioned above.

Cat. 2	Excerpts From Transcripts and Field-notes (Lesson II)	Cat. 3 Learning Strategies	Cat.4 Managing Learning
1	<p><b>Excerpt 1</b></p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><i>Field-notes - Teacher initiated question and answer session - to make students aware as to how to manage a reading comprehension task</i></p> </div> <p>T: ...what did you do to make sure you understood the passage? What are the steps you took, when you were reading? Anyone wants to share with the class? Ok, yes, Faridah. You tell the class what you did when you got the passage. How and what did you do to make sure you understood the passage?</p> <p>S: I read through the passage and then I look for the important facts.</p> <p>T: Ok. You looked for the important facts. That's all? Ok. Any other person who did it in a different manner? How many times did your read the passage? At least?</p> <p>Ss: two times. Three</p> <p>T: Ok, at least twice, some of you read it three times. Ok. Now you must remember that to make sure you understand the passage you must read it at least twice. Sometimes more than that. While you were reading, did you find any difficult words?</p> <p>Ss: No...Yes..</p> <p>T: Yes, what did you do when you found difficult words? Yes..Tasha?</p> <p>S: Pick out the word and look in the dictionary?</p> <p>T: Ok, so she looked into the dictionary to understand the difficult words... Class, this is what we call resourcing using the dictionary. Remember we have learnt resourcing using the dictionary. When you come across difficult words you have to resource and one resource that is easily available is the dictionary. Besides the dictionary what else can you use? Yes?</p> <p><b>Excerpt 2</b></p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><i>Field-notes - Teacher addressing whole class-teacher makes students aware of how they can monitor their learning - teacher introduces the strategy of self-questioning- explicitly.</i></p> </div> <p>T: Now, to check whether you understood the passage, what can you do, to check or monitor your understanding? Yes, anyone wants to share? No one? ... Well one way to check and monitor your learning or your understanding to make sure you really understand the passage and to know what is going on is to ask yourself questions. For example to make sure you understand this passage well is to ask yourself questions. You can ask questions like 'wh' questions - why/when/ how/ etc. This strategy is called self-questioning. By using the strategy of self-questioning you can check your own understanding. You do this by asking yourself questions like why, when, who, and how. For example, looking at the passage I can ask myself the questions like "Where was the writer? Who was with the writer? What were they doing? Okay? ..."</p>	<p>Implicit (IDS 1B)</p> <p>OI</p> <p>OI</p> <p>OI</p> <p>Explicit IDS 3A</p>	<p>MI</p>

2	<p style="border: 1px solid black; padding: 5px; text-align: center;"><i>Teacher gives more examples to provide necessary scaffolding and vets students to answer her questions.</i></p> <p>Now, I want to divide the class into two groups. This is Group 1, this is Group 2, ok? I'm giving to give you 5 minutes. You can either work individually, in pairs or in groups of 4. I want each of you to prepare two questions based on this passage. This will help you monitor you own understanding of the passage. Then we will have a inter-group quiz. Excerpt 3</p> <p style="border: 1px solid black; padding: 5px; text-align: center;"><i>When the students are ready with their questions - an inter-group quiz is held. Teacher first explains the scoring system to the class.</i></p> <p>T : Okay, Group 1, your question..... S : Okay, Why did the writer crawl to the dressing table for just a banana instead of going straight to the wardrobe for the tablets? T : Yes, anyone from Group 2 wants to answer that? Yes, you. S: He was suffering from hypoglycemia and so he was too weak to go to the wardrobe that was too far. So he decided to go to the dressing table to get the banana which was nearer . T : The wardrobe was too far. Ok, from which line did you get the answer? S : Lines 24 to 27 T : Ok, lines 24 to 27, Now group 1 is that the right answer and how many marks would you award her? S : the answer is right so 5 marks (students applause)</p>	IDS3B  Implicit DS 2A  DS 2C	MII    E II
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Key : T= teacher, S= student , Ss = students

**Category 2 - Level of autonomy displayed in language learning tasks and activities**

Level 1 - (Awareness) making students aware of the learning process or strategy use

Level 2 - (Involvement) getting students involved in the learning process

**Category 3 - Language Learning Strategies introduced explicitly and implicitly**

IDS 1B - Indirect Strategy (Metacognitive strategy - Arranging and planning your learning)

IDS 3A - Indirect Strategy (Social Strategy - asking questions)

IDS 3B - Indirect Strategy ( Social Strategy - co-operating with others)

DS 2A - Direct Strategy ( Cognitive Strategy - Practicing)

DS 2B - Direct Strategy (Cognitive Strategy - Analyzing and reasoning)

**Category 4 - Managing the Learning Process**

OI = an instance showing awareness for organizing the learning process

OII = an instance showing the application for organizing the learning process

MI = an instance showing awareness for monitoring the learning process

MII = an instance showing the application for monitoring the learning process

EII = an instance showing the application for evaluating the learning process

\* Note - Language used in lesson transcripts above is actual language used by the teacher and students

Figure 8. Example of multiple coding of lesson transcripts

For purposes of validity, an independent rater was employed to verify each of the above mentioned coding systems. The independent rater chosen was an English Language lecturer attached to a local Malaysian University with a background in research. The independent rater was required to code approximately 50 per cent from each of the three observed lessons. The process yielded an 83.7 per cent inter-rater reliability level. All differences of opinion were resolved through discussions.

### **Learning Journals and Learning Contracts**

The learning contracts and learning journals of the six identified students were analyzed to investigate how successful students were in managing their own learning. This helped to trace the development of learner autonomy among students.

Since students were required to record an entry into their learning journals after each English Language lesson, each student was expected to have approximately 30 journal entries at the end of the training programme. Before the analysis procedures were carried out, each journal entry was first coded for easy referencing according to week and lesson. For example Journal Entry 1a meant Week one Lesson 1 whereas Journal Entry 12b meant Week 12 Lesson 2. Since students were also encouraged to write entries on other aspects of language learning that they did on their own, some students had more than the 30 journal entries. Journal entries written outside the identified 30 classroom lessons were coded using Roman numerals. In such a case, Journal Entry 13 II referred to a student's second personal entry for week 13.

All the journal entries of all the six students identified for the case studies were read a few times in order to get a holistic picture of how students managed their learning. Each journal entry was subjected to both macro and micro level analysis and this process yielded the following two main categories.

In Category 1 of the coding process each entry was first read to get a holistic sense of how journal entries were written. These entries were then coded to find out whether the overall level of entry was reflective or descriptive.

Category 2 helped to analyze how students managed the learning process. In this study, self-management refers to the "understanding of conditions" that help a learner to "successfully accomplish language tasks" and therefore take suitable steps "to arrange for the presence of those conditions" (O'Malley and Chamot, 1990, p. 137). Based on this understanding of self-management, all the journal entries were deductively analyzed and coded according to the four main aspects of managing the learning process, i.e. planning, organizing, monitoring and evaluating.

In order to examine how effective strategy training was in helping students to plan their learning, the journal entries were analyzed to look into students' abilities to determine and formulate the objectives of classroom lessons. The students' written objectives were matched with the teacher's objectives for each lesson. Journal entries were also analyzed to investigate how successful students were in advance organizational planning - that is their ability to propose suitable strategies for handling an upcoming task or generating a plan of action for their own learning. These identified journal entries were analyzed using the codes PI and P II. The code PI indicated that

the entry recorded created awareness of planning the learning process whereas the code PII showed application of planning the learning process.

Similarly, journal entries were read to locate instances, which displayed the students' awareness and application of the organization of their learning. This applied to the understanding of conditions that helped the students to successfully accomplish language learning tasks or any other language learning experience. It included the students' ability to understand strategies and techniques to be used in the performance of learning tasks, the materials and content to be covered, and when and how long it would take to complete a learning task. These identified instances were coded as OI and OII. The code OI indicated students' awareness for organizing learning whilst the code OII was used to indicate students' application of organizing the learning process.

The monitoring of the learning process in this study refers to students' ability to check, verify and correct themselves while performing a language task. Journal entries, which displayed students' monitoring abilities were coded using the codes MI and MII. The code MI referred to students' awareness of monitoring learning whereas the code MII signified students' application or success in monitoring their learning.

Finally, journal entries were also analyzed to investigate how effective strategy training was in helping students to self-assess their work. Self-evaluation in this study referred to the students' ability to judge and grade their overall performance upon the completion of a learning task. In analyzing this aspect of the learning process the codes EI and EII were used.

Figure 9 provides an example of the multiple coding procedure used in analyzing students' learning journal entries.

Category 1	Journal Entry of Student A3	Category 2 Managing the Learning Process
Journal Entry 3a	Day : Wednesday Time : 10.15 a.m. - 11.25 a.m. Topic : Environmental Issues Objectives : How to write and plan a composition properly	PII
Descriptive	<p>Today's lesson was rather interesting. It is something different from other lessons although we are still using strategies such as mind-mapping and listing. <i>I learned the guidelines for composition writing. The steps are - understand the question, plan the composition, revise the first draft and edit. Then finally write the composition. The first step is to plan the composition by writing out the important points or making a mind-map. I have not gotten use to making mind-maps but my main problem is using the mind-map when I write my composition. I hope to accomplish proper planning of a composition in today's homework. At first, I was rather negative about the guidelines because from my point of view, there won't be enough time for me to actually draft the composition twice !! Impossible!!! In fact I have been taught from primary school not to do all these because of time constraint during exams. But later after I came home from school, I tried applying these guidelines to complete my homework, which was to write a talk on environmental issues. I did a mind-map and did two drafts. To my surprise, the whole process takes a fairly short time. After finishing it I checked my essay for spelling and grammar mistakes and make the corrections. I was very pleased with my work and I'm sure that I will be applying these guidelines during my upcoming test if needed. I'm really glad that I have achieved learning something that really is important to me during today's lesson. With that I rate myself 4/4 today as I have full understanding of what that was taught today. Thanks, Miss Karen !!</i></p>	OI
Reflective		EII
Reflective		
Reflective		OII
Reflective		MII
Overall = Reflective Entry		PI EII

Key :

P = Planning                      O = Organizing

M = Monitoring                  E = Evaluating

I = an instance depicting awareness of the learning process

II = an instance displaying application of the learning process

Figure 9 . Example of multiple coding of a journal entry

For purposes of validity, an independent rater was employed to verify each of the above-mentioned coding procedure. The independent rater, an English Language lecturer attached to a local university, was first provided the operational definitions used in this study for each aspect of the learning process (planning, organizing, monitoring and evaluating). She was required to rate three entries per student - one from the beginning phase of the training programme (weeks 1-5), one from the middle phase of training (weeks 6-10) and one from the final phase of the training programme (weeks 11-15). Therefore, she rated approximately 18 journal entries. This process indicated a 91.5 per cent inter-rater reliability level. All differences between the researcher and the independent rater were resolved through discussions.

Learning contracts were analyzed to investigate whether strategy training had an effect on developing learner autonomy among the students in terms of helping them to manage the learning process. Like the learning journals, the learning contracts too were analyzed to look into the students' abilities to plan, organize and evaluate their learning process. The monitoring aspect of the learning process was not displayed in the learning contract as the format of most learning contracts, including the one used in this study, did not encourage students to record the monitoring aspect of learning.

In order to explore how effective strategy training was in helping students to plan their learning, the learning contracts were analyzed to look into students' abilities to determine and formulate their own learning objectives based on their chosen topic of interest.



Learning contracts were also analyzed to investigate how successful students were in organizing their own learning process. This aspect of managing the learning process involved a number of aspects such as:

1. The students' ability to decide and propose suitable learning tasks to achieve the identified learning objectives;
2. The students' ability to determine and locate suitable learning materials to successfully accomplish the learning task(s) and
3. The students' ability to decide on the pace of learning - that is their ability to set and keep to proposed target dates for completing the chosen learning task(s).

Finally, learning contracts were analyzed to investigate the students' ability in self-evaluating their work or performance upon the completion of the learning task. Given on the next page (Figure 10) is an example of how the one of the six students' learning contracts was analyzed in this study.

LEARNING CONTRACT (2)

Name: STUDENT A1 Date: 5/7/99 Topic: Information in Reports

Objective (s): To read and understand a story book and to write a book report.  
To widen my vocabulary power while enjoying reading.

PLANNING

Proposed Task/Activity	Proposed Resources	Target Date of Completion	Evidence of Achievement	Assessment of Performance
1. To scan for unfamiliar words and search their meanings using a dictionary.	A horror story from the book entitled "The 7th Fontana Book of Great Horror Stories"	17/7/99	All <del>reading</del> <sup>these</sup> <del>have</del> been done in my vocabulary book.	I learnt a number of unfamiliar words and phrases that I'm positive will help me in my writing. Before searching for the meanings of these words, I had tried to guess them by connecting them to the words before and after. I thoroughly enjoyed reading and <del>doing</del> <sup>it</sup> writing the synopsis of the story. Still a lot to improve on my vocabulary.
2. To jot down new and unique phrases for future essays.	Title of the story is the turn of the tide by C.S. Forester	Completed 15/7/4/99		
3. To write a short account on the story for a Book Report.		Pacing the Learning Process		

Determining learning tasks → Determining Learning materials → EVALUATING

ORGANIZING LEARNING

Figure 10. Example of the coding procedure used to analyze a learning contract

### Interview Transcripts

To investigate whether strategy training had an effect on helping students to manage the learning process necessary for the development of learner autonomy, both the students' and teacher's audio taped responses to the interviews were transcribed.

Transcripts of the students' responses to the semi-structured interviews were deductively analyzed according to the following pre-determined categories viz.:

1. Students' awareness for learner autonomy;
2. Students' success in managing the learning process - i.e., planning, organizing, monitoring and evaluating their own learning; and
3. Students' perception of the Strategy Training Programme.

Similarly, the teacher's responses to the three open-ended interviews were also deductively analyzed. The analysis looked into various aspects such as how strategy training was implemented and the problems faced by the teacher in implementing it. Data obtained from the teacher's interviews also helped to shed light on the steps taken by the teacher to encourage learner autonomy and the overall students' and teacher's perception of the training programme.

## **The SILL Questionnaire**

In order to ascertain whether strategy training increased the use of language learning strategies among students, a comparison was made between the mean scores of both the pre and post results of the SILL survey. The SILL scores were first tabulated and the mean scores were calculated to investigate if there was a difference in the frequency use of learning strategies among students. These mean scores were then subjected to t-tests to find out if there was any significant improvement in the students' use of language learning strategies. The analysis of the data was carried out using the SPSS (Statistical Package for the Social Sciences) programme. The scores were reported in tables.

According to Oxford (1990) the SILL results are usually reported as follows: low, medium or high frequency use of strategies. A 'low' frequency use of learning strategies is indicated in a mean score ranging from 1.0 to 2.4. A 'medium' frequency use of strategies is exhibited in a mean score ranging from 2.5 to 3.4. Finally, a mean score ranging from 3.5 to 5.0 reflects a 'high' frequency use of strategies.

## **Feedback Form**

For the final part of the data analysis section, the Feedback Form looked into students' perceptions of the Strategy Training Programme. Here all the students' responses were tallied and the percentages were calculated and presented in tabular form.

In Section A of the Feedback Form, students rated their success on 12 different items regarding language learning based on a 4-point Likert-scale. Since the scale used was 1 to 4, the mean score of 2.5 was taken as a mid-point. Hence, a mean score of 2.5 and above in this study indicated that the students were successful whereas a mean score of 2.5 and below signified that the students were unsuccessful for that particular aspect of learning.

In Section B, students rated statements according to importance where the numeral '1' was regarded as 'most important.' The data was analyzed using non-parametric statistics whereby a weightage mean was calculated. The results were presented in tabular form. In Section C of the Feedback Form, students responded to open-ended questions giving reasons for their choice. These responses were deductively analyzed. All the students' responses to the Feedback Form were presented under the following three categories:

1. Students' success in taking responsibility for their own learning i.e. in planning, organizing, monitoring and evaluation;
2. Students' awareness of taking responsibility for their own learning; and
3. Students' perception of the 15-week Strategy Training Programme.

The findings were presented in summary tables in order to provide information relevant to each section / item presented in the Feedback Form. Finally, it must be stressed that data obtained from all the various sources used in this study were constantly compared, contrasted and triangulated to see if there were any similarities, differences and cause and effect relationships before any final conclusions were made.