Thesis
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Motivational factors and learners' strategies in the English as a Second Language classroom at Universiti Teknologi Malaysia with special reference to computer assisted language learning

by

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A thesis submitted for the degree of Doctor of Philosophy

Centre For English Language Teaching

University of Stirling

November 2000

06/01

DECLARATION

I hereby declare that this thesis has been composed by myself, and it has not been submitted for a degree at any other university.

Signature: 

ABSTRACT

The aim of this study is to investigate the motivational orientations affecting ESL learners in learning English and to identify learners' learning strategies when dealing with CALL instruction at Universiti Teknologi Malaysia. Specifically, the study seeks to investigate: (1) Motivational orientations when learning English in a conventional classroom, (2) Motivational orientations when learning English in a CALL classroom, and (3) Learners' strategies when learning English using computers. The data for the study were collected using two research tools: questionnaires and interviews. Two types of analyses, that is a Crosstabs and a Chi-Square tests were applied to the data.

This thesis is divided into six chapters. Chapter One presents the research context of the study. It also describes the significance of the study by addressing major questions concerning students' motivation when learning English at UTM. Chapter Two reviews the literature on motivational orientations and learning strategies to put the study in the broader research context. Chapter Three describes the sampling, research instruments and data collection procedures employed in the present study. Chapter Four analyses and presents the findings in relation to students' motivational orientations when learning English in a conventional classroom and in a CALL classroom. Chapter Five describes the findings in respect of students' learning strategies specifically when dealing with CALL tasks. Chapter Six presents a

summary of the major research findings and illustrates how the findings of the investigation relate to previous research findings. The chapter also indicates the implications of the findings for pedagogy, discusses the study limitations, and finally offers suggestions for future research.

The research results provide evidence that students put effort into learning English, showed a positive attitude, a strong desire, low anxiety, and high expectations when learning English using computers. The results also show that students used a wide range of strategies when working with computers, that is, metacognitive, affective, cognitive and social strategies. Based on the results of the study, the recommendation is made that if CALL is to be integrated in the English language curriculum at UTM, students' motivational orientations and learning strategies should be considered for effective teaching and learning.

Dedicated to

My lovely daughters,

Hazirah and Hazimah

ACKNOWLEDGEMENTS

I am grateful to Prof. M. Breen and Mr. John Higgins, my supervisors, for their constant guidance, support and encouragement throughout the course of this study. The expertise of Prof. M. Breen and Mr. John Higgins has made me feel privileged to share in their knowledge. I am also grateful to all the staff of CELT, at University of Stirling, who have helped me in their own special ways.

My deepest gratitude goes to my parents, sisters and brothers whose prayers and love have given me the strength and perseverance to complete this thesis. Most of all, I would like to express my special thanks to my husband, Ithnin for his encouragement, understanding, advice, guidance, patience and tolerance. And finally, my special thanks to my lovely daughters, Nur Hazirah and Nur Hazimah who have been very considerate, helpful and understanding throughout this study. They are the most marvelous daughters. The wonderful memories of seeing them growing up in Tullibody, Scotland, will not be forgotten. My family, Ithnin, Hazirah and Hazimah who shared the sorrow and joy of my thesis, they deserve my special love.

Above all, to ALLAH, the Almighty and Glorious for all the endless blessing.

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CHAPTER ONE

Introduction

1.1 Introduction

The purpose of this study is to investigate the motivational orientations affecting ESL learners in learning English in a conventional classroom and a computer assisted language learning (CALL) classroom. A related purpose is to identify learners' strategies when dealing with computer-based instruction at Universiti Teknologi Malaysia (UTM). However, before pursuing these purposes, it is necessary to present the context of the research. The chapter presents the issues relating to English language and computer education in Malaysia. It also discusses the significance of the study within this context. Finally, it describes the organisation of the thesis.

1.2 The research context

It is important to present an overview of the context of the research before getting into the research details in order to provide a better understanding of relevant research issues. This section will first provide information concerning English in the Malaysian education system. It then focuses on information concerning English language in UTM, and finally upon the development of computer education in

Malaysia.

English language in the Malaysian education system

Bahasa Malaysia, the national language and also the official language of the country, is the medium of instruction in all government-assisted schools. The implementation of the national language in schools has phased out English as the medium of instruction in schools established during the British administration. The National Education Policy however, recognises English as the second most important language that needs to be taught after Bahasa Malaysia. This is reflected in the new primary and secondary school curriculum where the teaching of English Language is given emphasis after Bahasa Malaysia. English Language is a compulsory subject in all government-assisted schools. Students will study English for a total of eleven years, that is, six years in the primary school and five years in the secondary school before they further their studies at higher levels or seek jobs. Through this policy, the teaching-and-learning of English Language is spread over the whole nation.

The government urged that English should continue to be taught and taught well in schools. The Deputy Education Minister, Dr. Leo Michael Toyad suggested that English should also be emphasized at the tertiary level. He proposed that "colleges and universities should take a more active role in English Education by collaborating closely with English Language teachers and researchers to ensure that

students coming in for tertiary education are proficient in English" (New Straits Times, 23rd November, 1993).

In 1976 the Communicative Approach was adopted into the English Language Syllabus. The Ministry of Education believed that the Communicative Syllabus would fulfil the practical needs of the school leaver, because "ninety percent of form five leavers enter the job market and do not expect to participate in tertiary education" (1975: 4). For potential tertiary students, on the other hand, the universities are expected to programme their own language requirements.

For continuity with the school syllabus, UTM adopted the Communicative Approach into its English Language Syllabus. The English language syllabus designed in schools and UTM aims to equip students with the skills and knowledge of English to communicate in certain everyday activities and certain job situations. The syllabus emphasises the teaching of both oracy (listening and speaking) and literacy (reading and writing) skills. The contents of the two syllabuses, their structures, scopes and sequences take into consideration the position and role of the English Language in the country, and the needs for it at both national and international levels.

English Language in Universiti Teknologi Malaysia

The students participating in the study were from the Universiti Teknologi Malaysia (UTM), it is therefore thought appropriate to provide a brief description of the

university. UTM was established in 1972 and it focuses its attention on courses in the field of Science and Technology. There are a total of ten faculties which deal mostly with science and technological education. The student population in the university has increased progressively and presently there are about 19,000 students who follow various courses in the two broad disciplines.

Students joining UTM come mainly from the science stream in secondary examinations. These students must have, at least, obtained credits (C3 to C6) in science and mathematics subjects in the Malaysian Certificate of Education Examination (SPM) in order to be accepted into various faculties. Courses offered at the University are between two and five years. In UTM, Bahasa Malaysia is the medium of instruction in all of its academic disciplines.

In keeping with the National Education Policy and to furnish the government needs of having literate and knowledgeable people in the field of science and technology, UTM has made English a compulsory subject for most of the students entering UTM. The importance of English language in UTM is reflected in the graduation requirements where a student needs to attend and pass all English courses as required by the Department of Modern Languages. All students entering UTM are required to sit for an entrance test known as the English Language Proficiency Test (hereafter, ELPT). A student whose level of proficiency is below the minimum required by the university is required to take the English Language Proficiency Course (hereafter, ELPC). The ELPT scores will determine the English courses that

students need to attend. The higher they score in their ELPT, the fewer courses they are required to attend. The Department of Modern Languages is given the responsibility for conducting all of the English Language courses.

The Department offers four English language courses. Some courses are offered during the first semester while others are offered in the second semester. Students who fail a course are allowed to repeat the course when the Department is offering it, but no two courses are allowed to be taken within a semester. All the courses are five-hours per week giving two credits. Since one of the courses is the focus of this study, it is necessary to provide a brief summary of the courses offered by the Department.

UHB 1212 (English 1)

This is a remedial course which students with the lowest scores in the ELPT are required to take. This course is designed for a two-fold purpose, namely to remedy students' weaknesses in the use of English, and to raise the proficiency level of the students in the following areas: grammar and writing, reading comprehension, and oral communication. The three components are taught through an integrated approach. The material used is simple, content-based and serves as a basis for the learning of the four basic language skills. Students are encouraged to participate in discussions on relevant reading and/or listening input as well as on current issues.

UHB 1222 (English 2)

This course is designed to integrate the four language learning skills using science and technology biased materials. Students are given practice in reading and extracting information from authentic science and technology texts and public interest texts, taking notes from tape-recorded texts, participating in discussions and presenting the findings of their discussion orally and in writing.

UHB 1232 (English 3)

The course also focuses on integrating the four language learning skills. Specifically designed materials compiled into units taken from general science and technology texts are used in the course. Students are given training in taking notes from written and taped-recorded texts which are then used for written and oral presentations. The skills of memo-writing and effective oral presentations are also introduced.

UHB 1242 (English 4)

The course is designed to prepare students to enter the 'real world' after graduation. The emphases of the course are on business correspondence, job application and interview, report writing and oral presentation, and meetings. Students are required to work in small groups on assigned tasks or projects leading to written and oral presentations of the outcome of the tasks or projects. The students are also given practice in conducting meetings and making impromptu speeches about various issues.

All students who are taking these English language courses are required to follow the sequence of the courses unless the Department exempts them from taking some on the basis of the ELPT results. The duration for each of the above courses is one semester. It is a sixteen-week period between the commencement and termination of the each semester.

Computer education in Malaysia

As this study aims to examine students' motivational orientation when learning English in a CALL classroom and their learning strategies when dealing with computer-based instruction, it is important to be aware of students' prior experience in working with computers in schools before coming to UTM. Computers were first introduced into Malaysian schools in 1986 through the setting up of Computer Clubs in most urban schools (Ministry of Education, 1986). The response from the students was very encouraging. The numbers of members of these clubs increased, and so did the number of clubs. Some schools later adopted these clubs as part of the school extra-curricular programmes, while others took the opportunity to try out the use of computers as a form of teaching aid. Since then the use of computers amongst school children has become increasingly popular.

In July 1992, the Ministry launched a Computer-in-Education programme. The focus of the programme was to develop computer literate students. The overall objective of the programme was to provide students with a knowledge of computing

and its application, and to develop their potential through teaching and learning with the aid of computers (Ministry of Education, 1992). Since computers have been introduced into most Malaysian schools, students were already equipped with at least a basic knowledge of the uses of computers. The schools thus not only produce computer literate learners, but also lessen the responsibility of language teachers at higher institutions for having to conduct introductory computer classes. The computer knowledge and experience attained by learners in schools can therefore be useful in designing an English language curriculum which includes CALL methodology.

1.3 Significance of the study

The major reasons for investigating motivational orientations and learners' learning strategies in relation to CALL is that, firstly, there has been no previous study on students' motivation in learning English in UTM. Most of the students coming to UTM have undergone at least eleven years of learning English as a subject in schools. When they enter UTM, most of them are required to attend and pass English courses in order to be able to graduate from the university. The questions that arise are: Are the students interested in learning English after having learned English for at least eleven years at school? Do they think it is important to learn English at the university when English is not used in any of its courses? In UTM, students' attendance in English courses was believed by the providers of the language course to disclose students' interest in learning English. In the contexts of poor attendance, the university ruled that students whose attendance was less than

80 percent and who failed to produce valid reasons for their absence during English class would automatically fail the English course. Thus, it would be appropriate for this study to explore students' motivation more closely.

Second, since the computer is making its way into the education system in Malaysia, it would be interesting to investigate students' motivation to learn English specifically when using computers. This research would help UTM to determine its investment in establishing a CALL laboratory. Most important of all, it would provide a basis for understanding the students' needs in learning language using computers and, therefore, provide a basis for the development of an alternative computer-based approach to language teaching and learning to complement conventional classes. Therefore, an optimum level of use of the facility could be informed through a study of students' views of computer-based language learning.

Third, new developments have meant that, in this era of computer technology, the use of computer-based instruction in language learning is becoming widespread. Numerous CALL programs have been developed with the sole intention of successfully assisting the learning of the target language. As such, it is necessary for a language learning institution like UTM to become involved in an informed way in the development of this innovation and to utilize it appropriately. In addition, such involvement would ensure that, not only would UTM benefit from new opportunities, but it would not be left behind in new technology. Thus, this study

may contribute to the formal involvement of UTM in using computers in the ESL classroom.

Fourth, no research on learners' strategies when dealing with CALL has been undertaken in UTM. One of the aims of the present study is to explore the strategies which learners employ as they learn English using computers. By understanding what learners actually do when working with computer-based instruction, additional and useful information can be gathered which can be related to information on the students' motivational orientations when learning English using computers. Information gathered on the motivational orientations can form a fundamental basis for materials development which then can be tied in with information gathered on the learners' strategies in order to develop effective learning materials. Both kinds of information are, therefore, mutually beneficial.

Research questions

The present study seeks to examine the motivational orientations and learning strategies of ESL students at UTM when learning English. It further seeks to compare these in relation to the different contexts of the conventional classroom and the CALL classroom. The study, therefore, attempts to address the following major questions:

1. What are students' motivational orientations when learning English in a conventional classroom and in a CALL classroom?
   a. Do students put effort into learning English language?
   b. What are students' attitudes towards learning English language?
   c. Do students have the desire to learn English language?
   d. Do students feel anxious when in English language classes?
   e. What are students' expectations regarding their learning of English language?
2. Is there a similarity or difference in students' motivation when learning English language in a conventional classroom as compared with a CALL classroom?
3. If there is a similarity or difference in students' motivation, can this similarity or difference be related to such independent variables as students' gender, faculty membership, proficiency levels, and their plans after graduation?
4. What range of learning strategies do students seem to use when dealing with CALL tasks?
5. Do students' learning strategies appear to vary according to gender, faculty, proficiency levels, and plans after graduation?

1.4 Organisation of the thesis

This section describes the content of the thesis that follows in order to make clear the overall aims, structure and sequence of the study. The remainder of the dissertation is comprised of five chapters.

Chapter Two reviews the theoretical constructs of second language learning in relation to motivational orientations, learners' strategies and computer assisted language learning. This chapter discusses influential early and more recent views concerning the definition and concept of motivation. The chapter also presents the definition and classification of learners' strategies as adopted in the study based upon previous strategy research. It also discusses evidence for benefits and limitations of computers in language learning and teaching. Previous studies concerning motivational orientations and learners' strategies when dealing specifically with computer assisted language learning are also dealt with in this chapter.

Chapter Three describes the research design for the present study, focusing upon the sampling, research instruments and methods for data collection. Chapter Four provides a detailed profile of analysis of students' *motivational orientations* when learning English in a conventional classroom and in a CALL classroom. It analyses data collected from questionnaire and interview surveys using two types of analysis; a Crosstabs and a Chi-Square test. This chapter examines the relationships between the independent variables of students' gender, faculty, proficiency levels and plans after graduation and the dependent variables of effort, attitude, desire, anxiety and expectations when learning English. The chapter also demonstrates a comparison between the conventional classroom and the CALL classroom with reference to all these variables.

Chapter Five presents and analyses data collected from questionnaire and interview surveys in an attempt to examine the *learning strategies* of the sample population. The chapter describes the results of two kinds of analysis applied to the data: a Crosstabs and a Chi-Square test. Through the use of these two types of analysis, the variation between the strategy use and variables including students' gender, faculty, proficiency levels and plans after graduation are explored in detail.

Chapter Six presents an overview of the major findings of the investigation and examines the implications for language learning and teaching. The chapter also discusses the relevance of the findings to previous research. It puts forward suggestions and recommendations for the direction of future research and provides concluding remarks about the investigation carried out here.

CHAPTER TWO

Research on motivational orientations, learners' strategies, and computer assisted language learning

2.1 Introduction

This chapter explores the research literature directly relevant to issues that are investigated in the present study. This review focuses on learners' motivational orientations in second language learning, learners' strategies and the contributions of computer assisted language learning. First, the chapter examines the highly influential social-psychological framework of second language learning motivation as developed in the 1970s and 1980s in which Gardner and his associates established their theory. Second, it provides recent critical perspectives on the motivational concepts developed at that time. Third, it deduces a theoretical framework for second language learning strategies. Fourth, the chapter discusses the evidence for the benefits and limitations of computer assisted language learning in relation to the second language teaching and learning. In addition to examining

the theoretical developments in these fields, it also discusses the corresponding research methodologies.

2.2 Influential theory and research on motivational orientations

Since the inception of Gardner's motivational-attitudinal theories of second language learning (Gardner and Lambert, 1972), interest in motivational and attitudinal variabilities has grown considerably. The Gardner and Lambert studies brought to attention the issue of motivation as a major factor influencing the second language learning. Motivational orientation has since been the focal point of studies around the world. Some researchers have elaborated on the original Gardnerian theories concerning the learning of second language, while others have moved in other directions, such as incorporating insights from different psychological theories.

The basic research question which Gardner and Lambert had asked themselves and which then had led to much of their research was:

> How is it that some people can learn a second language or foreign language so easily and do so well while others, given what seem to be the same opportunities to learn, find it almost impossible? (Gardner and Lambert, 1972: 130)

The study of second language learning motivation thus originated in the search for possible causes of language learning success, and in particular, causes of variability in individual achievement. In Gardner's (1985) socio-educational model, he concentrated on individual variables as they relate to achievement in second

language learning. In this model, Gardner focuses on four classes of variables: (1) Social milieu (2) Individual differences (3) The language acquisition context and (4) Outcomes.

Regarding the first variable, that is, social milieu, Gardner (1985: 146) explains that:

> A central theme of the model is that second language acquisition takes place in a particular cultural context. It proposes that the beliefs in the community concerning the importance and meaningfulness of learning the language, the nature of skill development expected, and the particular role of various individual differences in the language learning process will influence second language acquisition.

Within the notion of social milieu, there will be variations in a cultural belief that learning a second language is difficult or not important which may relate to a low level of achievement. But if the cultural belief is that learning a second language is easy and that most individuals will be able to learn it, the level of achievement may be relatively high. Individual differences in achievement will then be related to individual differences in intelligence, aptitude, motivation and anxiety (Gardner, 1985: 146). Gardner (1985: 147) argues that "the cultural beliefs will influence not only the general level of proficiency in a second language that will be achieved in a community but also, and more importantly, those factors that will influence individual differences in achievement".

Gardner's (1985) second variable in the socio-educational model therefore concerned individual differences. Gardner presented four different kinds of

individual differences that he saw as having a direct effect on foreign language achievement: intelligence, language aptitude, motivation and situation anxiety. Each individual difference was seen as important in terms of its effect on second language acquisition. Intelligence plays a role in language learning as it "determines how well or how quickly individual understand the nature of any learning task or any explanations provided" (Gardner, 1985: 147). Language aptitude "is defined as a series of verbal and cognitive abilities ... that would play a role in language learning in that individuals with high levels ability would be able to generalize these abilities to the new language ..." (Gardner, 1985: 147). Motivation is the "effort, want (desire), and affect associated with learning a second language" (Gardner, 1985: 147). Motivation determines how much effort one expends in acquiring a second language. Situation anxiety creates an inhibiting atmosphere that interferes with acquisition. Gardner (1985) suggests that these four individual variables (intelligence, language aptitude, motivation and situation anxiety) affect every individual's performance in a second language learning situation.

The third variable considered by Gardner's model is the context of language acquisition. Gardner made a distinction between a formal and informal context. A formal context means language is learned through instruction, for example, in a classroom situation or teacher-student context. An informal context refers to contexts where individuals are exposed to the language naturally, and language is learned without instruction, for example, by watching television, listening to the radio or reading. Gardner suggested that the four individual differences

(intelligence, language aptitude, motivation and anxiety) relate to differences in achievement of language learning in a formal context while, in an informal context, motivation and anxiety relate more highly to language achievement than do intelligence and aptitude.

The fourth variable of the model is language outcomes. Gardner (1985) explains that two outcomes result from the experience of learning a second language. The two outcomes are linguistic and non-linguistic. The linguistic outcome refers to second language proficiency, vocabulary, grammar and pronunciation, while the non-linguistic outcome refers to attitudes, cultural values, self-concept, motivation and interest in further language study. This socio-educational model was not seen as final. Gardner (1988: 102) pointed out that "the model was never intended to be one that would explain all... It was intended simply as a useful heuristic that could explain existing data, suggest possible processes that might be operating in second language learning, and indicate further directions for research".

Motivation has generally been looked upon as the most influential and forceful among other factors which can influence the educational process. De Roche (1971: 252) states that "educational psychologists agree that motivation is an integral part of the learning process. As such, it must become for the teacher a 'teaching habit'. The success and failure of a learning task partly depends on how the learner is motivated toward the task". Ball (1977: 1-2) also emphasized motivation as a central concept in any theory of education. When failure occurs in an education

system, motivation is often blamed". Teachers sometimes blame students as 'unmotivated' when the students do not follow or behave in the way the teachers would like them to behave or act. The blame tends to be stronger on the students when the students' performance is below the teachers' expectation. Although motivation is not the only factor which can facilitate learning, it has been proved to be an effective determinant of efficient learning. All "theorists in the field of learning either explicitly or by implication argue that a motivated creature is more likely to learn than one which is not" (Child, 1986: 92). Such a close link between motivation and learning has enhanced the role of a student's motivational orientations in relation to sufficient and productive learning. Learning seems to be more complete and more efficient when it is energized and directed by strong motivational factors.

Gardner (1985: 50) states that "motivation involves four aspects, a goal, effortful behaviour, a desire to attain the goal and favourable attitudes toward the activity in question". He further elaborates that, in order to assess and measure motivation in learning a language, the following four components should be examined:

1. An individual's orientation to language study (integrative or instrumental) which reflects the goal of language learning.
2. Motivational intensity which refers to the degree of effort one expends to reach the goal.
3. A desire to attain the goal of learning the language.
4. Attitudes toward learning the language.

The first aspect of motivation refers to the goal of language learning. This concerns the question of why a student learns a second language. Gardner (1985) believes that a 'goal' is a stimulus which gives rise to motivation. He states that "to reflect the kind of motivation for language learning, however, the reasons have to reflect some goal associated with language learning" (1985: 51). Once the reasons have been clarified, it is possible to classify them. The various categories of reasons have been referred to as 'orientations' (2 major groups – integrative orientation and instrumental orientation).

Examples of integrative orientation taken from Gardner (1985) include:

1. Studying French can be important for me because it will allow me to meet and converse with more and varied people.
2. Studying French can be important for me because I will be able to participate more freely in the activities of other cultural groups.

Examples of instrumental orientation taken from Gardner (1985) include:

1. Studying French can be important for me because it will make me a more knowledgeable person.
2. Studying French can be important for me because I think it will someday be useful in getting a good job.

Gardner makes a distinction between orientation in his terms and motivation. "Orientation refers to a class of reasons for learning a second language", while

motivation consists of three characteristics: attitudes toward learning the language, desire to learn the language, and motivational intensity, which may or may not be related to any particular orientation (1985: 54). The distinction can be clarified by considering the difference between an integrative orientation and an integrative motive. "An integrative orientation refers to that class of reasons that suggest that the individual is learning a second language in order to learn about, interact with, or become closer to, the second language community" (Gardner, 1985: 54). The integrative motive, on the other hand, includes not only the orientation but also the overall nature of the motivation, that is, attitudes toward learning the language, desire, and motivational intensity. The essential point according to Gardner is that, in order to achieve the goal, a student needs to expend some effort, show a desire or want for the goal of learning the language and have some favourable attitudes towards learning the language. It must be noted that given the same goal, two individuals could differ in their effort to achieve the goal.

Gardner's second aspect of motivation is motivational intensity. This refers to the strength of a student's desire to learn the second language, as reflected by the amount of work done for classroom assignments, future plans to make use of the language, and the effort made to acquire the language. A measure of students' motivational intensity is important, as it will provide researchers with some baseline information regarding how motivated students really are in learning the language. Motivational intensity reflects one's effort to attain a goal. Each individual differs in his or her effort to achieve set goals. If one has great motivational intensity, this

means that one expends a great amount of effort to attain a goal. Therefore, to assess motivational intensity, the amount of effort the individual expends or is willing to expend should be determined.

Gardner (1985) presents a research methodology which is based on self-report measures. "The self-report measures tend to focus on questions dealing with amount of effort spent on homework, willingness to take on special assignments, activity spent on improving level of knowledge and intentions about using available opportunities to improve French knowledge" (p.53). The following are some questions (taken from Gardner, 1985) which are based on these measures.

1. When it comes to French homework, I:
   (a) put some effort into it, but not as much as I could.
   (b) work very carefully, making sure I understand everything.
   (c) just skim over it.

2. If French were not taught in school, I would:
   (a) pick up French in everyday situations.
   (b) not bother learning French at all.
   (c) try to obtain lessons in French somewhere else.

3. When I am in French class, I:
   (a) volunteer answers as much as possible.
   (b) answer only the easier questions.
   (c) never say anything.

Gardner (1985) believes that intensity alone is not enough to describe the concept of motivated behaviour. He suggests that emotional aspects such as desire and attitude

must be included for a complete representation of motivation. The third aspect of motivation concerns desire. The desire to learn the language is a strongly affective aspect of motivation. It reflects one's want or need to learn the language. Gardner's self-report measures addressed desire through the following knits of questions:

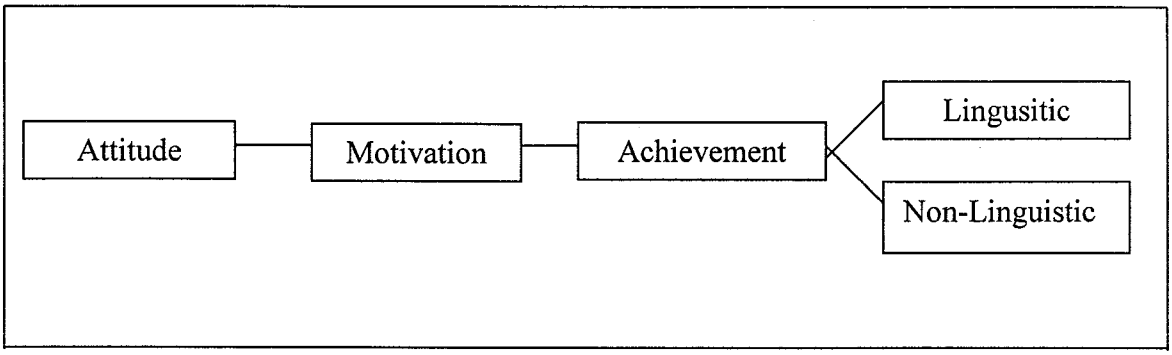
1. During French class, I would like:
   (a) to have a combination of French and English spoken.
   (b) to have as much English as possible spoken.
   (c) to have only French spoken.

2. I find studying French:
   (a) not interesting.
   (b) no more interesting than most subjects.
   (c) very interesting.

3. If it were up to me whether or not to take French, I:
   (a) would definitely take it.
   (b) would drop it.
   (c) don't know whether I would take it or not.

The fourth aspect of motivation is attitude. Gardner (1979) states that attitudes are relevant to second language acquisition because they serve as motivational supports. Gardner's (1979) model (Figure 2.1) can be summarized as follows: Motivation has a direct influence on second language achievement, whereas attitudinal measures have a direct influence on motivation which mediates their relationship with second language achievement.

Figure 2.1: A model of the relationship of attitude with motivation and achievement (Gardner, 1979: 207).



Motivation is therefore located as a mediator between attitude and achievement in second language learning. Although attitudes are regarded by Gardner as having no direct effect on achievement, they are viewed as having a direct impact on a person's motivation:

> In its complete form, the model states that individual differences in a number of social attitudes give rise to individual differences in motivation which in turn are responsible for variability in achievement (Gardner, 1979: 206).

Gardner, Lalonde and Pierson (1983) relate attitudes to the social aspects of language acquisition, and are specifically defined in terms of two clusters:

> One, integrativeness, refers to a cluster of attitudes relating to outgroups and foreign languages in general as well as attitudes toward the specific language community and integrative orientations to language study. The other, attitudes toward the Language Learning Situation, involves attitudes to such aspects of the learning context as the teacher, the course, etc. (p. 2).

Gardner (1985: 56) goes on to explain that "in order to understand the role played by attitudes and motivation in second language acquisition, it was necessary to conceptualize them as a complex organization of attitudes and motivation". He believes that attitude and motivation are important because they determine the extent to which individuals will actively involve themselves in learning the language. Gardner, Lalonde and Pierson (1983: 11) support this by saying that "attitudes are important in second language acquisition because they affect the individual's motivation to learn the language".

In relation to Gardner's perspective, Hills (1983: 81) further expresses that "in education [attitudes] are considered very important since they affect the learning process". Hills believes that attitudes can influence the way students carry out the learning activities and react to the various learning situations. Attitude is also thought to provide answers to why some students avoid while others approach educational tasks. For example, if students develop positive attitudes towards learning English language, they presumably can enhance their favourable attitudes towards learning the language which in turn may lead to successful achievement. Disick (1972) further suggests that attitudes towards second language learning can be improved if teachers seek to promote their students' interest and enjoyment. He believed that it is sometimes possible for teachers to anticipate the students' needs and interests. As teachers learn more about their students and how they learn, they are in a better position to anticipate students' effective strategies for language learning.

Anxiety is the other component of motivation which some researchers like Gardner have seen as important in a language learning classroom because it can have an impact upon the learning process of a student. Definitions of anxiety have included:

> Anxiety as individual experiences of general uneasiness, a sense of foreboding, a feeling of tension, in situations where the cause of the tension was not readily apparent.
>
> Hansen (1977: 91)

> Anxiety as unpleasant emotional state or condition which is characterized by subjective feelings of tension, apprehension, and worry, and by activation or arousal of the autonomic nervous system.
>
> (Speilberger, 1972: 482)

> Anxiety is associated with feelings of uneasiness, self-doubt, apprehension, or worry.
>
> (Brown, 1987: 106)

From the above definitions, 'anxiety' can be summarised as an emotional reaction to an unknown threat or the uncertainty of the sources of the threat; a feeling of tension. An example would be students who are afraid that their classmates will laugh at them when they speak in the English class. Thinking how others might react to their response has led these students to build up tension in themselves, become nervous, worried and confused to speak in the class. Thus, they may not perform well.

Anxiety has been examined in terms of its levels and types. Spielberger (1966: 363) believes that "the anxiety level of an individual fluctuated over time in response to both internal and external stimulation, and there were stable individual differences in the degree to which anxiety would be manifested in any given situation". Gaudry and Spielberger (1971) cite Spielberger et al's (1970) definition of two distinctive anxiety concepts, that is, state anxiety and trait anxiety. The definitions are as follows:

> State anxiety is conceptualised as a transitory emotional state or condition of the human organism that is characterised by subjective, consciously perceived feelings of tension and apprehension and heightened autonomic nervous system activity. ... Trait anxiety refers to relatively stable individual differences in anxiety proneness.
>
> Spielberger (1971: 14)

In summing up Spielberger's (1971) definitions, it can be said that state anxiety may vary in intensity and fluctuate over time. For example, a student going off to high school for the first time would exhibit state anxiety. As for trait anxiety, some individuals respond with different levels of anxiety to situations which are perceived as threatening. A person with high trait anxiety would tend to be highly anxious in most situations and a person with low trait anxiety would tend to be low in anxiety, even in relatively threatening circumstances.

Gaudry and Speilberger (1971) suggest that there is a consistent relationship between anxiety and educational achievement. Kleinmann (1977) believes that the

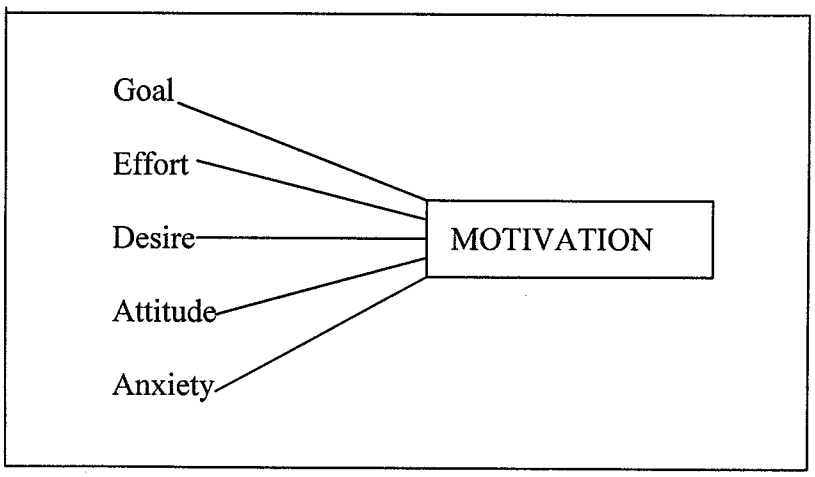
two types of anxiety - facilitating anxiety and debilitating anxiety, provide an explanation to why studies sometimes find positive correlations between anxiety and language proficiency and at other times negative correlations. In many studies, researchers sought to define facilitating anxiety and debilitating anxiety. Williams (1991) for example, explores Albert and Haber's (1960) descriptions of facilitating anxiety and debilitating anxiety. According to Albert and Haber, facilitating anxiety is considered as a source of motivation, and debilitating anxiety is a distractor.

Scovel (1978: 139) states that "facilitating anxiety motivates the learner to 'fight' the new learning task; it gears the learner emotionally for approach behaviour. Debilitating anxiety, in contrast, motivates the learner to 'flee' the new learning task; it stimulates the individual emotionally to adopt avoidance behaviour". In relation to this matter, Brown (1987: 106) comments that "the notion of facilitative anxiety is that some concern, some apprehension, over a task to be accomplished is a positive factor otherwise, a learner might be inclined to be 'wishy-washy', lacking that facilitative tension that keeps one poised, alert and just slightly unbalanced to the point that one cannot relax entirely". In addition, Spolsky (1989: 112) suggests that "anxiety can have two effects that cancel each other out, leading to facilitation in some cases and interference in others. Up to a point, an anxious learner tries harder; beyond this level, anxiety prevents performance".

To sum up Gardner's paradigm concerning motivation for learning a language, motivation is seen as the individual's total drive to the goal of learning the language

and reflects a combination of effort, desire and attitude towards learning the second language. It is fair to claim that motivation as defined in this way has been widely accepted by researchers since the 1980s as key factors which influence students in learning a second language. However, "Motivation is a difficult subject to analyze because so many different factors influence the inclination to learn" (Beihler and Snowman, 1990: 516). In the domain of second or foreign language learning, students certainly approach the process of language learning with different levels of motivation depending on their motives for learning. "Many students pursue foreign language studies as a requirement or as a basic tool for later purposes (study, professional reading, or travel) and are willing to trust the teacher's judgement as to the best way to achieve these goals efficiently" (Rivers, 1969: 80-1). Figure 2.2 summarises the components of motivation as identified by researchers where motivation is seen by them as an essential factor in bringing about efficient learning.

Figure 2.2: Components of motivation



2. 3 Current views on motivation research in second language and foreign language learning.

More sharply critical reviews of Gardner's paradigm concerning motivational orientations have emerged over the years. Earlier comments tended to focus on certain specific methodological or theoretical aspects only. Oller (1977, 1981), and Oller and Perkins (1978a, 1978b) questioned the validity of the measurements used by Gardner and his associates to obtain data on motivation and attitudes. They claimed that the three sources of variance, that is approval motive, self-flattery and response set might provide unreliable and invalid results. They believed that these sources are important in an attitude questionnaire because some behaviours may be accepted in a society, while others may not be. They also criticised the scales used by the subjects to rate themselves.

Oller and his associate commented on the approval motive by stating that subjects tend to evaluate themselves in accordance with the beliefs that exist in their society. In such a situation, students may show only desirable or undesirable attitudes in their responses. The use of bipolar scales especially, may conveniently allow students to approve one side of the pole. Concerning the self-flattery source, Oller's criticism was based on a study he and Perkins did in 1978(a). They reported a correlation between self-ratings on various personality traits, on one hand, and ratings of value of the same traits on the other. Their study led to the interpretation that people enjoy flattering themselves and they do it by rating themselves higher on traits that they think are important. Most of the subjects did not make an attempt

to provide honest and unbiased responses. In relation to response set, Oller and his associate pointed out that once the subjects show agreement or disagreement with a certain view, there is a tendency for the subjects to remain consistent in their responses throughout the questionnaire.

The definition of motivational orientation is an issue of concern in many studies related to this work. McDonough (1981) comments that there are no clear distinctions between integrative and instrumental orientations in Gardner's work. He speculates that there may not be a strong form of integrative orientation for many language learners. Indeed, Clement and Krudenier (1983) in their investigation found that there is no clear justification that integrative orientation is common among language learners. They conclude that their results raise doubts about the construct validity of a general integrative orientation. Another area of criticism concerns the question of the influence of success on motivation. The Gardnerians believed that motivation causes achievement in second language learning. Studies done by Burstall (1975), Hermann (1980), and Strong (1984) indicate that achievement is primary and motivation is the consequence. Motivation may be the result of successful learning experience.

Gardner and Lambert (1972) viewed motivation as a presupposed intention on the part of the students to learn the target language with instrumental or integrative aims in mind. Although certain aspects within these orientations often overlap, in general, an instrumentally oriented learner is described as a person who seeks

learning the target language for utilitarian or operational purposes, while an integratively oriented learner needs to learn the target language for affiliative purposes and possibly for integration with the target language community (Gardner and Lambert 1972). Gardner and Lambert found the integrative orientation to correlate more highly with the learners' higher degree of achievement in the target language. Gardner and Lambert (1972: 15) believe, "the integratively oriented learner might be better motivated because the nature of his goals is more likely to sustain the long-term effort needed to master a second language". The Gardnerian theory regarding the integrative orientation of motivation seems to be workable only in situations where learners directly experience the socio-psychological benefits in a bilingual and bicultural type of environment. The findings of some investigations such as the Philippines study in Gardner and Lambert (1972), Lukmani (1972), and Kraemer (1993) suggest that in certain linguistic and cultural contexts, an instrumental rather than integrative type of motivational orientation may be more effective in promoting second language proficiency.

On the whole, initial criticisms have reflected varying opinions and emphases but within the generally accepted conceptual framework offered by Gardner and his associates. Only quite recently, the framework itself and its more basic theoretical foundations have been questioned. Following Crookes and Schmidt's 1991 call to re-open the research agenda, interest and debate on language learning motivation appear to be thriving. Crookes and Schmidt (1991) came to the conclusion that Gardner's work on motivation is considerably important, but its scope has been

limited with regard to the range of possible influences on motivation. Crookes and Schmidt divided motivation into two categories: those within the learning context, and those which result from learning. Materials and teaching strategies which include factors such as the attractiveness of teaching materials, amount of variety in classroom work, the nature of classroom organisation and the nature of teacher-student relationships belong to the first category. The second category concerns the consequences of learning that are evaluated by others such as educational agencies, employers, and parents. Frequent class tests, public examinations, monetary rewards and threats of being suspended from the class are factors which may manipulate the motivations of students.

Crookes and Schmidt proposed other psychological influences on motivation. They believe that expectations and success of the individual influence the way motivation may be caused through the satisfaction of doing well and also the expected satisfaction that one will do well. In this case, motivation does not only cause success, but also follows it. For example, it seems likely that students who have experienced failure in second language learning and attribute the failing due to their own abilities rather than problems with the course or text, are likely to have a low estimate of their future success in second language learning, which, according to Crookes and Schmidt, may lead to low risk-taking, low acceptance of ambiguity, and other behaviours that seem to be negatively correlated with success in second language learning.

Oxford and Shearin (1994) also believed that psychological factors need to be given more attention. They argue that in order to inform second language learning theory, more research should be conducted on the basis of various branches of psychology (general, industrial, educational, and cognitive developmental psychology) rather than a focus on social psychology alone. They integrate these different branches of psychology into an expanded theoretical framework of motivation theories: need theories, instrumentality theories, equity theories, and reinforcement theories. They believe that these motivational theories might be helpful in broadening the concept of second language learning motivation.

In relation to hierarchies of need, Oxford and Shearin (1994) base their argument on Maslow's concepts of needs. Maslow's hierarchy of needs progresses through five levels: (1) Physiological (2) Safety and security (3) Belongingness and love (4) Esteem, and (5) Self-actualisation. Oxford and Shearin (1994) believe that, in the foreign language setting, needs do not relate to physiology or physical safety, although they often relate to emotional or psychological security. Nonphysical safety and security needs may show up in the foreign language classroom, where risk-taking cannot occur unless students feel psychologically secure. Insecure language learners can be very anxious. Needs for foreign language learners would center on the psychological aspects of the second level in the hierarchy (safety and security) and, then when those are satisfied, would relate to the third (belongingness and love), fourth (esteem) and fifth (self-actualisation) levels. Another need theory of motivation is based on the need for achievement. "Past success in a particular

situation would make a person more likely to engage in achievement behaviours in a similar situation in the future; past failure would generate fear and stifle achievement behaviour" (Oxford and Shearin, 1994: 17).

In terms of instrumentality (expectancy-value) theories, Oxford and Shearin (1994) suggest that instrumentality theories emphasise cognition and the individual's expectation of receiving a valued reward. The second language learners' expectancies of success or failure are important in determining their motivation to learn language. If language learners do not believe that their performance leads somewhere valuable, their motivation will be lowered. In relation to reward, Oxford and Shearin relate their theories to a mathematical ratio of inputs to outcomes. The ratio between inputs and outcomes should be the same. Inputs include intellectual ability, personality traits, experience, psychomotor skills and seniority. Outcomes include grades, performance ratings, money, promotions, and praise. Students want rewards to be equitable. "Equity theories are related to second language learning motivation because the learner must believe that the probable results are worth the effort expended" (p.19). Oxford and Shearin further proposed a theory relating to reward in a classroom referred to as reinforcement theory. Reinforcement theories attribute individual behaviour to the association of stimulus, response, and reward. This is possibly the most widely used motivation theory in the classroom and the most familiar to teachers.

Oxford and Shearin expand some of these earlier concepts by adding social

cognition, educational cognition, and cognitive developmental theories which they think might broaden motivation theory in language learning. Oxford and Shearin further expand the cognition theories by including attribution theory, self-efficacy, mastery model, goal-setting theory and cognitive developmental theory. Attribution theory refers to how causal ascriptions of past failures and success influence future goal-expectancy. For example, the difficulty of a task decreases the expectation of future success more than failure that is ascribed to bad luck or to a lack of effort. Self-efficacy refers to learners' judgement of their ability to perform a specific action. It involves the idea that performance will lead to rewards and focuses on one's ability, creativity, adaptability, and capacity to perform in a particular situation or context.

The mastery model supports the importance of goal-setting as a motivational factor. The second language classroom must focus on using criteria (goals) for students to master rather than on comparing one student's performance against the performance of another. Goal-setting refers to performance which is closely related to an individual's accepted goals. Learners' learning styles will also influence the goal-setting process. Learners' goals and feedback from language teachers can therefore help to determine students' motivated behaviour. According to Oxford and Shearin, language development specifically requires a stimulating environment, which provides rich input for learners, and language teachers should, whenever possible, draw ideas, materials, and inspiration authentic to second language settings. Language learning goals must also be clearly based on learners' needs and interests

for motivation to occur, and the input from the teacher must be both relevant and demanding. Although Oxford and Shearin have expanded the concepts of second language learning motivation, they admit that they have not yet provided a complete model. Clearly they offer more complex and comprehensive basis for approaching motivation but it remains to be seen if its investigation in their terms is viable.

Dörnyei (1994) like Oxford and Shearin believes that Gardner's motivation construct does not include sufficient detail regarding cognitive aspects. Dörnyei claims that although Gardner's model is called a socio-educational model, the theory does not offer an educational dimension for the foreign language classroom, but rather has its roots in the social milieu. Dörnyei suggests that Gardner's theory does not cover all possible aspects of motivational factors of language learning in particular.

In relation to the social dimension of second language motivation, Dörnyei (1994) points out that "attitude" and "motivation" are two separate entities in the psychological literature as they are considered to be key terms for different branches of study. Attitude is explored in the realm of social psychology and sociology, while motivation focuses on individual cognitive behaviour rather than on the social being. Dörnyei conceptualises a general framework of second language motivation based on recent studies by him and others. Dörnyei's framework consists of three levels: the Language Level, the Learner Level, and the Learning Situation Level.

The Language Level focuses on orientation and motives related to various aspects of the second language, such as the culture it conveys, the community in which it is spoken, and the potential usefulness of proficiency in it. This level closely corresponds to Gardner's integrative and instrumental orientations. The Learner Level refers to affects and cognition traits which can be identified as need for achievement and self-confidence. Self-confidence itself encompasses anxiety, competency, attributions and self-efficacy. The Learning Situation Level consists of intrinsic and extrinsic motives, and three motivational conditions: (1) course-specific which is best described in Crookes and Schmidt's (1991) framework of interest, relevance, expectancy and satisfaction, (2) teacher-specific which include affiliation drive, authority type and students' socialization, and (3) group-specific conditions which encompass goal orientedness, norm and reward system, group cohesion and classroom goal structure.

Dörnyei (1996) points out that second language motivation is particularly complex and unique; therefore, to describe its features requires particular care. At the time of the present study, Dörnyei (1998: 118) attempted to achieve a synthesis of the static and dynamic conceptions of motivation by defining it as a "process whereby a certain amount of instigation force arises, initiates action, and persists as long as no other force comes into play to weaken it and thereby terminate action, or until the planned outcome has been reached". Despite Dörnyei's wish to integrate both the cognitive and social forces involved in motivation, his current (untested) view of

the process remains rooted in much earlier psychological views of learning behaviour.

It remains the case that critics such as Crookes and Schmidt, Oxford and Shearin, and Dörnyei acknowledge the seminal work of Gardner and his associates. Crookes and Schmidt admit that:

> We do not claim that there are no interesting relationships among social contexts, individual attitudes, and motivation; and we find that Gardner, in particular, has been sensitive to many of the issues raised ... our claim is that this particular approach has been so dominant that alternative concepts have not been seriously considered (1991: 501).

Dörnyei also shares Oxford and Shearin's assertion that:

> The current authors do not intend to overturn the ideas nor denigrate the major contributions of researchers such as Gardner, Lambert, Lalonde, and others, who powerfully brought motivational issues to the attention of the L2 field (Oxford and Shearin, 1994: 13).

Comprehensive theoretical proposals and some of the research cited in the above discussion have shown that each of these contributions has added to the development of second language motivational theory and may attribute to the analysis of motivational issues in the context of second language learning. Gardner et al. appreciate Crookes and Schmidt's (1991), Oxford and Shearin's (1994) and Dörnyei's (1994) perspectives by stating that:

> The three views have provided a rich inventory of motivational theories, and researchers looking for a preferred orientation would do well to consider the different perspectives reviewed (1994: 362).

In general, therefore, it can be deduced that recent researchers such as Crookes and Schmidt (1991), Oxford and Shearin (1994) and Dörnyei (1994) have looked into the aspects of the psychology of motivation in-depth. The researchers do not oppose Gardner's theory, but they believe *the theory* was incomplete due to the lack of psychological sophistication. Although these researchers have tried to expand Gardner's theory, they agree that goals in learning a second language are still crucial in contributing to learners' motivation. They believe learners' needs and interest in learning a language might derive from their goals and expectations of learning. Recent researchers, also agree that expectation is an important aspect of motivation in learning a second language. All these aspects remain to be more fully investigated.

2.4 Definitions and classification of learners' strategies

In addition to exploring particular students' motivation, the present study aims to investigate learners' strategies when dealing with CALL tasks. It is therefore, appropriate to review the literature on learning strategies. In order to reflect the literature of learners' learning strategies, this section raises issues relating to the definition and classification of such strategies. Second language learner strategies have been defined and studied in a number of different ways over the past years. Grenfell and Harris (1998) state that the difficulty in dealing with research on

learner strategies is to determine their definition. They believe the term 'learner' or 'learning' strategy can lead to the problem of which term to use. Grenfell and Harris did not differentiate the meaning of the two terms in their study. Accordingly as with much of the research, the two terms 'learner' or 'learning' strategy are often used synonymously in this current study. In addition, Cohen (1998), and Wenden and Rubin (1987) argue that the term 'learner strategies' refers to moments when learners demonstrate their strategic behaviours in the context of, and in relation to, motivation or emotions such as anxiety. This perspective is adopted in the current study.

The definition of learners' strategies

This section present the definitions of learners' strategies offered by researchers in the field. Wenden (1987) offers the broadest and possibly the most comprehensive definition of learner strategies. She provides three definitions: First, "language learning behaviours learners actually engage in to learn and regulate the learning of a second language" (Wenden, 1987: 6). Second, the term learner strategies refers to "what learners know about the strategies they use, i.e. their strategic knowledge" (Wenden, 1987: 6). She adds that the learners' knowledge is reflected when they are interviewed, complete a questionnaire, or write a diary. In all the situations described, the learners are required to think back on specific or general aspects of their language learning. Thus, learners may report the actual use of strategies, make assumptions that they used the strategies or suggest that they should use the strategies. Third, Wenden (1987) claims that the term learner strategies refers to

"what learners know about aspects of their language learning other than the strategies they use, e.g. what personal factors facilitate L2 learning, what is easy or difficult about learning a specific language" (Wenden, 1987: 6). Wenden assumes that this knowledge may influence learners' choice of strategy.

Grenfell and Harris (1998: 25) define 'learner strategies' as "thought process and products immanent in engaging with language tasks". Bialystok (1985) in her definition of learning strategies comes up with two components of the cognitive process: analysed knowledge and cognitive control and suggests that:

> Learning strategies are construed as activities undertaken by learners, whether consciously or not, that have the effect of promoting the learner's ability either to analyse the linguistic knowledge relevant to the language under study, or to improve the control of procedures for selecting and applying that knowledge under specific conditions (Bialystok, 1985: 258).

Weinstein and Mayer (1986) define learning strategies as those learner behaviours and thoughts that are intended to influence the learner's encoding process, whereas they are viewed by Dansereau (1978: 4) as "learner-based techniques or processes associated with the identification, utilization, and manipulation of material". According to Chamot (1987: 71), learning strategies are "techniques, approaches or deliberate actions that students take in order to facilitate the learning, and recall of both linguistic and content area information". O'Malley and Chamot (1990) agree that learning strategies are the special thoughts or behaviours that individuals use to

help them comprehend, learn, or retain new information.

Oxford (1990), recognising the commonly used definition of strategies to refer to specific operations used by the learner at various levels to ease the acquisition, storage, retrieval and use of information, extends the definition by suggesting that:

> Learning strategies are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations (Oxford, 1990: 8).

Various distinctions have been made between strategies and other related concepts such as technique, tactic, skill and style. Schmeck (1988), for example, makes a distinction between 'strategy' and 'tactic'. According to him the word 'tactic' refers to the specific steps in implementation of a plan and the term 'strategy', on the other hand, implies a more general approach reflecting a higher level cluster of tactics that go together to yield a learning outcome. Students' choices of tactics are guided by their strategy, and their choice determines the learning outcome. Seliger (1984) also distinguishes 'strategy' and 'tactic'. He defines 'strategy' as "universal, age- and context-independent, and when engaged must be assumed to lead to long-term acquisition" (Seliger, 1984: 38). In contrast, 'tactics' are devices used to meet the immediate demands of a situation and are "dependent on a wide variety of factors such as environment, age, personality, affective constraints, and first language" (Seliger, 1984: 38).

In contrast to Chamot (1987) who appears to associate techniques directly with

strategies, Stern (1983) distinguishes between learning strategies and learning techniques as follows:

> Strategy is best reserved for general tendencies or overall characteristics of the approach employed by the language learner, leaving learning techniques as the term to refer to particular forms of observable learning behaviour, more or less consciously employed by the learner (Stern, 1983: 405).

Ellis (1994) and Tarone (1980) make a distinction between language learning strategies and skill learning strategies. In language learning strategies, learners attempt to master new linguistic and sociolinguistic information about the target language. The skill learning strategies are concerned with the learners' attempts to become skilled listeners, speakers, readers, or writers. Nisbet and Shucksmith (1986) place strategies above skills in that strategies are viewed to be executive processes which are responsible for choosing, coordinating and applying skills. A strategy carries a certain purpose and it is a sequence of activities and is thus more readily modified to suit the context, whereas a skill is more specific or reflexive.

The above definitions show how complex language learning strategies appear. They include a wide range of behaviours ranging from mental operations to learners' perceptions and to actual learner actions. Learning strategies are viewed as having a direct or an indirect effect on interlanguage development depending upon the divergent focus of researchers. Rubin (1987) and Oxford (1990) assert that their effect is a direct one, while other researchers, such as Seliger, see them to be more indirect. Most important, all researchers believe that whatever they are called,

strategies can make learning more efficient and effective.

Ellis (1994) presents a comprehensive definition of learning strategies which helpfully serves to sum up most previous discussions. The following is his list of characteristics of the learning strategies (Ellis, 1994: 532):

- Strategies refer to both general and specific actions or techniques used to learn an L2.
- Strategies are problem-oriented – the learner deploys a strategy to overcome some particular learning problem.
- Learners are generally aware of the strategies they use and can identify what they consist of if they are asked to pay attention to what they are doing/thinking.
- Strategies involve linguistic behaviour (such as requesting the name of an object) and non-linguistic (such as pointing at an object so as to be told its name).
- Linguistic strategies can be performed in the L1 and in the L2.
- Some strategies are behavioural while others are mental. Thus some strategies are directly observable, while others are not.
- In the main, strategies contribute indirectly to learning by providing learners with data about the L2 which they can then process. However, some strategies may also contribute directly (for example memorization strategies directed at specific lexical items or grammatical rules).
- Strategy use varies considerably as a result of both the kind of task the

learner is engaged in and individual learner preferences" (Ellis, 1994: 532).

The classification of learners' strategies

Various attempts have been made to produce different inventories of learning strategies. One of the major problems in strategy research at the present time is that, there is no generally agreed single typology of them.

Dansereau (1985) distinguishes two categories of strategies: primary and support strategies. Primary strategies are aimed at operating directly on learning materials, for example, comprehension and memory strategies. Support strategies, on the other hand, help to establish an appropriate learning attitude and to help learners cope with distractions, fatigue, frustration, and so forth. An example of support strategies is the effort to concentrate.

Rubin (1975, 1981) introduces one of the earliest typologies of language learning strategies and identifies two types: 'direct' and 'indirect', which have been further classified into three primary categories: learning, communicative and social strategies. Within this taxonomy, learning strategies are those which "contribute to the development of a language system which the learner constructs and affect learning directly" (Rubin, 1987: 23). For Rubin, these include two major categories: metacognitive and cognitive strategies. Metacognitive strategies relate to knowledge about the processing, regulation and application of information and also

to self-directed learning through processes such as planning, monitoring and evaluating. Cognitive strategies are defined as the "steps or operations used in learning or problem solving that require direct analysis, transformation and synthesis" (Rubin, 1987: 23).

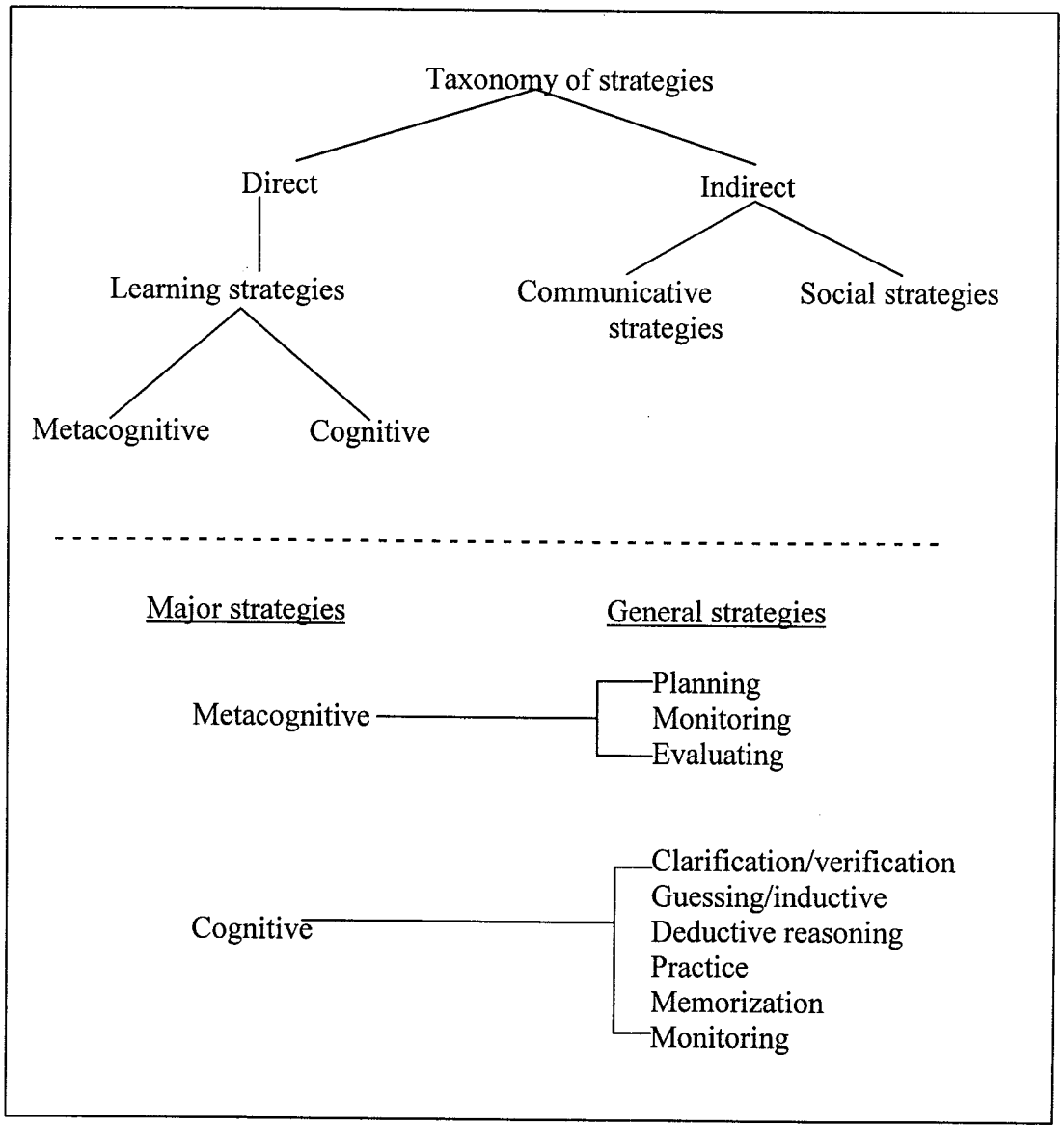
Rubin (1987) suggests six general cognitive learning strategies:

1. Clarification/verification refers to strategies which learners use to clarify and confirm the rules and regulations being learned in a new language.
2. Guessing/inductive inferencing refers to the use of previous knowledge and available information to infer meanings of new and unfamiliar items.
3. Deductive reasoning is a problem solving strategy in which the learner looks for general rules such as finding organisation and pattern in a new language. The learner uses analogy, analysis and synthesis to obtain information about a language in an organised way.
4. Practice refers to strategies which contribute to the storage and retrieval of language such as repetition, imitation, application of rules and rehearsal. These strategies focus on accuracy of usage.
5. Memorization also refers to strategies which contribute to the storage and retrieval of language such as drill and repetition. However, in memorization the focus is on storage and retrieval process. Rubin also includes some mnemonic strategies such as visual, writing out, note taking, selective attention in which students focus on certain details.
6. Monitoring is thought to be a combination of cognitive and metacognitive

strategies in which learners direct their attention to linguistic and communicative errors and then make decisions about them.

Figure 2.3 summarises Rubin's distinctions.

Figure 2.3: Taxonomy of strategies (based on Rubin, 1987)



In relation to the indirect strategies, communicative strategies focus on the process of participating in a conversation and getting the intended meaning across. In order to maintain continuity in a conversation, learners must (1) find new ways to keep producing language, (2) realise any failure to get meaning across, and (3) show understanding of the speaker's intention.

Social strategies refer to activities learners participate in to expose themselves to the target language for practice. The activities include creating favourable opportunities to initiate communication in the target language with people, and also using facilities such as listening to television or radio, reading books, attending movies and parties.

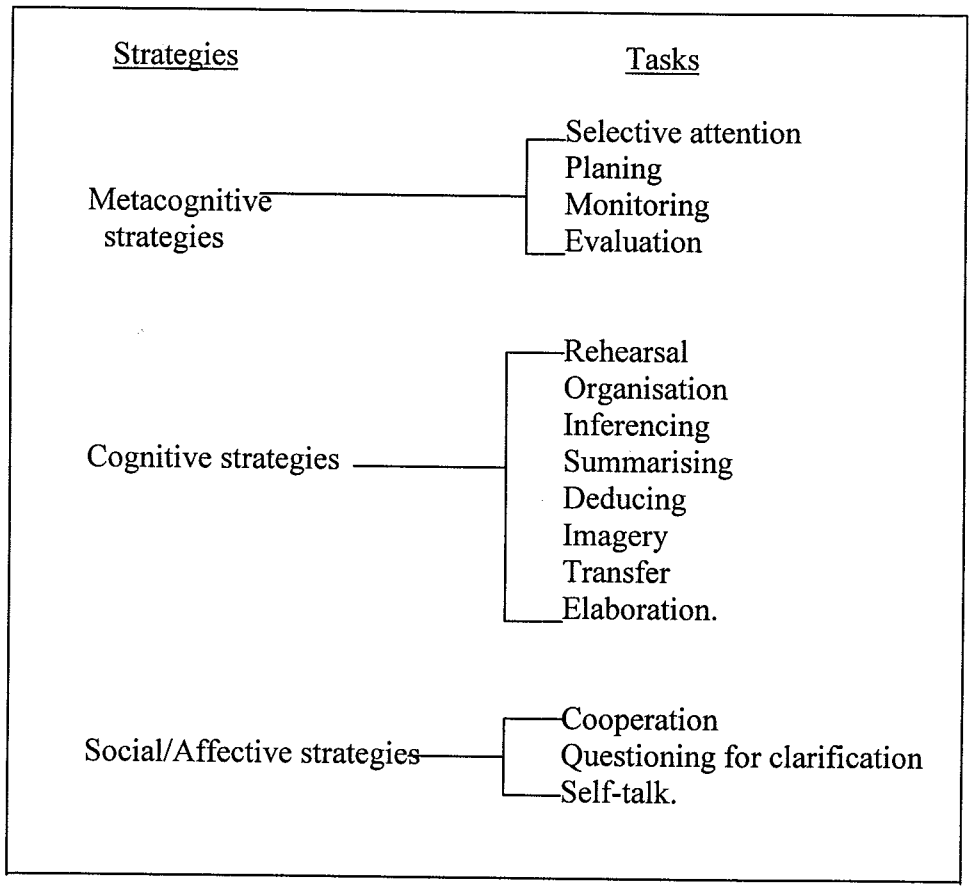
Similarly to Rubin, O'Malley et al. (1985) differentiate metacognitive, cognitive, and social/affective strategies as follows:

1. Metacognitive strategies include receptive or productive language tasks such as selective attention, planning, monitoring, and evaluation.
2. Cognitive strategies operate directly on incoming information, manipulating it in ways that enhance learning. The language tasks which are included in these strategies are rehearsal, organisation, inferencing, summarising, deducing, imagery, transfer, and elaboration.
3. Social/affective strategies represent a broad grouping that involves either interaction with another person or ideational control over affect. The language tasks applicable under these strategies are cooperation, questioning for

clarification, and self-talk.

Figure 2.4 summarises O'Malley et al.'s (1985) classification of strategies.

Figure 2.4: Classification of learning strategies (based on O'Malley et al. 1985)



Oxford (1990), building on the earlier classification schemes, provides the most comprehensive and detailed classification of learning strategies to date. In Oxford's classification, strategies are divided into two categories, direct and indirect strategies, which correspond to those of Rubin. In Oxford's scheme, the two major

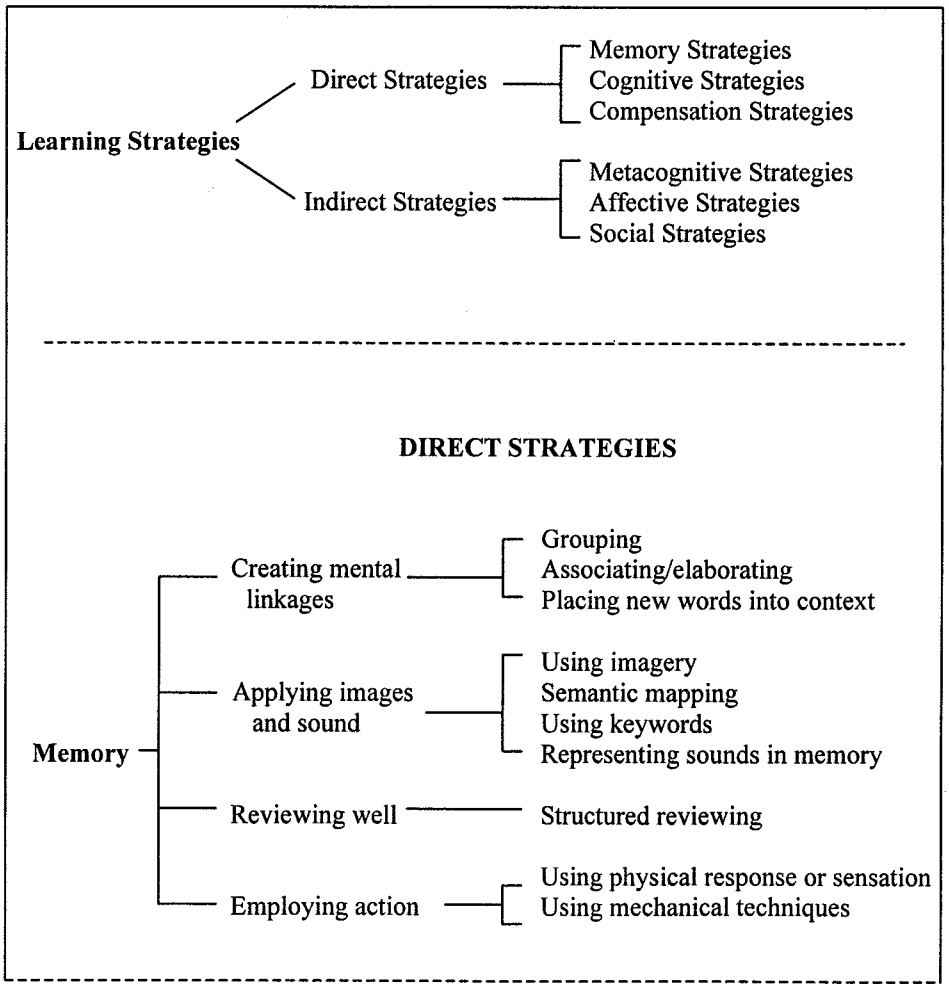
classes, that is, direct and indirect strategies, are subdivided into six categories. Direct strategies comprise memory, cognitive, and compensation strategies, while indirect strategies comprise metacognitive, affective, and social strategies. These six strategy groups are subdivided into a total of 19 strategy sets which are then subdivided into further levels. Figure 2.5 following presents a summary of Oxford's (1990) classification of strategies.

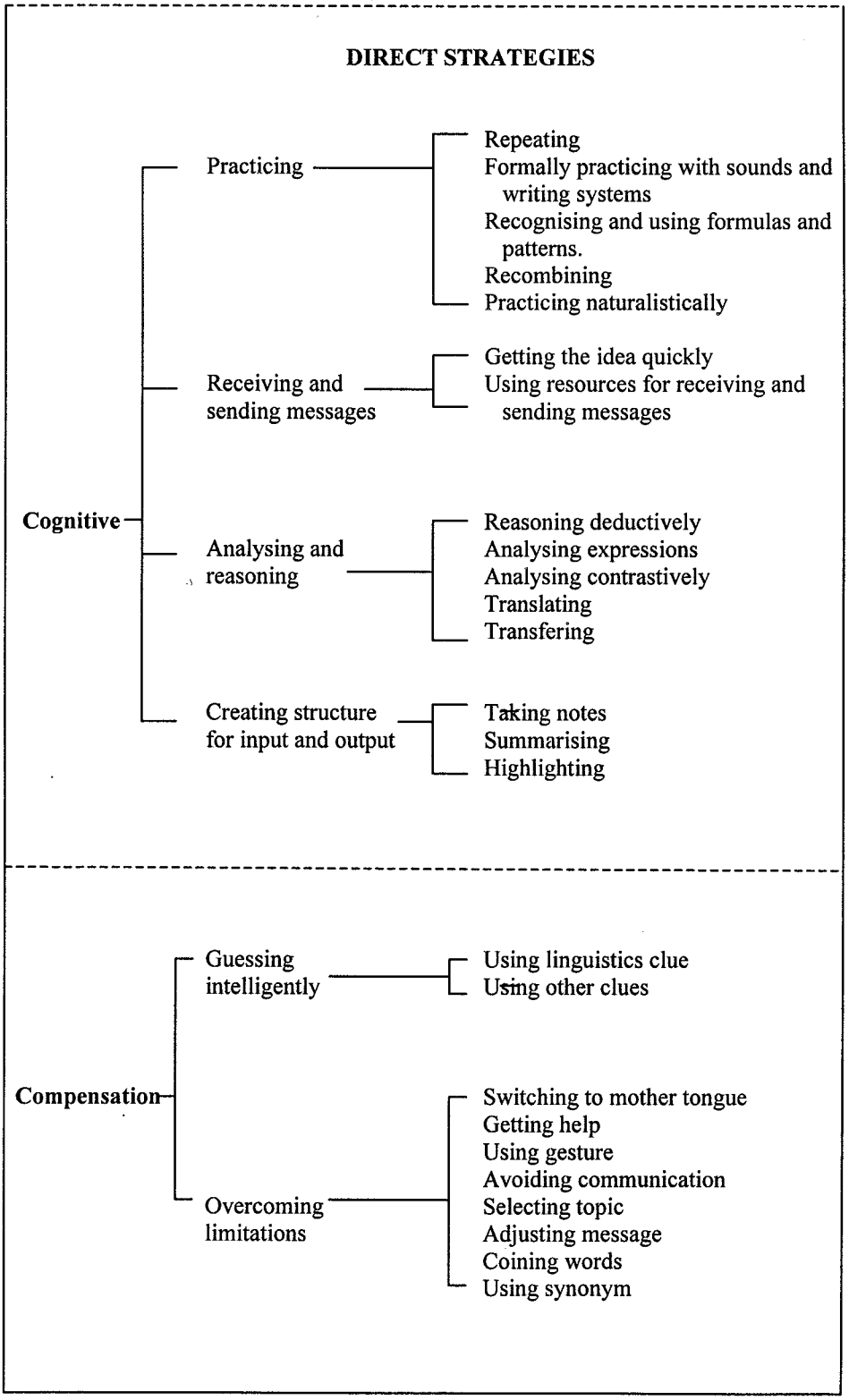
Oxford's classification is systematic in the sense that individual strategies as well as strategy groups are linked with each of the productive and receptive skills such as writing, speaking, reading and listening, thus providing information not only about the type of strategy, but also the type of task and setting where the strategy may be used.

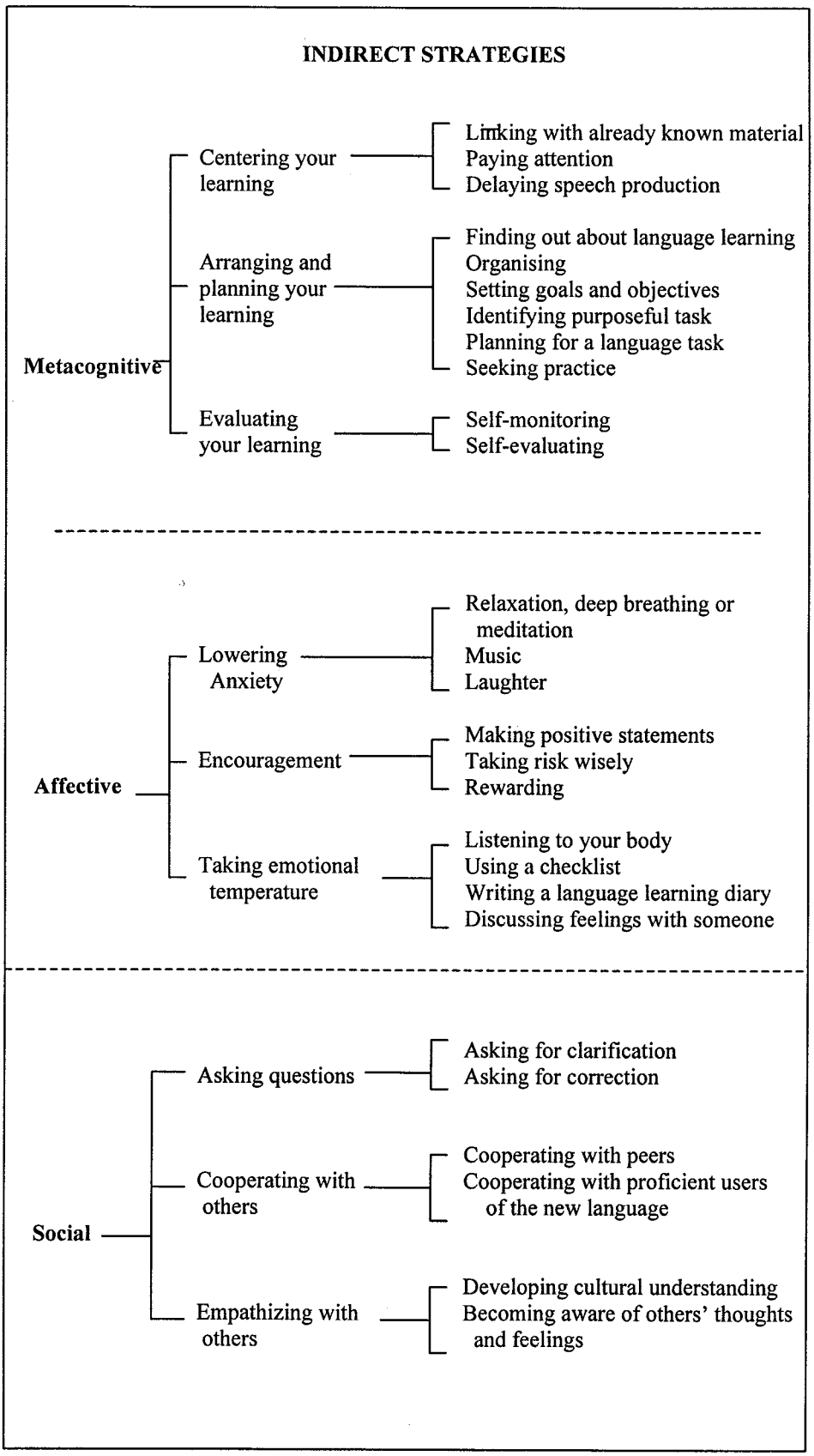
In brief, the major conclusion that can be drawn from the above review of recent theory and research on learning strategies is that we do not yet have a consistent definition of them nor a generally agreed system for categorising them. There are a number of reasons which can be given to account for this diversity. First, the fact, as stated earlier, that the term strategy refers to a wide range of behaviour ranging from mental processes to actions and this is reflected, not surprisingly, in strategy classification systems too. Secondly, there have been gradual and considerable developments and refinements in classification systems, which result in more comprehensive and complex categorisation schemes. The third possible reason for the diversity of strategy taxonomies could be the fact that the methodology for

eliciting such strategies can be considered as still in a developmental stage. Definitions and classifications of strategies have accordingly undergone a number of changes in parallel with the introduction of new research procedures for data collection.

Figure 2.5: Overview of strategy system (based on Oxford, 1990)




DIRECT STRATEGIES
Cognitive
Practicing
Repeating
Formally practicing with sounds and writing systems
Recognising and using formulas and patterns.
Recombining
Practicing naturalistically
Receiving and sending messages
Getting the idea quickly
Using resources for receiving and sending messages
Analysing and reasoning
Reasoning deductively
Analysing expressions
Analysing contrastively
Translating
Transfering
Creating structure for input and output
Taking notes
Summarising
Highlighting
Compensation
Guessing intelligently
Using linguistics clue
Using other clues
Overcoming limitations
Switching to mother tongue
Getting help
Using gesture
Avoiding communication
Selecting topic
Adjusting message
Coining words
Using synonym


INDIRECT STRATEGIES
Metacognitive
Centering your learning
Linking with already known material
Paying attention
Delaying speech production
Arranging and planning your learning
Finding out about language learning
Organising
Setting goals and objectives
Identifying purposeful task
Planning for a language task
Seeking practice
Evaluating your learning
Self-monitoring
Self-evaluating
Affective
Lowering Anxiety
Relaxation, deep breathing or meditation
Music
Laughter
Encouragement
Making positive statements
Taking risk wisely
Rewarding
Taking emotional temperature
Listening to your body
Using a checklist
Writing a language learning diary
Discussing feelings with someone
Social
Asking questions
Asking for clarification
Asking for correction
Cooperating with others
Cooperating with peers
Cooperating with proficient users of the new language
Empathizing with others
Developing cultural understanding
Becoming aware of others' thoughts and feelings

2.5 The benefits and limitations of computers in language learning and teaching

For years the main language teaching resource of textbooks has dominated school curricula and appears to have met the needs of most teachers. However, today books are giving way to the computer. The computer is becoming a popular educational tool in schools and higher education institutions. Recent developments in CALL offer possibilities for influencing the quality of language teaching and learning. Davies and Higgins (1985: 8) describe Computer Assisted Learning (CAL) as "a form of tuition in which the computer is used as an aid to the presentation, reinforcement or assessment of material to be learned". In discussing CALL, Hardisty and Windeatt (1989: 5) regard it as "the term most commonly used by teachers and students to describe the use of computers as part of a language course". Language teachers have started to see its potential capacity as one of the more powerful teaching aids in the language classroom. The following discussion presents reviews of the benefits that computers may offer the language teachers and learners. In order to exemplify some of these benefits, computer programs such as simulations and drill-and-practice are referred to in the discussion.

Kepner (1987) listed some of the advantages that the use of computers has for teachers and learners. For teachers, it:

- Relieves teachers of some of the burden of preparing and correcting large numbers of individualized exercises in basic concepts and skills, and of recording grades.

- Allows the teachers themselves to be updated effectively, without allotting a summer or a year for subject matter refurbishing every three years or so.
- Encourages frequent changes in the actual material used.
- Makes much more time available for "real teaching", i.e., to be able to work individually with all students on whatever problems and questions they may have in assessing and handling new concepts.

For learners, it offers:

- Better, more comfortable and faster learning. Students can time their learning experience at his own pace and catch up on missed time.
- Personalised tutoring. Computers can provide individual attention which is an important factor as no two students are the same or have the same ability and with the use of the computer, students can take the initiative to actively earn in their own ways.
- Automatic measurement of progress by keeping records of responses which allows students to keep track of their own progress.

The computer as a tool, therefore enables its user to perform a multitude of tasks. In the past, language teachers found that preparing teaching materials, setting examination questions, and keeping students' records could at times be tedious, but now the computer may help them to perform these tasks efficiently and quickly. The computer can give access to information where the students can explore freely. They can use the computer as a tool to extend and enrich their thinking and

imagination. As mentioned in the review of related literature (Section 2.6), computer programs used in a language classroom may motivate students to learn.

In the process of operating the program, the students working in a group may transform their individual work into a cooperative game where they take turns participating, or work together to complete the task. Straker (1989) suggests that communication skills can be developed with the use of a computer as it provides a focus for discussion. Simulation is an example of a type of computer program which particularly encourages communication among language learners. Hardisty and Windeatt (1989: 55) describe a simulation as "a way of reproducing in the classroom as many features as possible of a situation that might be found outside the classroom". Geisert and Futrell (1995: 93) define computer simulation as "a program that gives the illusion of a reality". Higgins and Johns (1984: 63) consider the term 'simulation' as "a general term, covering a range of activities which involve decisions based on data from realistic situations". Bridging the gap between the classroom and the real world has become one of the most important concerns in language learning in recent years, for example in the context of the Communicative Approach. Krashen (1985: 70) states that, "in my view the goal of the language class is to bring the student to the point where he or she can use the language outside the classroom in understanding and communicating with native speakers". The simulation programs enable teachers to involve students in activities they could not otherwise experience and they can take the form of a role play, a problem-solving task, or a commercial management exercise.

Philips (1985: 29) suggests that simulation programs "usually involve the students, frequently working as one of a group in decision-making activities demanding the use of language in discussion, negotiation and argument". Kenning and Kenning (1983: 157) support this by explaining that:

> Computer simulations can thus be of great assistance in stimulating conversation; in confronting pupils with tasks to be carried out in the here and now, to prompt them to consult one another and argue the merits and demerits of a particular response. The conversation is not gratuitous, it has a genuine purpose – to try and arrive at a good solution – and this tends to make for a lively exchange.

Jones and Fortescue (1987) state that computer simulations provide a context for discussion. The students have reasons for speaking because they need to communicate their thoughts and opinions to their group. "They offer both a focus for oral activity and continually changing scenario for learners to talk about" (Jones and Fortescue, 1987: 63). They believed computer programs that are designed for group decision are less threatening to students especially who have little or no confidence in the target language. They will also lower students' anxiety because there is no such thing as 'wrong' or 'right' answer. Davies and Higgins (1985: 13) similarly suggest that "there is no reason why the computer should not be used as a stimulus for group oral activity, with the teacher monitoring the response".

Immediate feedback available from a computer program is another factor that may motivate students to learn. In some programs clues are given to help students to

move towards the correct answer. If the answer provided by the student is correct, the computer will present another question or task. Most drill-and practice software allows students to see their scores even though they may not complete their tasks. Drill-and-practice programs are useful for sustaining, refining, or perfecting performance in some categories of behaviour already learned by other means in the classroom. Computer programs can give students intensive practice on a particular topic or aspect of language.

The advantage of working with computer is that, it has the ability to repeat as many times as required by students and without making errors. Higgins and Johns (1984: 38) suggest that the computer "takes over the human trainer's role, and can provide the kind of endlessly patient and flexible supervision which the class teacher often cannot spare the time for". Students do not have to worry about the computer's time. The computer does not get tired or impatient. Doerr (1979) points out that the computer also will not respond in a biased way to a student or be affected by the background of a student.

Computer programs can also be a great help to slow learners who find themselves unable to master the material which their friends seem to master easily and effortlessly. According to Underwood (1984), working at one's own pace will motivate remedial students, students who have special problems, or students who need extra help to learn. Some studies show that students learn at a faster rate (in some cases up to forty percent faster) when computers are used (Rude, 1986: 5).

Ahmad et al. (1985: 116) explains that "one of the most obvious and accessible benefits of CALL is its capability to provide personalised and self-paced learning. This allows students of varying ability enough flexibility to find their own level, which is a boon to slow learners and fast learners who need remedial and extension exercises respectively".

The computer can provide privacy for those who prefer solitary study, or those who are shy of raising hands to respond or who fear their answers are wrong. Such students can work on their own using the computer in order to build up their self-confidence and courage. The computer may create a non-threatening, non-critical, and non-competitive learning environment.

Since computers appear to offer a lot of benefits to students, a question to be addressed is: If the benefits that computers offer can help students to learn better, then should computers replace teachers? The answer to this question is that the computer by itself lacks what may be offered by a human teacher. The computer cannot provide extra help especially when the problem causes strong feelings. Fox et al. (1992), Higgins (1988), and Clement (1985), emphasise the incapability of the computer to make decisions as it cannot even fix small or unpredictable mistakes by itself.

The combined effort of the computer and the teacher, however, might create the ideal teaching conditions. This view is supported by Thomas Dwyer that "put simply, I believe the computers in education are revolutionary because they make

possible great teaching in a system dedicated to mass education. But they make this possible by supporting person-to-person educational influence, not by replacing it" (cited in Doerr, 1979: 12). Higgins (1988: 94) also supports the idea that beneficial learning could be derived from the collaborative effort between human and computer. According to him, "... the computer is fast, accurate, and stupid. Humans are slow, inaccurate, and brilliant. When they are able to combine effectively, the results will be unimaginable". Instead of threatening to replace good teaching, the computer offers a new opportunity for great teaching. Kenning and Kenning (1983) suggest that computer and teacher should not be seen as rivals, but as complements to each other. They also believe that:

> While the computer has unquestionably enormous potential as an educational aid, providing new learning opportunities, it is clear that in many respects it cannot compete with the teacher. (Kenning and Kenning, 1983: 4)

Like any other educational tool, the computer has its advantages and disadvantages. The computer is sometimes more appropriate for some uses than others. It depends mostly on the creativity of the users to determine its effectiveness. Adams and Jones further explain that:

> Computer is no more than an aid. Whether we use it, or how we use it, depends always on our own understanding of how pupils learn and our own assessment of whether and how this machine can help us achieve our goals. (Adams and Jones, 1983: 32)

Ahmad et al. (1985: 4) state that "the computer is a tool of itself incapable of action". It is a "servant, and its' role in education is that of a medium". Along the same lines, Clement (1985) and Higgins (1988) stress that computers are not capable of solving problems without getting specific instructions from human beings. In this sense, Higgins (1988) points out the role of the computer as 'pedagogue' which means 'slave'. It takes and obeys orders, never creates questions, and allows itself to be exploited depending on the user's intelligence. Kenning and Kenning (1983: 4) add that "not only do they (computers) operate mainly within the medium of the written language, but they operate in a predetermined fashion and cannot cope with the unexpected".

It is important for students to be aware of their own capabilities and not to feel that they are not as smart as the computer. Clement (1985) finds that only through greater computer awareness, can understanding of the role of the computer in the life of the individual and in the world be gained. He disagrees with the view which states that computer awareness comes only through experience. It may be too late to learn some of the drawbacks of the computers after experiencing them. If students were given computer awareness earlier, they would perhaps be more ready to meet challenge of the tasks set by the computer. In this way the students would work harder to prove their capabilities.

Given current fashions, the computer can sometimes be overused. As more and more machines are introduced in school, teachers need to monitor how they are

introduced. If students often use computers individually there are possibilities for reducing the interactions between the students of the classroom. There are certain features of the computer that can be overused and, as a result, learning does not take place at the maximum level. The computer features of graphics, colour, animation and sound effects can be overemployed by materials writers with the result that their valuable pedagogical benefits are diminished and their effectiveness seriously impaired. Some students may favour this kind of software, however, attention needs to be paid to make the students aware of their real needs when dealing with the software.

It may not be surprising to see students becoming demotivated to learn when using computers. Some software is not user-friendly. The students may not be able to operate the program independently, because the instructions given may be confusing. Students may not be interested in a program where they need to read the manual in order to operate it because of the time involved.

The potential roles of the computer in the ESL classroom, therefore, are seemingly positive. More importantly, both human and computer can eventually play a complementary and active part in the language learning process. What cannot be denied however is that the introduction of computers in the classroom will initially be met with, at least, some uneasiness.

2.6 Previous studies concerning motivational orientations of second language learners in a computer assisted language learning classroom.

Although it is clearly urgent, research regarding the effect of CALL on students' motivation is still very scarce. Only very recent literature has started to devote attention to determining students' motivation, interest or anxiety in using computer instruction in language classrooms. It is in precisely such a context that the present study was undertaken.

Dhaif (1990) believes that, being the recipients of the teaching and learning process, students should also be consulted about their likes and dislikes in using computer instruction in learning language. He conducted a study at the University of Bahrain to find out students' reactions to using computers in learning English as a foreign language. He carried out his study using questionnaires. 197 randomly selected students were asked to complete the questionnaire which was constructed to seek students' views on the effect of various CALL exercises on their progress in learning English. The students' views emerged as follows: 62% (the majority) thought that using the computer was an essential part in any language course, while 27% thought it helped a great deal, and 10% said it helped to a certain extent. Only 1% said that using the computer in language learning was a waste of time. In response to how much the students thought they had benefited from the computer laboratory sessions, the results indicated that almost all the students believed that they had benefited, in varying degrees, from the computer laboratory sessions.

However, there was no overall majority in favour of any one of the responses sought (a great deal, quite a lot, a little, or not at all). Dhaif's study showed that most of the students felt that using the computer in learning English had been a beneficial experience and would like to see it continue. They also suggested that more time should be allotted to computer sessions.

Simonsen (1985) carried out a study at North Carolina University, USA with the aim of analysing students' approaches and reactions to computer materials. 17 students who worked with computer programs that Simonsen had authored and used a courseware called CALIS (Computer Augmented Language Instructional System) participated in the research. They provided feedback by completing an evaluation form on their last day of classes. All the students in this study were beginners of German who were required to attend a two-semester course. In their evaluations, 14 of the students showed positive feelings towards the use of the computer in their language class. They also indicated a lot of value in the computer exercises and preferred them to the traditional homework. The students generally thought that computers should be an essential part of language course.

Chapelle and Jamieson (1986) studied the effectiveness of CALL in the acquisition of English as a second language by Arabic- and Spanish-speaking students in an intensive program. Specifically, 28 Spanish-speaking and 20 Arabic-speaking students in the English Institute at the University of Illinois participated in the study. In the study, students' motivational intensity, English class anxiety, and

attitudes towards CALL were obtained from students' questionnaires. The time spent using CALL was determined through a self-report data, that is, by tabulating the number of hours each student spent working on the computer over the course of the semester.

The results of the study indicated that students who put a lot of effort into learning English tended to spend a lot of time using CALL and had a positive attitude toward it. A significant positive correlation was found between motivational intensity and both time and attitude. In relation to motivational intensity, attitude and time, the study revealed that there was a strong relationship between what students said they liked and what they actually did. Concerning English class anxiety, the research showed that students who felt nervous in English classes disliked working on English at their own private terminals.

Stevens (1991) conducted a survey of the attitudes of students at Sultan Qaboos University in Oman regarding using computers to study English in the self-access Student Resource Centre. 75 first year students were selected to be the subjects of this study. They were required to complete a 35-item questionnaire during class time. The questionnaire was also to provide insights into how important students considered computers to be in general, and also to investigate students' anxieties when confronting unfamiliar technologies while engaged in language learning. Most of the students in the survey did not have prior exposure to computers. In response to questions that asked students if they enjoyed using computers to learn

English, 71% of the students expressed positive enjoyment. 95% believed that it was important to use computers to learn English for the reason that computers helped them to improve. The students' attitudes became increasingly positive the more they used the computers. Regarding anxiety, the students' fear of working with computers did not last long. After one semester, they felt relaxed around the computers.

Schcolnik and Rubin (1991) reported on a collaborative effort between a course coordinator and a development team at Tel Aviv University that designed and developed computer lessons based on a booklet which was used as the core of the reading comprehension course. The computer lessons were piloted for a period of two semesters and then were fully incorporated into the reading curriculum. In order to find out students' attitudes towards using the computer lessons, students were required to complete a questionnaire consisting of 16 items in Hebrew during the Summer and Fall sessions. The results obtained from the two sessions were then compared. The results from both sessions showed the level of satisfaction was relatively high, the results of the Fall session were slightly higher. The students in this project had expressed their enjoyment in working with the computer lessons, and also indicated favourable attitudes towards the use of computers to learn English.

Adamson (1996) conducted research on a group of non-specialist students of French in Dundee University. 16 students were involved in the study and they worked in

pairs or groups at times convenient to themselves on computer exercises set as part of their French syllabus. The students were asked to complete a questionnaire about their attitudes to the use of the computer. The results of the survey on students' attitudes showed that they enjoyed working with computers and they felt considerably more relaxed with the computer than they did in a traditional class situation.

Gray (1996) investigated students' views of IT training and their resulting attitudes towards the use of computers in the language classroom. 26 students from the Initial Teacher Training Programme were asked at the end of their course to complete a questionnaire regarding IT capabilities, and their attitudes towards computers and intentions of using them in their future careers. The results obtained showed that most of the students felt comfortable with computers and were keen to develop their skills. 21 students said that they intended to incorporate computers into their classroom practice. The majority of the students had a positive attitude towards the use of computers.

McEnery et al. (1995) carried out a comparison study between students learning grammar in a "computer-based" classroom and in a "traditional-based" classroom. 17 first year English Language undergraduates participated in the seven week experiment. In this study, 9 students were taught grammar in the "traditional-based" classroom while the other 8 used a computer aided learning of linguistic program. In respect to the accuracy of the students' response over time, the results showed

that students in the "computer-based" classroom did better than the students in the "traditional-based" classroom. In response to the questionnaire distributed at the end of the test, the computer-aided group rated their task more positively than the human taught group. The overall finding of this study was that, in terms of teaching the parts-of-speech, CALL programs were more effective than traditional classroom instruction.

2.7 Previous studies concerning learners' strategies in a computer assisted language learning classroom.

Studies on students' strategies in CALL are also still very scarce. Dhaif (1990) strongly believed that learners needed to be consulted to find out their views about the effect of using the computer on their learning task. Thus, he conducted a study on learners' strategies when dealing with CALL exercises at the University of Bahrain. A 25-item questionnaire was constructed to highlight three aspects: (1) The type of exercises students liked or disliked, (2) The strategies used by students in dealing with CALL material, and (3) The students' view on the effect of various CALL exercises on their progress in learning English. To gather the information, 197 questionnaires were distributed to randomly selected learners from the 'orientation' and first year students of the University.

Dhaif addressed two questions concerning the types of exercise that the students liked or disliked. The first question asked the students to choose from a list of nine different types of exercise, the ones they would like to see more of in the computer

laboratory. The other question asked the students to rank those types of exercises in descending order according their preference, (giving No. 9 as their favourite type and No. 1 as their least favourite). Dhaif focused mainly on English language exercises such as multiple-choice grammar, vocabulary, language games, spelling, sentence transformation, cloze, sentence re-ordering, exercises with pictures and graphs, and reading. The results of the study showed that multiple-choice and vocabulary were the two most favoured types of exercise. The least favoured type of exercise was reading.

Concerning the students' strategies in dealing with CALL, Dhaif found that teachers were the prime source of help, as 39% of the students said they would ask them for help. Another 23% said they would turn to a friend for help, 19% said they would seek help from the computer, and only 1% of the respondents said they would abandon the exercise altogether. As for the students' opinion about using the computer in learning a language, the majority of them indicated that it was essential in any language course.

Marsh (1997) conducted a project with a group of learners attending preparatory courses at the University of Hull with the particular aim of identifying the learning strategies of the language learners. This study also aimed to guide the students towards autonomy. Two weeks before the university vacation began, students in the study were introduced to electronic mail or e-mail. All communication between the students and teacher during this period was done through e-mail. A learner diary

which was an integral part of the students' programme was also done through the e-mail. At the beginning of her study, Marsh found that the students referred to the teacher more often than to friends when they faced difficulty. However, when the students were informed that the teacher was away and could not respond to their e-mail, they started to seek help among themselves. The students reported that through collaborative learning, they gained confidence, and could express their thoughts and ideas far more clearly. With the aim of helping each other, they asked questions, made comments and explored vocabulary. The students also expressed their positive attitudes towards learning English using computers.

2.8 Implications for the present study

Based on this review of the research literature relating to motivation and learners' strategies in second language learning, an integrated construct of motivation and a broader categorisation of learners' strategies are proposed in this final section as the framework for the present study.

The various theories and research discussed earlier help to encompass the key construct of *motivational orientations* in this study. In the present research, motivation is taken to be made up of the components of effort, attitude, desire, anxiety, and expectations for learning the second language. Each of these variables is seen as important for different reasons. Effort and desire are seen as important factors in determining how actively the individual works to acquire the language. Attitude is currently related to motivation. Most studies concerning attitude in

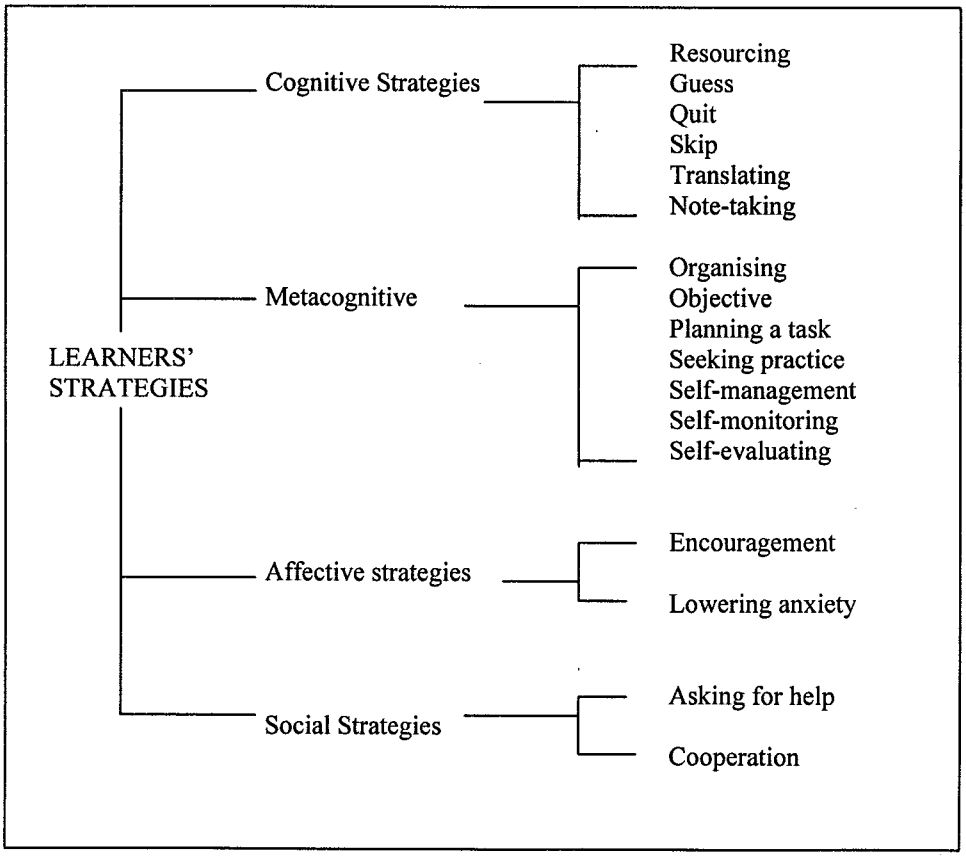
second language learning tend to confirm that a favourable attitude and a high level of motivation go hand in hand with second language learning success. Attitude can influence the student's level of motivation to learn and motivation is shaped by attitude. Anxiety associated with the language itself is viewed as important because it may have an inhibiting effect on the individual's performance, thus interfering with acquisition. Expectation is seen as having a psychological influence on learners. The expectation of learners that they will do well may influence a positive motivation to learn. Finally, research indicates that motivation comprising of effort, attitude, desire, anxiety and expectations can significantly shape students' performances in second language learning.

As for learners' strategies, all of the earlier definitions and classifications are based on language learning in conventional classrooms. There has yet been no specific classification of learners' strategies in CALL classrooms. Thus, in the present study, a classification of learners' strategies when learning English using computers was adapted from strategy classifications of earlier researchers referred to in the above review.

In this study, *learners' strategies* have been identified, therefore, as consisting of four major strategies or types of strategy: cognitive, metacognitive, affective, and social strategies. O'Malley et al's (1985) definitions and classification of cognitive strategies – strategies that operate directly on incoming information, manipulating it in ways that enhance learning – were adopted in this study. The particular strategies

included in this category which relate to CALL are resourcing, translating, note-taking, quit, skip and guess. As for metacognitive, social, and affective strategies, Oxford's (1990) definitions and classification were adopted. The strategies involved in the metacognitive type are organising, setting goals and objectives, planning for a language task, seeking practice, self-management, self-monitoring and self-evaluating. Social strategies consist of asking for help and cooperation. Affective strategies include encouragement and lowering anxiety. Figure 2.6 presents the classification of learners' strategies as adopted in the study.

Figure 2.6: Categories of learners' strategies as focused on in the present study



Students who use computers to learn English employ varieties of strategies to accomplish their tasks. By understanding the students' learning strategies when using computers, the potential for computer assisted language learning instruction to build on such strategies can be maximized.

2.9 Chapter Summary

This chapter presented an interpretation of related literature. The definitions and components of motivation were examined. In relation to the literature concerning motivational orientations in second language learning-and-teaching, this chapter also reviewed recent criticisms of the early research (the Gardnerian). It also examined the definition and classification of language learners' strategies. An integrated construct of motivation and a broad categorisation of learners' strategies were derived from a review of the current literature. This chapter also discussed the benefits and limitations of computers in language learning and teaching. The purpose in this section was to review the potential of computers for language teaching and the limited relevant research.

Related studies concerning the motivational orientations and learning strategies of second language learners in a computer assisted language learning classroom were also discussed in this chapter. From the review of literature, it can be deduced that all the students in the available studies favoured CALL instruction (Dhaif, 1990; Simonsen, 1985; Chapelle and Jamieson, 1986; Stevens, 1991; Schconik and Rubin, 1991; Adamson, 1996; Gray, 1996; McEnery, 1995). Most of the students put a lot

of effort into learning English when using computers (Chapelle and Jamieson, 1986). The students also showed positive attitudes towards the use of computers (Dhaif, 1990; Simonsen, 1985; Chapelle and Jamieson, 1986; Stevens, 1991; Schconik and Rubin, 1991; Adamson, 1996; Gray, 1996). Concerning their anxieties with regard to working with computer programs, the students did not sense feelings of anxiety or discomfort (Chapelle and Jamieson, 1986; Stevens, 1991; Adamson, 1996). In relation to the effectiveness of learning in a computer-based classroom as compared with a conventional classroom instruction, the students seemed to do better in a computer-based classroom (McEnery et al, 1995). After examining the related literature, the intention of the present study was to investigate learners' motivational orientations in a conventional and a CALL classroom at UTM. However, in this study, all of the motivational orientations (effort, attitude, desire, anxiety and expectations) will be investigated in this single study and the number of participants in this study will be larger than in almost all of the previous studies related to the use of CALL.

Previous studies concerning learners' strategies in a CALL classroom examined the sources of help sought by students, for example asking for help from friends or teachers, or getting help from the computer menu. Both the studies, Dhaif (1990) and Marsh (1997) found that students preferred non-computer related strategies (e.g. getting help from friends) over computer related strategies (e.g. getting help from the computer menu). The present study seeks to investigate the kinds of strategies (e.g. cognitive, metacognitive and so forth) that students in UTM may use

in their attempt to learn English language in a CALL classroom. The next chapter details the research methodology designed to address these issues – learners' motivational orientations in a conventional classroom and in a CALL classroom, and learning strategies when dealing with CALL tasks.

CHAPTER THREE

Research design and approach

3.1 Introduction

In this chapter, the research design specifying the focus of the research, its sampling, research instruments, and methods for data-collection, is elaborated upon. Based on the theoretical framework reviewed in the preceding chapters, research questions are initially identified for the present study.

3.2 The focus of the study

This study attempts to investigate three research focuses. The first examines students' motivational orientations when learning English in conventional classrooms, that is, whether students are motivated or not to learn English language in conventional classroom settings in UTM. The second research focus examines students' motivational orientations when working with computer instruction to learn English. Building on previous research, the motivational orientations to be examined within the first and second points of focus comprise effort, attitude, desire, anxiety and expectations. The third research focus explores the students' strategies when dealing with computer-based instruction. CALL is a new instructional material as far as UTM is concerned, even though it is not a new field in the language learning domain. If computer assisted language learning activities

can motivate students towards learning English language, then the instructional material and the preferred strategies of learning English through the computer may be adapted to enhance learning in the ESL classroom at UTM.

3.3 Research Questions

The research questions addressed in this study are:

1. What are students' motivational orientations when learning English in a conventional and in a CALL classroom?
   a. Do students put effort into learning English language?
   b. What are students' attitudes towards learning English language?
   c. Do students have the desire to learn English language?
   d. Do students feel anxious when in English language classes?
   e. What are students' expectations regarding their learning of English language?
2. Is there a similarity or difference in students' motivation when learning English language in a conventional classroom as compared with CALL classroom?
3. If there is a similarity or difference in students' motivation, can this similarity or difference be related to such independent variables as students' gender, faculty membership, proficiency levels, and their plans after graduation?
4. What range of learning strategies do students seem to use when dealing with CALL tasks?
5. Do students' learning strategies appear to vary according to gender, faculty, proficiency levels, and plans after graduation?

3.4 The sample variables

The variables selected for this research are classified into two main categories: independent and dependent. According to Seliger et al (1989) a single variable which may be called the predictor will predict what will happen to a second single variable to which it is related in some way. The predictor variable is called the independent variable, while the variable about which predictions are made is called the dependent variable. An independent variable is a factor which the researcher manipulates in order to see what effect any changes will have. Dependent variables, the central variables, are the means by which any changes are measured, and variables about which predictions are made.

In this study, the dependent variables to be explored can be divided into two. First, the dependent variables in relation to students' motivation when learning English language in a conventional and in a CALL classroom include effort, attitude, desire, anxiety, and expectations. Second, the dependent variables concerning learning strategies when dealing with CALL tasks are cognitive, metacognitive, social, and affective strategies.

The independent variables to be investigated in relation to motivation and learning strategies in this research consist of students' variables as follows:

1. Faculty

   The sample in this study belongs to two different faculties, that is the Faculty of Electrical Engineering and the Faculty of Chemical Engineering and Natural Resources.

2. Gender

   Male and female students are involved.

3. Proficiency level

   In the present study, the proficiency level of the students is determined through their SPM English Language results. The students are divided into two groups: (1) 'High proficiency', that is, students who obtained Grade 7 (Pass), and (2) 'Low proficiency', those who obtained Grade 9 (Fail).

4. Plans after graduation

   The students' plans after graduation are divided into four groups: (1) Students who plan to further their studies in local institutions, (2) Students who plan to continue their education abroad at English speaking universities, (3) Students who plan to get jobs that require a knowledge of English, and (4) Students who plan to get jobs that do not require a knowledge of English.

Statistical combination of variables

In order to obtain the most useful results and provide answers to the research questions for this study, the dependent and the independent variables are combined accordingly. Using the Statistical Package for the Social Sciences (SPSS), all negative statements in this study were given new variable names and values so that

negative and positive statements have the same value. The statements can only be combined when they have the same value. For category description, each of the statements belonging to same category (for example, effort, attitude, or cognitive strategy) was then combined accordingly. Again using the SPSS, each category was given new variable names and values. A Crosstabs test was used to examine the relationships between the dependent and the independent variables. In this study, one of the aims is to examine whether students' are motivated or not when learning English language. In order to understand students' motivation in the two different classroom settings, each of the categories (effort, attitude, desire, anxiety, and expectations) were combined (according to their settings) and given new variable names and values. To explore in-depth the relationships between the dependent and independent variables, a Chi-Square Test was carried out. The Chi-Square Test would demonstrate whether there was significant difference or not between the dependent and the independent variables. However, there was no test of significance applied to the data obtained from the interview sessions because of the small size of the sample (16 interviewees).

In relation to the independent variables, only the statements concerning plans after graduation were combined. The four statements relating to students' plans after graduation were combined accordingly and given new variable names to form to two statements: (1) Require a knowledge of English (2) Do not require a knowledge of English. Table 3.1 exemplified the classifications.

Table 3.1: Classification of students' plans after graduation

Require a knowledge of English	Do not require a knowledge of English
Continue education abroad at English speaking institutions	Continue education at local institutions (non-English speaking institutions)
Get a job that requires a knowledge of English	Get a job that does not require a knowledge of English

3.5 The pilot study

If the consistency, accuracy, reliability and validity of the research can determine its quality, it is important to gauge the effectiveness of the procedure before it is applied in the actual research so that it may be still possible to refine and improve if necessary. Accordingly, it was decided to develop and implement a pilot version of the data gathering procedures before embarking on the main study. This piloting phase gave the researcher opportunities to examine different data collection procedures in order to avoid problems during the administration of the main research. The type of information collected in the piloting was related to: (1) the clarity of the statements in the questionnaire, (2) the reliability and validity of the instrument.

3.5.1 The research design of the pilot study

3.5.1.1 The sample of the pilot study

The participants in the pilot study were 150 students who were attending English language proficiency courses at UTM. The distribution of male and female respondents in this study was 85 and 65 respectively. All students were in their first

year and taking UHB 1222 course. The students' age of between 17 to 19 was the expected age of first year students at UTM. All the students in this study belong to the age group mentioned. The students involved in this pilot study were from three academic disciplines: 48 students were from the Faculty of Computer Science, 52 from the Faculty of Chemical Engineering and 50 from the Faculty of Geoinformation Science. The majority of the students, that is, 87 scored grades of between 7 and 8, while 63 students scored grade 9 on a scale of 1 to 9 in their English language SPM (Malaysian Certificate of Education) results. In the SPM Examination, grades are awarded as follows: Grades of 1 and 2 are categorised as "Distinctions", 3 to 6 as "Credits", 7 and 8 as "Pass", and 9 as "Fail". The participants were all undergraduates. They were all non-native speakers of English. The 150 students who were selected were in the classes where the teachers were willing to cooperate in this research. They were willing to distribute and collect the questionnaires.

3.5.1.2 The pilot data collection instrument

The main methodology employed in the pilot investigation was a survey questionnaire. The aim of the questionnaire was to elicit information concerning motivational orientations when learning English in a conventional and in a CALL classroom. In addition, it was to find out the language learning strategies used by students when dealing with computer-based instruction.

The questionnaires at this stage were written in English. Simple and direct language

was used in all the questionnaires so that they might be comprehensible to all the respondents. The respondents in the study were students who were required by the university to take English language courses. It was therefore important not to use technical words or jargon for better understanding by the students. There were four sections in the questionnaire survey, and they are exemplified in Table 3.2. (Please see Appendix 1 for details of the questionnaire).

Table 3.2: Summary of the questionnaire

Section	Description
A	Background information: gender, age, year of study, English course attended, faculty, SPM English language result, and plans after graduation.
B	Motivational orientations when learning English language in a conventional classroom.
C	Motivational orientations when learning English language in a CALL classroom.
D	Students' learning strategies when dealing with computer-based instruction.

Observation was also undertaken in the study. Observation was another means used to gather research evidence concerning learners' strategies when dealing with computer activities. The observation was designed to provide the opportunity to examine what actually happened in the setting. In this study, an observation form was developed to guide the observer in the process. (The observation form is presented in Appendix 2).

3.5.1.3 The administration procedures of the pilot study

With the help of the ESL teachers teaching the students involved in this study, a set of questionnaires consisting of three sections (Section A to Section C) was administered. The questionnaires were distributed to the students during their English language classes. The purpose of the research was stated at the beginning of the questionnaire. Understanding the objective of the research may have encouraged students to be interested in the study and answer the questionnaire honestly.

Since the administration of the questionnaires depended on the time when the students were having their English classes, language teachers involved with this part of the research were given two weeks to conduct the survey. They were asked to administer the questionnaire to their students within the last two weeks of the semester. Students were to complete the questionnaire in the class within fifty minutes, that is, the duration of one class period. The English class teacher collected the questionnaires from the students once they had completed them. The Strategies Questionnaire (Section D) was distributed in the computer laboratory, that is, immediately after the students had completed their CALL exercises. The immediate feedback could help the students remember the computer exercises well and they would therefore be able to provide more valid answers. The students were given fifteen minutes to complete the questionnaire concerning their strategies when working with computers.

In an attempt to have respondents acting naturally when working with computer instruction, observation was done by a computer laboratory assistant. Through earlier observation and experience, students appeared not to act naturally when being closely observed by the language teacher while they were trying out computer exercises. Therefore, before the actual observations were made, an initial informal study of the respondents' behaviours when attending computer laboratory activities was undertaken. It was reported by some language teachers that, in the presence of a teacher, most of the students sat still working and watching their computer screens. Through informal interviews by the computer laboratory assistants, most students said they felt uncomfortable when their teachers were in the computer laboratory while they were working there. However, the students were not bothered by the presence of the computer laboratory assistants. The students are used to the situation where they come to the Resource Room and try the activities under the informal supervision of the computer laboratory assistants.

Another method by which students can be observed is videotaping. However, it was felt that the video-taping method was inappropriate in this case as the equipment set up to record the students' activities might distract their attention and make them aware that they were being watched. Therefore, they would be less likely to act naturally while completing their CALL exercises. In order to create a situation which is as natural as possible, it would be better to conduct this research without the presence of a teacher or videotape. Since the students are used to the supervision

of computer laboratory assistants, it was felt to be appropriate to let the assistants do the observation. In addition, during the observations the assistants were not required to use English.

For the pilot investigation, the observation took place in the place where the participants normally practice their CALL exercises. In this study, the researcher had the advantage of knowing the setting and the subjects. Students are allowed to come to the Resource Room and practice CALL activities at any time they wish during office hours. There is no time restriction on the students trying out the exercises. They are only required to sign up with the laboratory assistant before starting the exercises.

This procedure made the process of identifying the participants in the research easier. A list of names was given to the computer laboratory assistant so that the participants could be identified as they came into the room. Once the participants were identified, observation could immediately take place. During the process of observation, the observer used a simple observation form that required the observer to simply place a check mark on the form. This form acted as a guide for what to look for during the process. The limited number of computers available in the Resource Room also helped to make the observation of the participants easier as only a small number of students could work on the CALL activities at a time. This was an ideal situation for observation, even though a lot of time was needed to observe all the participants. Since it is a time consuming event, proper advance

structuring of the observation helped to reduce the time commitment. Thus, in this pilot phase, the research allocated four weeks to the computer laboratory assistant for the observation process and observation forms were used to make observation more focused.

The overall aim of the questionnaire and observation, therefore, was to gather information from the respondents and provide guidelines to help increase the effectiveness of computer-based instruction in ESL classrooms at UTM.

3.5.2 Review of the pilot study

The pilot study provided opportunities to try out different data-collection procedures in order to avoid problems during the undertaking of the main research. The information gathered suggested that to ensure the obtaining of reliable and valid data, the main study required a more sensitive and reliable and valid instrument. The criterion of reliability refers to whether the data collection procedure is consistent and accurate to the extent that it will produce the same results with a similar population at a different time. One way by which reliability can be increased is through refining and lengthening the data collection instrument by adding more items and questions. Also, in order to determine the consistency of students' responses towards a particular statement, checking items may be included.

Specifically, in the pilot study, all items in the questionnaires were constructed towards positiveness. This was intended to make responding easier. However, when

responding to items that focused only on positive statements, it was possible for the respondents to provide biased responses. It was later felt that, if negative types of statement could be included in the questionnaire, they could offer respondents in the study more choices, which in turn, would help to provide more precise and less biased responses. In addition, the negative types of statement could act as checking items, which in turn, could help to determine the reliability and validity of the questionnaires.

Another limitation that emerged from the pilot study was that the questionnaires were written in English. Although simple and short sentences and no technical or jargon words were used in the constructions of the items in the questionnaires, it was thought that greater accuracy of the data could be obtained if students were able to respond to questionnaires written in a language that was more easily understood by all students. It was therefore concluded that, in the questionnaire for the main study, Bahasa Malaysia, the national language of the respondents, should be used. It was hoped that in this way, the students would have a better understanding and would be able to provide more accurate information when completing the questionnaires.

The other important criterion for assuring the quality of the data collection procedure is validity. Validity refers to the extent to which the data collection procedure measures what it intends to measure. The data collected should be a good representation of the content which needs to be measured (Seliger and Shohamy,

1989). In the pilot study, some of the items did not fully embody the meaning of a particular concept defined in the study on the basis of earlier research. For example, the item concerning desires in learning English in a conventional classroom, which said, "I like to read English newspapers and magazines" did not sufficiently reveal the students' desires to learn English in a conventional classroom as had been intended in the study. However, the item could be best utilized to elicit information concerning students' desires towards English language in general, or to be specific, it could be used to investigate students' desires towards reading different types of English texts.

The observation method used in the pilot study may have failed to provide valid results. The main weakness was that the observations were made mostly with reference to generalizations about behaviour. The observation study reflected a largely incomplete view of the students' actual strategies used. There were no specific counts made of each activity performed by students. Perhaps, the large number of students, that is the maximum of 10 students to be observed at one time by one observer may have caused the observer to make generalizations over the results of each of the students. It was deduced that another data collection procedure such as an interview should be used instead.

In relation to learners' strategies, the pilot study had limited itself to only two kinds of learners' strategies, that is cognitive and social. Other kinds of strategies such as the metacognitive and affective strategy were not included. The drawback of the

limited kind of strategies addressed in the pilot questionnaire was that, they could not be classified explicitly according to the learners' strategies categories identified in the literature such as cognitive, metacognitive, social, or affective strategies. In addition, no specific claims could be made in relation to the strategies, biased and less accurate information might have been gathered as a result of focusing upon limited kinds of strategies.

The limitations in the pilot study led to further studies of the literature of most recent research, which in turn enabled the concepts originally used to be refined and updated. Understanding the limitations of the research procedures of the pilot study helped to strengthen the research procedure for the main study. The following section will provide details of the developed research procedures of the main study.

3.6 The refinement of the present study

Before embarking on the main study, the outcome of a subsequent literature search and the data-collection procedure of the pilot study were reviewed. Accordingly, to increase the validity of the questionnaire in relation to their uncovering of aspects of motivation, more items were added. Most of the additional items were used as checking items on each of the components of motivation to confirm students' responses. For example, concerning students' attitudes towards learning English in a conventional classroom, every statement that was positively constructed was accompanied by a negatively constructed statement (please see Appendix 3). It was hoped that the negatively constructed statements not only provided the respondents

with more and better choices in the questionnaires, but also allowed for accurate and consistent responses. In relation to very recent views concerning motivation, statements pertaining to 'expectations' were also added to the motivational orientations explored in the pilot study.

The limited number of items and also the limited categories of learners' strategies used in the questionnaire for the pilot study were therefore extended in the main study. Here, items seeking data concerning learners' strategies when learning English using computers, were expanded and spread over an elaboration of four major categories of learners' strategies; that is, cognitive, metacognitive, social, and affective strategies. All the items were designed to enable classification according to these broader categories of strategies derived directly from the research literature. It was important to classify the learners' strategies because, by classifying them according to their categories, the students' most preferred types of strategy when working with computers could be deduced. This had not been previously explored in language learning strategy research.

In the main study, all the concepts used were expressed as clearly as possible. For example, statements concerning students' attitude in learning English in a conventional classroom were revised and the meaning was clarified. In order for students to understand the questionnaires well, Bahasa Malaysia, which is also the medium of instruction, was utilised. The interviews were also conducted in Bahasa Malaysia. It was hoped that by using the language that was understood by all

students, accurate information could be gathered. (The interview survey is presented in Appendix 4).

The interview was thought to be a good research instrument to gather an in-depth explanation of the learners' strategies when working with computers. During an interview, direct information can be obtained from the learners. The purpose of the interview was to obtain precise information by actually talking directly and pursuing issues with the subject. Interviews are more personalised and therefore permit a level of in-depth information-gathering, free response, and flexibility that cannot be obtained by other procedures. In the main study, the interviews were used to replace the original observation method. Finally, the sample of the main study was made larger by increasing the number of respondents. A further 162 students participated in this part of the research. More reliable responses could be obtained from as large a number of respondents as possible.

3.7 The research design for the present study

3.7.1 The sample of the present study

The participants in the study were 162 students who were attending English language proficiency courses. One of the criteria in selecting participants was to have students who were taking the same course in the same semester. This is an important factor to be considered because participants taking the same course in the same semester would cover a similar content area and would be exposed to the similar learning situations; therefore more representative information in relation to

specific groups of UTM students could be gathered. Hence, the Semester December 1998/99 students' taking the English proficiency course called UHB 1222 were chosen as the sample. This is the same course as focused on in the pilot study. However, the students participating in the pilot and main study were different. UHB 1222 is a five-hour per week course. Students taking this course have to spend four hours in a formal English Language classroom and one hour on Self-Access activities.

Age is also an important element in ensuring accurate feedback. It would be inappropriate to choose participants with different ages because maturity and experience may cause the participants to have different attitudes and motivations toward learning English at UTM. As age was not a variable explored in the study, only undergraduates aged between 17 and 19 were selected as the sample. All of the students had experienced Bahasa Malaysia as the medium of instruction in schools. They learned English in schools where it was taught as a compulsory subject. Basically, all of the students had been exposed to English for six years in primary education and five years in secondary education. The students were all non-native speakers of English.

The population of all the students taking UHB 1222 was too large as a total sample, that is, more than 1,000. It would have been impractical to deal with a large population in a single study. 162 students from the whole population were selected to be the subjects of the study by making a purposive randomisation of eligible

classes of students and administering the questionnaires to all the students in those classes. To be more specific, the study was conducted on classes where the teachers were willing to distribute and collect the questionnaires and the classes were held within the schedule of the data-collection period. Therefore, the selections of classes were primarily based on convenience and availability. As for the interview sessions, the samples were students who volunteered to be interviewed after completing the questionnaires. 16 students were selected to attend the interview sessions. The interviewees represent 10 percent of the total sample of the study.

3.7.2 The present data collection instruments

The questionnaire

As I have indicated, there were two primary instruments used to collect data in the main study: questionnaire and interview. The questionnaire was designed to gather information concerning motivational orientations when learning English in a conventional and in a CALL classroom. In addition, it was designed to gather information on learners' strategies when dealing with CALL tasks. (The questionnaire is presented in Appendix 3). In the light of experience gained in the pilot study, the questionnaire in this study was written in Bahasa Malaysia. (The questionnaire in Bahasa Malaysia is presented in Appendix 5).

There were four sections (Section A, B, C, and D) in the questionnaire survey. Section A was designed to elicit some background information which was used for demographic statistical analysis. The background information included gender, age

group, year of study, faculty, SPM English language result, and students' intention after graduation. In this section, students were required to make a check mark (✓) in the relevant boxes or to write in the spaces where applicable.

The development of the choices to the statements in Section B, Section C and Section D was based on the Likert scale (Oppenheim, 1982) where the participants were required to rate the statements along a continuum of strongly disagree to strongly agree. For each statement, five options were given:

Strongly Disagree ---------- (SD)
Disagree ---------- (D)
Undecided ---------- (N)
Agree ---------- (A)
Strongly Agree ---------- (SA)

Section B addressed the issues whether students were motivated or not when learning English in conventional classrooms. This section comprised of a total of 18 items covering five categories (effort, attitude, desire, anxiety, and expectations). Section C constituted statements which required students to provide information on whether they were motivated or not when learning English using computer instruction. This section also consisted of a total of 18 items covering the five categories (effort, attitude, desire, anxiety, and expectations). Table 3.3 illustrates the statements regarding motivational orientations when learning English in a conventional and in a CALL classroom.

Table 3.3: Types of statements referring to motivational orientations when learning English in a conventional and in a CALL classroom.

Effort
I really put effort into trying to learn English.
I don't really put effort into trying to learn English. (negative statements)
I put effort into attending English.
I don't put effort into attending English. (negative statements).
Attitude
I think that learning English is interesting.
I think that learning English is dull.
I think that learning English is useful to me.
I think that learning English is a waste of time.
I love learning English language
I hate learning English language
Desire
When I am in the English class, I wish the time would pass quickly.
When I am in the English class, I wish the time would not pass quickly.
Anxiety
I feel confident when I am in the English class.
I feel nervous and confused when I am in the English class.
Expectations
I expect to learn English well in an English class.
I do not expect to learn English well in an English class.
The English class will definitely help me improve my English.
The English class will definitely not help me improve my English.

Section D was specifically designed to seek students' strategies when learning English using computers. The statements in this section were classified according to strategy categories such as cognitive, metacognitive, affective and social strategies. An explicit and comprehensive section concerning learners' strategies when learning English using computers was incorporated into the questionnaire in the main study. Table 3.4 illustrates statements from each of the categories in relation to learners' strategies when dealing with CALL tasks (refer to full questionnaire in its Appendix 3).

Table 3.4: Learners' strategies when learning English using computers

Categories and sub-categories
COGNITIVE **Resourcing** Example: I refer to an English dictionary when I do not know the meaning of certain words in the computer exercises. **Translate** Example: I think in Bahasa Malaysia for the answer to the computer exercise, then translate it into English. **Note-taking** Example: I take notes of certain rules or words from the computer. **Quit** Example: I leave (quit) the computer exercise that I have problems understanding. **Skip** Example: I skip the computer exercise that I have problems understanding. **Guess** Example: I try to guess the meaning of unfamiliar words using information available on the computer screen.

METACOGNITIVE

Organising
Example:
I keep records of all the computer exercises that I have tried.

Planning Task
Example:
I make plans to complete all computer tasks.

Objective
Example:
I have objectives when choosing the computer exercises.

Self-management
Example:
I choose a challenging computer exercise.

Seeking-practice
Example:
I look for opportunities to practice English language as much as possible when working with computers.

Self-monitoring
Example:
I check my mistakes with the answers provided by the computers.

Self-evaluating
Example:
I check my score after I complete the computer exercise.

SOCIAL STRATEGIES

Asking for help
Example:
I ask my teacher to help me when I have problems understanding certain computer exercises.

Cooperation
Example:
I try to work with a group in order to understand certain computer exercises better.

AFFECTIVE STRATEGIES

Encouragement
Example:
I tell myself that I am working with a machine, I should not feel embarrassed when I make mistakes.

Lowering Anxiety
Example:
I try to laugh when the computer corrects my mistakes.

The interview

The other instrument used in collecting data on strategies in particular was the interview. The interview was thought to be a good research instrument to gather an in-depth explanation of the learners' strategies. The interview was used to complement the quantitative findings of the main study. (The interview questions are presented in Appendix 4). The interview consisted of two parts, that is, structured and semi-structured forms. In the structured interview, interviewees were given a specific set of questions to be answered. Since no elaboration was allowed in the structured part, the interviewees were given opportunities to express and elaborate their views during the semi-structured part. All interviews were conducted in Bahasa Malaysia. It was hoped that by using the language that can be understood by all students, accurate and reliable information could be gathered. Table 3.5 presents some of the interview questions of the study.

Table 3.5: Types of statements referring to the interview

Structured form
Examples:

2. When you are in an English class (conventional classroom), do you .....
   (a) really put effort into trying to learn as much as possible
   (b) not really put effort into trying to learn as much as possible
   (c) not sure

5. When learning English language in a CALL classroom, do you .....
   (a) expect to learn well
   (b) not expect to learn well
   (c) not sure

6. When you are in the English language class (conventional classroom), do you feel .....
   (a) confident
   (b) nervous
   (c) not sure

7. What do you do when you don't know the answer to a certain computer exercise? Do you .....(Choose as many as you want from the following list)
   (a) use the 'hint' or 'help' menu ( )
   (b) refer to the English class textbook ( )
   (c) refer to any English textbooks ( )
   (d) refer to an English dictionary ( )
   (e) refer to a bilingual dictionary (English-Malay dictionary) ( )
   (f) ask for help from friends ( )
   (g) ask for help from teacher ( )
   (h) guess ( )
   (i) just leave it and try another (skip) ( )
   (j) just quit ( )

8. When you are in your English language class (conventional classroom), do you .....
   (a) wish the time would not pass quickly
   (b) wish the time would pass quickly
   (c) not sure

9. When you are in an English class (CALL classroom), do you .....
   (a) really put effort into trying to learn English as much as possible
   (b) not really put effort into trying to learn English as much as possible
   (c) not sure

19. What kind of English language exercises do you like to work on when working with computers? (Choose as many as you want from the following list).
   (a) A challenging exercise. ( )
   (b) A non-challenging exercise ( )
   (c) An exercise that is related or similar to the English lessons. ( )
   (d) An exercise that is not related or similar to the English lessons. ( )

20. How important do you think it is to read the comments made by the computer?
    (a) Important ---------- ( )
    (b) Not important---------- ( )
    (c) Not sure ---------- ( )

Semi-structured form

21. Please add any other comments you like to make about learning English in a conventional and in a computer-based classroom, and learning strategies when dealing with CALL tasks.

_____
_____
_____
_____
_____
_____

3.7.3 The administration procedures of the present study

The questionnaire survey was administered in class with the help of the ESL teachers. Since there was a large number of statements, students were asked to complete the questionnaire at two separate times in order to obtain reliable responses. Section B and Section C consisted of 36 statements while Section D contained 35 statements. Section A, B, and C were administered first. The students were asked to complete the questionnaire within one class period, that is, within fifty minutes. The second questionnaire containing Section D was administered at another class time. The students were also given one class period, that is, fifty minutes to complete the questionnaire in this section. All questionnaires were distributed and collected by the class teachers.

Interviews were conducted at times separate from the class time. The interview was a one-to-one and face-to-face interview. All interviews were conducted in a friendly atmosphere. The interviewees themselves determined the setting and time which were convenient to both the interviewees and interviewers. It was hoped that the setting would encourage students to relax and provide more accurate and honest answers. The interviewers were advised to conduct an individual interview within half an hour.

In order to obtain as accurate information as possible, interviewers were actually selected from amongst students. Two students who were exempt from English language courses were asked to be the interviewers. It was hoped that the interviewees would give honest information when they were asked by friends. The interviewees would also have more freedom to express and elaborate their points of view when peers interviewed them. The interviewers used interview schedules to elicit information from the interviewees. Since most of the interview questions were in structured form, the information gathered could be compared across the sample. Most importantly, all interviews were conducted in Bahasa Malaysia, therefore, few problems arose concerning understanding during the interview session.

3.8 Chapter summary

This chapter has described the research design for the present study refering to points of focus, the sampling, research instruments and methods for data collection. The chapter also presented the research questions which were enumerated under

three broad headings: Motivational orientations when learning English language in a conventional classroom, and when learning English language in a CALL classroom and finally, learners' strategies when dealing with CALL tasks. The chapter described the dependent and independent variables to be studied. The dependent variables consisted of effort, attitudes, desires, anxiety, expectations, cognitive strategy, metacognitive strategy, social strategy and affective strategy, while the independent variables comprised of students' faculty, gender, proficiency level, and plans after graduation. The next two chapters provide the analysis and discussion of the research findings from which answers to the research questions of the present study are derived.

CHAPTER FOUR

The analysis of motivational orientations

4.1 Introduction

This present chapter sets out the findings in respect of students' motivational orientations when learning English in both a conventional and a CALL classroom. Motivational orientations as deduced from the literature are comprised of effort, attitude, desires, anxiety, and expectations. This chapter intends to explore in more detail the dependent variables of students' effort, attitude, desires, anxiety, and expectations in relation to the independent variables of students' gender, faculty, proficiency levels, and future plans after graduation. A comparison between all the variables as involved in the conventional classroom and the CALL classroom will be made. An item-by-item discussion of students' motivational orientations will be presented first before a category-by-category description of the motivational orientations is provided. A category-by-category comparison of the dependent and independent variables in conventional and CALL classrooms aims to compare students' perceptions of the two language learning situations. The information obtained from interviews will be discussed alongside the relevant information

gathered from the questionnaires. This chapter also provides answers to the research questions concerning the students' motivation.

Raw data for the present study were gathered through: (1) Questionnaires (background information, effort, attitude, desire, anxiety, and expectations in the conventional and CALL classroom) and (2) Interview focusing upon students' motivational orientations (structured and semi-structured in form). The data obtained were then computed through a statistical programme SPSS (Statistical Package for Social Science). In this study, the results obtained have been presented in the form of tables where necessary. It is worthy of note that although statistical techniques were used, students' gender, faculty, and plans after graduation have to be taken with caution because of the relatively small sample size for female students, students from chemical engineering faculty, and students who claimed they did require a knowledge of English for their future plans.

4.2 The demographic information

A profile was developed to provide demographic information about the subjects in the present study. The demographic information of students involved in this study was sought in questions No.1 to No. 8 of the questionnaire (see Appendix 3). The demographic questionnaire collected data about the subjects' personal information and their plans after they have completed their present studies at UTM. A summary of the demographic information obtained is presented in Table 4.1.

The total number of subjects under investigation amounted to 162. 148 of the students were male and 14 were female. All the students in this study belong to the 17 to 19 age group. The sample was selected to provide equal numbers of students in the low and high proficiency levels. 81 students belonged to each proficiency group. They were all in their first year and taking UHB 1222 course.

Table 4.1: Personal details of the sample

Questions	Frequencies n =162	Percentage 100%
2. Gender		
Male	148	91
Female	14	9
3. Age group		
17-19	162	100
4. SPM English result		
7 (Pass)	81	50
9 (Fail)	81	50
5. Year of study at UTM		
1st Year	162	100
6. English course		
UHB 1222	162	100
7. Faculty		
Electrical Engineering	104	64
Chemical Engineering	58	36
8. Plans after graduation		
Continue education locally	26	16
Continue education abroad	08	05
Get a job that requires English	03	02
Get a job that does not require English	125	77

The table above also illustrates that the sample comprised undergraduates enrolled in two faculties: 58 students were from the Faculty of Chemical Engineering and Natural Resources and 104 were from the Faculty of Electrical Engineering. When the students were asked about their intentions after graduation, 26 expressed the

intention to further their studies in local universities, 8 students wanted to continue their education abroad at an English speaking university. Three students planned to get jobs that required a knowledge of English, and 125 students, wanted to get jobs that did not require a knowledge of English.

In general, the demographic results showed that most of the respondents in the study were males (91%). 64% of the respondents belonged to the Faculty of Electrical Engineering. 77% of the respondents, that is, the majority intended to seek a job that did not require a knowledge of English. This shows that a knowledge of English was not seen to be important for their career after graduation.

4.3 The motivational orientations when learning English language in a conventional classroom

Section B of the questionnaire contained eighteen statements concerning students' motivational orientations covering effort, attitude, desires, anxiety, and expectations when learning English in a conventional classroom (see Appendix 3). The statements were deliberately jumbled rather than sequenced according to their categories when they were presented in the questionnaire. However, in the following analysis and discussion, the motivational orientations will be described item-by-item and then by categories (effort, attitude, desires, anxiety and expectations). The category analyses will also be examined in relation to students' gender, faculty, proficiency levels, and plans after graduation.

4.3.1 Students' effort when learning English language in a conventional classroom.

In Section B of the questionnaire, students were asked to respond to four statements which required them to provide information concerning the effort they put in to learning English in a conventional classroom. The results for all students are illustrated in Table 4.2.

Table 4.2: Response to students' effort in a conventional classroom

	SD %	D %	A %	SA %
9. I really put effort into trying to learn English.	18	62	14	6
2. I don't really put effort into trying to learn English.	8	13	64	15
16. I put effort into attending English class.	10	52	31	7
11. I don't put effort into attending English class.	9	27	56	8

SD = Strongly Disagree
D = Disagree
A = Agree
SA = Strongly Agree

The overall trend in the responses was clearly negative both in regard to effort put into learning and attending the English classes. 62% of students disagreed that they put effort into trying to learn English, and 52% disagreed that they put effort into attending English class. When the results from the two statements are compared, it can be seen that only 14% of the students believed they put effort into trying to learn English, while 31% agreed that they put effort into attending English classes.

The students showed some agreement in putting effort in to attending English classes, most probably because of the university requirement. (Students are required to have a minimum of 80% for their English class attendance in order to enable them to sit their English final examination).

The checking items covering effort put into trying to learn English, and attending the English class showed that the students were quite consistent in their responses. 80% of the students were on the negative continuum of the scale ("disagree" and "strongly disagree") when they were asked about the effort they put into trying to learn English, and 79% were on the opposite of the scale, that is, 'agree' and 'strongly agree' when the same statements were asked in the negative form. As for the effort students put into attending the English class, 62% strongly disagreed or disagreed to put effort into attending English class. 64% of the students strongly agreed or agreed with the statement that they did not put effort in to attending English class.

A Crosstabs analysis was further conducted to explore the relationship between the dependent variable of effort and the independent variables of students' gender, faculty, proficiency levels, and plans after graduation. Table 4.3 illustrates the relationship between these variables. The frequency distribution shows that according to gender, male students (72%) disagreed that they put in effort; according to faculty, electrical engineering students (77%) disagreed that they put in effort; according to proficiency level, more higher proficiency students (73%)

expressed their disagreement regarding the effort they put in than the low proficiency level students (64%) did; and according to plans after graduation, students who did not require English (74%) disagree with the statement that they put effort into learning English in a conventional classroom.

Table 4.3: Frequency distribution according to gender, faculty, proficiency levels and plans after graduation.

		EFFORT				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	72	(107)	28	(41)	(148)
	Female	29	(4)	71	(10)	(14)
FACULTY	Chemical	53	(31)	47	(27)	(58)
	Electrical	77	(80)	23	(24)	(104)
PROFICIENCY	Low	64	(52)	36	(29)	(81)
	High	73	(59)	27	(22)	(81)
FUTURE	Require Eng.	0	(0)	100	(11)	(11)
PLAN	Require no Eng.	74	(111)	26	(40)	(151)

The overall view of the students' lack of effort to learn and attend English class may clearly be explained in the students' response to the statement which addressed their plans after graduation. The majority of the students (74%) who believed they did not require English in their future career expressed their disagreement with the statement concerning effort put into learning English. Clearly the students' future plans could have influenced the effort to learn and to attend English class.

To investigate whether there are significant differences or not in the students' effort put into English language in a conventional classroom, a Chi-Square Test was

conducted and the results are presented in Table 4.4.

Table 4.4: Effort v gender, faculty, proficiency levels and future plans

	Significance
Gender	0.002*
Faculty	0.002*
Proficiency	0.236
Future plans	0.000*

*$p < 0.05$

According to Table 4.4, there is no significant difference (where the p value is more than 0.05) between students of different proficiency levels regarding the effort they claim to put into learning English language. Students with low and high proficiency did not show differences concerning effort put into learning English in a conventional classroom. However, there are significant differences in relation to students' gender, faculty, and plans after graduation. The results of the analysis given in Table 4.4 can be summarised as follows:

- There is a significant difference in the effort students claim to put into learning English language in a conventional classroom between male and female students. The female students claim that they put in more effort than the male students.
- In terms of faculty, there is a significant difference in terms of effort students claim to put into learning English language between students from the chemical engineering and students from the electrical engineering faculty. The students from the chemical engineering believe that they put in more effort than students from the electrical engineering students.

- There is no significant difference between students with low and high proficiency levels in the effort they believe they put into learning English language.
- There is a significant difference between students who say they require a knowledge of English in the future and those who do not. All of the former students believe they put in effort while less than half of the latter students felt that they put in effort.

4.3.2 Students' attitude toward learning English language in a conventional classroom.

Six statements were addressed to students to trace their attitudes toward learning English in a conventional classroom. Three of the statements formed the checking items (no.12, no.10, and no.17). The responses for all students are presented in Table 4.5.

Table 4.5 suggests that the dominant attitude is one of disfavour towards learning English. There is a definite degree of negativity towards learning English among the students in the study. Learning English is seen as dull, a waste of time, and they largely dislike the subject. 84% of students agreed that learning English is dull. 84% of students thought that learning English is waste of time. 87% of students disliked learning English.

Table 4.5: Response to students' attitude in a conventional classroom

	SD %	D %	A %	SA %
4. I think that learning English is interesting.	37	46	17	-
12. I think that learning English is dull.	-	16	50	34
8. I think that learning English is useful to me.	31	44	19	6
10. I think that learning English is a waste of time.	4	12	50	34
14. I love learning English.	32	52	14	2
17. I hate learning English.	1	12	58	29

Students disagreed with statements that supported the learning of English, such as learning English is interesting, learning English is useful, and the love of learning English. 83% of students expressed their disagreement with the statement, "I think that learning English is interesting". 75% disagreed with the statement that said, "I think that learning English is useful to me". 84% disagreed with the statement that said, "I love learning English". In contrast, a small number of students showed positive attitudes towards learning English. 17% of the students stated that learning English is interesting. 25% thought that learning English is useful to them, while 16% love learning English in a conventional classroom.

A statistical analysis was carried out to explore the more detailed relationships between the dependent variable of attitudes and the independent variables of students' gender, faculty, proficiency levels and plans after graduation. Table 4.6 demonstrates the relationships among the variables.

Table 4.6: Frequency distribution according to gender, faculty, proficiency levels and plans after graduation.

		ATTITUDE				
		Negative		Positive		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	88	(130)	12	(18)	(148)
	Female	29	(4)	71	(10)	(14)
FACULTY	Chemical	72	(42)	28	(16)	(58)
	Electrical	88	(92)	12	(12)	(104)
PROFICIENCY	Low	93	(75)	7	(6)	(81)
	High	73	(59)	27	(22)	(81)
FUTURE	Require Eng.	36	(4)	64	(7)	(11)
PLAN	Require no Eng.	86	(130)	14	(21)	(151)

In relation to students' attitude to learning English in a conventional classroom, the frequency scores in Table 4.6 show that according to gender, 88% of male and 29% of female students have negative attitudes, while 12% of male and 71% of female students have positive attitudes. According to faculty, 72% of students from the chemical engineering faculty and 88% of students from the electrical engineering faculty have negative attitudes, in contrast, 28% of students from the chemical engineering faculty and 12% of students from the electrical engineering faculty have positive attitudes. According to proficiency levels, 93% of students with low proficiency and 73% of students with high proficiency have negative attitudes, while 7% of students with low proficiency and 27% of students with high proficiency have positive attitudes. According to plans after graduation, 36% of students who require a knowledge of English and 86% of students who do not require a knowledge of English have negative attitudes. On the other hand, 64% of students who require English knowledge and 14% of students who do not require

English knowledge have positive attitudes. This analysis suggests that students who do not have intentions to use English in their future plans tend to have negative attitudes towards learning English language and vice-versa.

A Chi-Square Test was further carried out to see whether there was any significant difference between the dependent and independent variables. Table 4.7 presents the level of significance of the variables.

Table 4.7: Attitude v gender, faculty, proficiency levels and future plans

	Significance
Gender	0.000**
Faculty	0.010*
Proficiency	0.001*
Future plans	0.000**

*p < 0.05 **p < 0.01

The table above reveals that all the variables differed significantly with p value less than 0.01 for gender and plans after graduation and a p value less than 0.05 for faculty and proficiency levels. The results of the analysis given in Table 4.7 can be summarised as follows:

- There is a significant difference between male and female students in their attitude to learning English in a conventional classroom. Relatively more female students claim to have a positive attitude than the male students.
- In terms of faculty, there is a significant difference between students from the chemical engineering faculty and students from the electrical engineering faculty in their attitudes towards learning English language. Relatively more

students from the chemical engineering faculty have positive attitudes than students from the electrical engineering faculty.

- There is a significant difference between students with low and high proficiency in relation to their attitude towards learning English language in a conventional classroom. Relatively more students with high proficiency seemed to have positive attitudes than students with low proficiency.
- In terms of plans after graduation, there is a significant difference between students who believe they require a knowledge of English and who do not. Relatively more students who believe they require a knowledge of English have positive attitudes than those who did not.

4.3.3 Students' desire toward learning English language in a conventional classroom.

Students were asked to respond to two items that explored their desire toward learning English language in a conventional classroom. The results for all students are shown in Table 4.8.

Table 4.8: Response to students' desire in a conventional classroom

	SD %	D %	A %	SA %
6. When I am in English class, I wish the time would not pass quickly.	27	59	13	1
15. When I am in English class, I wish the time would pass quickly.	1	11	59	29

The results from the table show that 86% of students 'strongly disagree' and 'disagree' with the statement that said, "When I am in English class, I wish the time would not pass quickly". The results suggest that the students do not have the desire to learn English. They wish for the class to pass quickly. The checking statements, "When I am in English class, I wish the time would pass quickly", revealed that 88% of the students agreed with the statement. This result also suggests that the students wish for the class time to pass quickly when learning English in a conventional classroom.

Table 4.9 shows the relationships between the dependent variable of desire and the independent variables of students' gender, faculty, proficiency levels and plans after graduation.

Table 4.9: Frequency distribution according to gender, faculty, proficiency levels and plans after graduation.

		DESIRE				
		Disagree/No		Agree/Yes		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	91	(135)	9	(13)	(148)
	Female	29	(4)	71	(10)	(14)
FACULTY	Chemical	78	(45)	22	(13)	(58)
	Electrical	90	(94)	10	(10)	(104)
PROFICIENCY	Low	89	(72)	11	(9)	(81)
	High	83	(67)	17	(14)	(81)
FUTURE	Require Eng.	64	(7)	36	(4)	(11)
PLAN	Require no Eng.	87	(132)	13	(19)	(151)

The results in Table 4.9 indicate that 91% of male students disagreed with all the statements which suggest that they have the desire to learn English language in a conventional classroom, and the other 9% of male students agreed that they wish to learn English language. On the other hand, only 29% of female students disagreed with having the desire to learn English and 71% of female students however agreed that they wish to learn English language. 78% of students from the chemical engineering faculty and 90% of students from the electrical engineering faculty disagreed with the statements showing a desire to learn English language. The students with low proficiency level (89%) indicate a higher frequency of disagreement than the students with high proficiency levels (83%) towards having the desire to learn English. In other words, more of the low proficiency students did not have the desire to learn English. 87% of the students who believed that they did not require English knowledge for their future plans did not have the desire to learn English language. It is clear that the majority of students who do not have any intentions of using English in their future plans, either to further studies or to use English in their work place are likely not to have the desire to learn English language.

Table 4.10 illustrates the level of significance gathered from the students' responses towards the statements concerning desire. The desire statements which were combined to form one dependent category were compared against the independent variables of students' gender, faculty, proficiency levels, and plans after graduation. The Chi-Square Test was used to test the level of significance of these variables.

Table 4.10: Desire v gender, faculty, proficiency levels and future plans

	Significance
Gender	0.000**
Faculty	0.025*
Proficiency	0.260
Future plans	0.052*

*p < 0.05 ** p < 0.01

In relation to students' desire towards learning English language, the results in Table 4.10 show that there are significant differences in terms of students' desire to learn English in a conventional classroom as between male and female students, students from the chemical engineering faculty and the electrical engineering faculty, students who require a knowledge of English and who do not require a knowledge of English. However, there is no significant difference between students with low and high proficiency in learning English language in a conventional classroom. The results of the analysis given in Table 4.10 can be summarised as follows:

- There is a significant difference between male and female students in that proportionally more female students agreed with showing desire to learn English than the male students.
- There is significant difference between students from the chemical engineering and the electrical engineering faculty in terms of showing desire to learn English language. Although most students from both the faculties disagreed with having desire to learn English in a conventional classroom, proportionally less of the chemical engineering students disagreed.

- There is no significant difference between students with low and high proficiency levels in showing desire to learn English language in a conventional classroom.
- There is a significant difference in relation to showing desire to learn English language between students who believe they require a knowledge of English and those who do not. Proportionally more of the students who saw themselves requiring a knowledge of English for their future plans showed a desire to learn English language than those who did not.

4.3.4 Students' anxiety when learning English language in a conventional classroom.

Students were asked to respond to two items concerning their feeling of anxiety when learning English in a conventional classroom. The results for all students are presented in Table 4.11.

Table 4.11: Response to students' anxiety in a conventional classroom

	SD %	D %	A %	SA %
3. I feel confident when I am in the English class.	29	56	11	4
13. I feel nervous and confused when I am in the English class.	4	11	56	29

Students' responses to the items show that they have feelings of anxiety in the English class. The students expressed agreement with the statements that reflect

feelings of anxiety in English class. 85% of the students 'agree' or 'strongly agree' that they felt nervous and confused when in English class. On the other hand, 85% of the students expressed disagreement with the statement which indicated their confidence when in English class.

Although the frequency distribution in Table 4.11 puts forward a convincing image of the way students responded to statements concerning anxiety, a further test was thought necessary. Table 4.12 shows the relationships between the dependent variable of anxiety and the independent variables of students' gender, faculty, proficiency levels and plans after graduation.

Table 4.12: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		ANXIETY				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	91	(135)	9	(13)	(148)
	Female	29	(4)	71	(10)	(14)
FACULTY	Chemical	78	(45)	22	(13)	(58)
	Electrical	90	(94)	10	(10)	(104)
PROFICIENCY	Low	89	(72)	11	(9)	(81)
	High	83	(67)	17	(14)	(81)
FUTURE	Require Eng.	64	(7)	36	(4)	(11)
PLAN	Require no Eng.	87	(132)	13	(19)	(151)

The findings in the table above show that 91% of male and 29% of female students learning English language in a conventional classroom disagreed with statement which suggests that they were confident in English class. 78% of students from the

chemical engineering faculty and 90% of students from the electrical engineering faculty disagreed with the statements which show that they do not have feelings of anxiety when in the English class. The low proficiency level students (89%) indicate a higher frequency of disagreement than the high proficiency level students (83%) towards not having feelings of anxiety. In other words, the low proficiency level students were less confident than the high proficiency level students when learning English in a conventional classroom. 87% of students who believed that they did not require a knowledge of English for their future plans expressed feelings of anxiety, and 64% of students who require a knowledge of English also suggested feelings of anxiety when in the English class.

To investigate whether there are significant differences or not in feelings of anxiety among students when in a conventional English language classroom, a Chi-Square Test was carried out. Table 4.13 presents the results of the significance test between the dependent variable of anxiety and the independent variables.

Table 4.13: Anxiety v gender, faculty, proficiency levels, and future plans

	Significance
Gender	0.000**
Faculty	0.025*
Proficiency	0.260
Future Plans	0.052*

*$p < 0.05$ ** $p < 0.01$

Table 4.13 illustrates that there are significant differences when learning English in a conventional classroom in relation to students' anxiety between male and female

students, students from the chemical engineering faculty and the electrical engineering faculty, students who require a knowledge of English and who do not require a knowledge of English. However, there is no significant difference between students with low and high proficiency levels when in a conventional English language classroom. The results of the analysis given in Table 4.13 can be summarised as follows:

- There is a significant difference between male and female students in that proportionally more female students expressed their confidence in learning English language than the male students.
- There is significant difference between students from the chemical engineering and the electrical engineering faculty in terms of expressing that they do not have feelings of anxiety when learning English language. Proportionally more of students from the chemical engineering faculty expressed their confidence in learning English language in a conventional classroom than students from the electrical engineering faculty.
- There is no significant difference between students with low and high proficiency levels concerning feelings of anxiety when learning English language in a conventional classroom.
- There is a significant difference in terms of students' feelings of anxiety when learning English language in a conventional classroom between students who see themselves requiring a knowledge of English and those who do not. Proportionally more of the students who saw themselves as requiring a knowledge of English for their future plans expressed their confidence in

learning English language than those who did not.

4.3.5 Students' expectations when learning English language in a conventional classroom.

Students were asked about their expectations in learning English in a conventional classroom by responding to four statements which were listed in the questionnaire. The results for all students are presented in Table 4.14.

Table 4.14: Response to students' expectations in a conventional classroom

	SD %	D %	A %	SA %
1. The English class will definitely help me improve my English.	28	54	16	2
7. The English class will definitely not help me improve my English.	3	15	53	29
18. I expect to learn English well in an English class.	9	52	28	11
5. I do not expect to learn English well in an English class.	10	31	49	10

The findings in the table above suggest that, the students' expectations when learning English in conventional classrooms were low. 82% of the students disagreed with the statement that said, "The English class will definitely help me improve my English". 61% disagreed with the statement that said, "I expect to learn English well in an English class". On the other hand, the checking statements also suggest that the students 'agree' and 'strongly agree' with both statements.

82% of the students seemed to agree with the statement which states that the English class would not help them to improve their English. 59% of the students did not expect to learn English well in a conventional English language classroom. The checking statements thus showed that the students were quite consistent in their responses in relation to their expectations in learning English.

In order to understand the relationships between independent and dependent variables better, a Crosstabs analysis was carried out. Table 4.15 shows the relationships between the dependent variable of expectations and the independent variables of students' gender, faculty, proficiency levels, and plans after graduation.

Table 4.15: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		EXPECTATIONS				
		Disagree/Low Exp.		Agree/High Exp.		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	76	(112)	24	(36)	(148)
	Female	29	(4)	71	(10)	(14)
FACULTY	Chemical	64	(37)	36	(21)	(58)
	Electrical	76	(79)	24	(25)	(104)
PROFICIENCY	Low	74	(60)	26	(21)	(81)
	High	69	(56)	31	(25)	(81)
FUTURE	Require Eng.	36	(4)	64	(7)	(11)
PLAN	Require no Eng.	74	(112)	26	(39)	(151)

In relation to students' expectations in learning English in a conventional classroom, the frequency scores in Table 4.15 show that: According to gender, 76% of male and 29% of female students have low expectations, while 24% of male and

71% of female students have high expectations. According to faculty, 64% of students from the chemical engineering faculty and 76% of students from the electrical engineering faculty have low expectations. In contrast, 36% of students from the chemical engineering faculty and 24% of students from the electrical engineering faculty have high expectations. According to proficiency levels, 74% of students with low proficiency and 69% of students with high proficiency have low expectations, while 26% of students with low proficiency and 31% of students with high proficiency have high expectations. According to plans after graduation, 36% of students who require a knowledge of English and 74% of students who do not require a knowledge of English have low expectations. The deduction that can be made from this particular analysis is that, students with low proficiency and those who do not have any intentions of acquiring English language for their future have low expectations towards learning English language.

Table 4.16 illustrates the level of significance gathered from the students' responses concerning expectations when learning English in a conventional classroom. The expectation statements which were combined to form one category were compared against the independent variables. The Chi-Square Test was used to test the level of significance of these variables.

Table 4.16: Expectations v gender, faculty, proficiency levels, and future plans

	Significance
Gender	0.001
Faculty	1.000
Proficiency	0.486
Future plans	0.013

$p < 0.05$

According to Table 4.16, there are significant differences in relation to students' gender and plans after graduation regarding the expectations they claim to have when learning English language. However, there are no significant differences between students of different faculty and proficiency levels regarding their expectations. The results of this analysis can be summarised as follows:

- There is a significant difference in the expectations students claim to have when learning English language in a conventional classroom between male and female students. Relatively more of the female students claim to have high expectations than the male students.
- In terms of faculty, there is no significant difference between students from the chemical engineering faculty and the electrical engineering faculty in terms of their expectations that they claim to have when learning English.
- There is no significant difference between students with low and high proficiency levels in the expectations they believe they have when learning English.
- There is a significant difference between students who say they require a knowledge of English in the future and those who do not. Relatively the majority (64%) of the former believe they have high expectations while only

about one sixth (26%) of the latter felt that they have high expectations when learning English language in a conventional classroom.

4.4 The motivational orientations when learning English language in a CALL classroom

In Section C of the questionnaire, students' responses were analysed according to their effort, attitude, desire, anxiety, and expectations when learning English language using computers. The section contained eighteen statements. The statements were not classified according to their categories when they were presented in the questionnaire. However, in the following analysis, the motivational orientations will be described according to item-by-item and then by categories (effort, attitude, desires, anxiety and expectations) in relation to gender, faculty, proficiency levels, and plans after graduation.

4.4.1 Students' effort when learning English language in a CALL classroom

In the questionnaire students were invited to respond to four statements which required them to provide information concerning the degree of effort they expended in learning English when using computers. The results of all the students' responses to the statements are presented in Table 4.17.

Table 4.17: Response to students' effort in a CALL classroom

	SD %	D %	A %	SA %
7. I really put effort into trying to learn English using computers.	-	14	66	20
15. I don't really put effort into trying to learn English using computers.	25	63	12	-
3. I put effort into attending English class when I know I will be working with computers.	-	5	75	20
12. I don't put effort into attending English class when I know I will be working with computers.	22	72	6	-

The results show that students expressed positive responses in putting effort into learning and attending the English class when computers were used. 66% of students agreed that they put effort into trying to learn English using computers, and 75% said that they put effort into attending English class when they knew that they would be working with computers. When the results from the two statements were compared, it can be seen that only 14% of the students disagreed with putting effort into trying to learn English, and 5% disagreed with putting effort into attending the English class where computers were used.

The checking items for students putting effort into trying to learn English, and putting effort into attending English class showed that the students were quite consistent in their responses. In statement No.7, 14% of students' responses were on the negative continuum of the scale. They expressed their disagreement with the

statement that showed that they put effort into trying to learn English using computers. On the contrary, 12% of the students expressed their agreement with the statement that said they do not really put effort into trying to learn English using computers. Concerning the effort students put into attending the English class using computers, 5% were against the statement, that is, they disagreed with putting effort into attending the English class. 6% agreed with the statement that shows they did not put effort into attending English class.

A further statistical analysis was carried out so as to examine the relationships between the dependent variable of effort and the independent variables of gender, faculty, proficiency levels and plans after graduation. Table 4.18 shows the relationships between the variables.

Table 4.18: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		EFFORT				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	14	(20)	86	(128)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	10	(6)	90	(52)	(58)
	Electrical	13	(14)	87	(90)	(104)
PROFICIENCY	Low	10	(8)	90	(73)	(81)
	High	15	(12)	85	(69)	(81)
FUTURE	Require Eng.	0	(0)	100	(11)	(11)
PLAN	Require no Eng.	13	(20)	87	(131)	(151)

The findings demonstrate that 86% of male and all of female students put effort into learning English language in a CALL classroom. 90% of students from the chemical engineering faculty and 87% of students from the electrical engineering faculty expressed their agreement regarding effort put into learning English language. The low proficiency level students (90%) indicate a higher frequency agreement than the high proficiency level students (85%) towards putting effort into learning English language. 87% of students who did not require a knowledge of English for their future plans expressed their agreement with putting effort into learning English using computers.

In order to investigate whether there are significant differences or not in effort claimed to be devoted to learning English language in a CALL classroom, a Chi-Square Test was carried out. Table 4.19 presents the results of the significance test between the independent variable of effort and the independent variables of students' gender, faculty, proficiency levels, and plans after graduation.

Table 4.19: Effort v gender, faculty, proficiency levels, and future plans.

	Significance
Gender	0.220
Faculty	0.563
Proficiency	0.339
Future plans	0.362

$p < 0.05$

The results in Table 4.19 show that there are no significant differences between male and female students, students from the chemical engineering faculty and the

electrical engineering faculty, students with low and high proficiency levels and, students who believe they require a knowledge of English and who do not. Although there are no significant differences, all of the female students claimed that they put in more effort as compared with the male students. In terms of faculty, relatively more of the chemical engineering students believed that they put in effort than the electrical engineering students. In relation to proficiency levels, relatively more students with low proficiency levels believed they put effort into learning English language. In terms of plans after graduation, all of the students who said they required a knowledge of English in the future believed they put effort into learning English language when using computers.

4.4.2 Students' attitude toward learning English language in a CALL classroom

Six statements were presented to explore students' attitudes toward learning English using computers, three of which formed the checking items. The results for all students are presented in Table 4.20. Students' responses to the statements show that they have an overall positive attitude towards learning English when using computers. Learning English is seen as interesting, useful and agreeable to them. Students agreed with statements that support the learning of English using computers where 72% thought that it was interesting, 73% thought that it was useful, and 72% loved it. Similarly, students disagreed with statements which questioned the learning of English using computers.

Table 4.20: Response to students' attitude in a CALL classroom

	SD %	D %	A %	SA %
4. I think that learning English using computers is interesting.	-	4	72	24
8. I think that learning English using computers is dull.	23	73	4	-
9. I think that learning English using computers is useful for me.	-	5	73	22
5. I think that learning English using computers is a waste of time.	20	74	6	-
10. I love learning English using computers.	-	6	72	22
6. I hate learning English using computers.	19	74	5	2

A further statistical analysis concerning attitudes was carried out. The analysis examined the relationships between the dependent variable of attitude and the four independent variables. Table 4.21 illustrates the relationships between the variables.

Table 4.21: Frequency distribution according to gender, faculty, proficiency levels and plans after graduation.

		ATTITUDE				
		Negative		Positive		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	5	(7)	95	(141)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	5	(3)	95	(55)	(58)
	Electrical	4	(4)	96	(100)	(104)
PROFICIENCY	Low	0	(0)	100	(81)	(81)
	High	9	(7)	91	(74)	(81)
FUTURE	Require Eng.	0	(0)	100	(11)	(11)
PLAN	Require no Eng.	5	(7)	95	(144)	(151)

In relation to students' attitude to learning English in a CALL classroom, the frequency scores in Table 4.21 show that according to gender, the majority of the male students (95%) and all female students (100%) have positive attitudes. According to faculty, 96% of students from the electrical engineering faculty and 95% of students from the chemical engineering faculty have positive attitudes; only 4% of students from the electrical engineering faculty and 5% of students from the chemical engineering faculty expressing negative attitudes. According to proficiency levels, all of the students with low proficiency have positive attitudes and 91% of students with high proficiency level have positive attitudes. According to plans after graduation, all of the students who believed that they required English knowledge and 95% of students who do not require have positive attitudes. On the other hand, only 5% of students who believed that they do not require a knowledge of English have negative attitudes. It is clear from the results that the majority of students have positive attitudes towards learning English in CALL classrooms. In order to explore in-depth the relationships between the independent variable of attitude and the independent variables, a Chi-Square Test was conducted. Table 4.22 presents the results of the significance test.

Table 4.22: Attitude v gender, faculty, proficiency levels, and future plans.

	Significance
Gender	1.000
Faculty	0.702
Proficiency	0.014*
Future plans	1.000

* $p < 0.05$

Concerning the level of significance, Table 4.22 shows that there are no significant differences in attitudes towards learning English in CALL classrooms between male and female students, students from the chemical engineering faculty and the electrical engineering faculty and students who believe they require a knowledge of English and who do not. However, there is a significant difference between students with low and high proficiency levels when learning English in CALL classrooms. All students with low proficiency levels seemed to have a positive attitude towards learning English language when using computers.

4.4.3 Students' desire toward learning English language in a CALL classroom

Students were asked to respond to two items that reflect their desire toward learning English when using computers. The results for all students are shown in Table 4.23

Table 4.23: Responses to students' desire in a CALL classroom

	SD %	D %	A %	SA %
17. When I am in the computer assisted language learning class, I wish the time would not pass quickly.	-	4	71	25
14. When I am in the computer assisted language learning class, I wish the time would pass quickly.	24	71	4	1

The students' responses to the statements above show that students have a strong desire to learn English when using the computer. 71% of students agreed with the

statement that said, "When I am in the computer assisted language learning class, I wish the time would not pass quickly", while 71% of them disagreed with the statement that said, "When I am in the computer assisted language learning class, I wish the time would pass quickly".

A further statistical analysis concerning the desire towards learning English when using computers was carried out so as to enumerate relationships among the variables. Table 4.24 shows the relationships between the dependent variable of desire and the independent variables of students' gender, faculty, proficiency levels, and plans after graduation.

Table 4.24: Frequency distribution according to gender, faculty, proficiency levels, and plans after graduation.

		DESIRE				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	6	(9)	94	(139)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	7	(4)	93	(54)	(58)
	Electrical	5	(5)	95	(99)	(104)
PROFICIENCY	Low	1	(1)	99	(80)	(81)
	High	10	(8)	90	(73)	(81)
FUTURE PLAN	Require Eng.	9	(1)	91	(10)	(11)
	Require no Eng.	5	(8)	95	(143)	(151)

The findings from Table 4.24 show that 94% of male and all of the female students agreed with the statements which suggest that they have the desire to learn English language when using computer. 95% of students from the electrical engineering

faculty and 93% of students from the chemical engineering faculty agreed with the statements which show that they have the desire to learn English language. The low proficiency level students (99%) indicate a slightly higher frequency of agreement than the high proficiency level students (90%). Nevertheless, 95% of students who did not see themselves requiring a knowledge of English for their future plans expressed their desire to learn English language. The majority of the students in this study indicated that they have a strong desire to learn English language when computers are used in the classroom.

To investigate whether there are significant differences or not in the desire to learn English language in CALL classroom, a Chi-Square Test was conducted and the findings are presented in Table 4.25.

Table 4.25: Desire v gender, faculty, proficiency levels, and future plans

	Significance
Gender	1.000
Faculty	0.723
Proficiency	0.034
Future plans	0.478

$p < 0.05$

The results in Table 4.25 show that there are no significant differences between male and female students, students from the chemical engineering faculty and the electrical engineering faculty and, students who believe that they require a knowledge of English after graduation and those who do not. However, there is a significant difference between students with low and high proficiency in their desire

to learn English language in a CALL classroom. The majority of the students with low proficiency claimed to have a desire to learn English language.

4.4.4 Students' anxiety when learning English language in a CALL classroom

Students were asked to respond to two items concerning their feelings of anxiety when learning English using computers. The results for all students are presented in Table 4.26.

Table 4.26: Response to students' anxiety in a CALL classroom

	SD %	D %	A %	SA %
13. I feel confident when I am in the computer class to learn English.	1	5	74	20
11. I feel nervous and confused when I am in the computer class to learn English.	21	73	5	1

Students' response to the items shows that they believe they do not experience feelings of anxiety or discomfort in the computer-based class. 73% of students disagreed that they felt nervous and confused when in this particular English class, and 74% agreed with the statement that expressed their confidence when learning English using computers. In order to review this relationship, a Crosstabs analysis was carried out. Table 4.27 shows the relationships between the independent variables and the dependent variable of anxiety.

Table 4.27: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		ANXIETY				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	6	(9)	94	(139)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	7	(4)	93	(54)	(58)
	Electrical	5	(5)	95	(99)	(104)
PROFICIENCY	Low	1	(1)	99	(80)	(81)
	High	10	(8)	90	(73)	(81)
FUTURE	Require Eng.	9	(1)	91	(10)	(11)
PLAN	Require no Eng.	5	(8)	95	(143)	(151)

The findings in Table 4.27 show that 94% of male and all of the female students learning English language in CALL classroom agreed with statement which suggests that they do not have feelings of anxiety in the class. 95% of students from the electrical engineering faculty and 93% of students from the chemical engineering faculty expressed their confidence when in the English class. The low proficiency level students (99%) indicate a slightly higher frequency of agreement than the high proficiency level students (90%) in expressing their confidence when in English class. 95% of students who did not require a knowledge of English for their future plans did not express feelings of anxiety, and 91% of students who require a knowledge of English also did not express feelings of anxiety when in English class. In other words, the majority of the students in this research expressed their greater confidence when learning English using computers.

To investigate whether there are significant differences or not in feelings of anxiety

among students when in a computer-based classroom, a Chi-Square Test was carried out. Table 4.28 presents the results of the significance test between the dependent variable of anxiety and the four independent variables.

Table 4.28: Anxiety v gender, faculty, proficiency levels, and future plans

	Significance
Gender	1.000
Faculty	0.723
Proficiency	0.034
Future Plans	0.478

$p < 0.05$

The table illustrates that there are no significant differences between male and female students, students from the chemical engineering faculty and the electrical engineering faculty and, students who require a knowledge of English and students who do not require a knowledge of English after their graduation. However, there is a significant difference between students with low and high proficiency levels when computers are used in the classroom. The majority of the students with low proficiency as compared to high proficiency students seemed to have greater confidence in learning English language.

4.4.5 Students' expectations when learning English language in a CALL classroom

Students were asked about their expectations in learning English using computers. They were to respond to four statements in the questionnaire. The results for all students are presented in Table 4.29.

Table 4.29: Response to students' expectations in a CALL classroom

	SD %	D %	A %	SA %
1. The computer assisted language learning class will definitely help me improve my English.	-	5	74	21
18. The computer assisted language learning class will definitely not help me improve my English.	22	70	7	1
16. I expect to learn English well in computer assisted language learning class.	1	6	70	23
2. I do not expect to learn English well in computer assisted language learning class.	21	73	6	-

Table 4.29 suggests that students have high expectations when learning English using computers. 95% of students agreed with the statement that said, "The computer assisted language learning class will definitely help me improve my English". 93% agreed with the statement that said, "I expect to learn English well in computer assisted language learning class". This pattern was confirmed by the checking items. A Crosstabs analysis was carried out to explore the relationships between the four independent variables and the dependent variables of expectations. Table 4.30 shows the relationships between the variables so as to enumerate more detailed relationships between them.

Table 4.30: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		EXPECTATIONS				
		Disagree/Low Exp.		Agree/High Exp.		Total
		%	(raw)	%	(raw)	*n* (162)
GENDER	Male	6	(9)	94	(139)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	7	(4)	93	(54)	(58)
	Electrical	5	(5)	95	(99)	(104)
PROFICIENCY	Low	0	(0)	100	(81)	(81)
	High	11	(9)	89	(72)	(81)
FUTURE	Require Eng.	9	(1)	91	(10)	(11)
PLAN	Require no Eng.	5	(8)	95	(143)	(151)

In relation to students' expectations in learning English in CALL classroom, the frequency scores in Table 4.30 show that, according to gender, 94% of male and all of the female students have high expectations. According to faculty, 93% of students from chemical engineering faculty and 95% of students from electrical engineering faculty have high expectations. According to proficiency levels, all of the students with low proficiency and 89% of students with high proficiency have high expectations when learning English using computers. According to plans after graduation, 91% of students who require a knowledge of English and 95% of students who do not require a knowledge of English have high expectations. The deduction that can be made from this analysis is that, the majority of the students, regardless of gender, faculty, proficiency levels or future plans, have high expectations in learning English language in the computer-based classroom.

In order to test the significance levels of the independent variables in relation to expectations, a Chi-Square Test was carried out. Table 4.31 presents the results obtained from the test.

Table 4.31: Expectations v gender, faculty, proficiency levels, and future plans

	Significance
Gender	1.000
Faculty	0.723
Proficiency	0.003
Future Plans	0.478

$p < 0.05$

The results obtained show that there are no significant differences between male and female students, students from the chemical engineering faculty and the electrical engineering faculty and, students who believed that they require a knowledge of English after graduation and who do not. In terms of proficiency levels, there is again a significant difference between students with low and high proficiency in their expectations regarding learning English language when using the computer. All of the students with low proficiency claimed to have high expectations when learning English language.

4.5 Analysis of the interview data

In this study, the interview sessions were divided into two parts: structured and semi-structured interviews. The structured and semi-structured interviews were intended to elicit information concerning students' motivational orientations when learning English in a conventional and in a CALL classroom. In administering the

structured and semi-structured interviews, the interviewer used an interview schedule which listed the questions to be asked, and provided space to record the information obtained during the interview. In the following discussion, the structured interview will be analysed first.

The demographic information

During the interview, students were asked to provide their identification number (student I.D. No.), the English course they are attending at the moment, their faculty, and their SPM results. This basic information helped the researcher to identify and confirm that the interviewees were also students who responded to the questionnaire survey. In this part of the chapter, a profile will be offered on the background information concerning the interviewees. A summary result of the demographic information is presented in Table 4.32.

The total number of subjects under investigation was 16. There were equal numbers of male (8) and female (8) students. All students in the study belonged to the 17 to 19 age group. They were all in their first year and taking UHB 1222 course. There were 8 students in each of the proficiency groups – low and high proficiency. The sample comprised undergraduates enrolled in the two faculties: 6 were from the Faculty of Chemical Engineering and Natural Resources and 10 from the Faculty of Electrical Engineering. With regards to the students' intention after graduation, 5 students intended to further their studies in local universities, 3 students wanted to continue their education abroad at an English speaking university. 1 student planned

to get a job that required a knowledge of English, and 7 students wanted to get a job that did not require a knowledge of English.

Table 4.32: Personal details of the sample

Questions	Frequencies *n* (16)	Percentages 100%
2. Gender		
Male	8	50
Female	8	50
3. Age group		
17-19	16	100
4. SPM English result		
7 (Pass)	8	50
9 (Fail)	8	50
5. Year of study at UTM		
1st Year	16	100
6. English course		
UHB 1222	16	100
7. Faculty		
Chemical Engineering	6	37
Electrical Engineering	10	63
8. Plans after graduation		
Continue education locally	5	31
Continue education abroad	3	19
Get a job that requires English	1	6
Get a job that does not require English	7	44

In general, the demographic results showed that more of the respondents belonged to the Faculty of Electrical Engineering. There were equal numbers of male and female students and equal numbers in the low and high proficiency group. The majority of the students intended to seek a job that did not require a knowledge of English. It seemed that a knowledge of English was seen by them as not important for the students' careers after graduation.

4.5.1 The motivational orientations when learning English language in a conventional classroom

The interview survey questionnaire contained five statements concerning students' motivational orientations, that is, effort, attitude, desire, anxiety, and expectations when learning English in a conventional classroom. The statements were deliberately jumbled rather than classified according to their categories when they were presented during the interview. However, in the following analysis, the motivational orientations will be described according to their categories. All statements in this analysis are numbered as in the interview survey.

4.5.1.1 Students' effort when learning English language in a conventional classroom.

During the interview, students were required to respond to one statement concerning the effort they put into learning English in a conventional classroom. The results for all students are illustrated in Table 4.33.

Table 4.33: Response to students' effort in a conventional classroom

Statement	Agree	
	n(16)	%
2. When you are in an English class (conventional classroom), do you		
(a) really put effort into trying to learn English as much as possible	4	25
(b) not really put effort into trying to learn English as much as possible	12	75
(c) not sure	0	0

The students' responses showed that they did not have a strong motivational intensity to learn English. The majority of the students said that they did not really put effort into trying to learn English as much as possible. A Crosstabs analysis explored the relationship between the dependent variable of effort and the independent variables of gender, faculty, proficiency levels, and plans after graduation. Table 4.34 illustrates the relationship between the variables.

Table 4.34: Frequency distribution according to gender, faculty, proficiency levels, and plans after graduation.

		EFFORT		
		Disagree	Agree	Total *n* (16)
GENDER	Male	7	1	8
	Female	5	3	8
FACULTY	Chemical	3	3	6
	Electrical	9	1	10
PROFICIENCY	Low	4	4	8
	High	8	0	8
FUTURE PLAN	Require Eng.	1	3	4
	Require no Eng.	9	3	12

Table 4.34 shows that according to gender, most of the male and female students believed they did not put effort into learning English language. However, relatively more of the female students claimed to put in effort than the male students when learning English in a conventional classroom. According to faculty, more students from the electrical engineering faculty seemed to disagree with putting in effort. However, proportionally more students from chemical engineering believed in

putting effort into learning English language than students from electrical engineering. In terms of proficiency levels, all students with high proficiency levels (8) expressed their disagreement regarding putting in effort. In contrast, more students with low proficiency (4) claimed to put in effort. According to plans after graduation, the majority of the students (9) who did not require English claimed not to put effort into learning English language. However, relatively more students who did require a knowledge of English suggested that they put in effort. In general it can said that the students' responses showed that they did not have a strong motivational intensity to learn English language in a conventional classroom.

4.5.1.2 Students' attitude towards learning English language in a conventional classroom.

Students were asked to respond to one statement concerning their attitude towards learning English in a conventional classroom. The results for all students are presented in Table 4.35.

Table 4.35: Response to students' attitude in a conventional classroom

Statement	Agree	
	n(16)	%
18. Do you think that learning English language in a conventional classroom is		
(a) useful to you	4	25
(b) a waste of your time	12	75
(c) not sure	-	

The results revealed that the majority of the students (12) agreed with the statement that they thought learning English language in a conventional classroom at UTM was a waste of time. The students' responses show that they had a negative attitude towards learning English language. A statistical analysis concerning attitude was carried out. The analysis examined the relationships between the dependent variable of attitude and the four independent variables. Table 4.36 illustrates the relationships among the variables.

Table 4.36: Frequency distribution according to gender, faculty, proficiency levels and plans after graduation.

		ATTITUDE		
		Negative	Positive	Total *n* (16)
GENDER	Male	7	1	8
	Female	5	3	8
FACULTY	Chemical	3	3	6
	Electrical	9	1	10
PROFICIENCY	Low	4	4	8
	High	8	0	8
FUTURE	Require Eng.	3	1	4
PLAN	Require no Eng.	9	3	12

The results in Table 4.36 shows that, according to gender, most of the male and female students believed they have a negative attitude towards learning English language. However, relatively more of the female students claimed to have a positive attitude. According to faculty, more students from the electrical engineering faculty seemed have a negative attitude. In terms of proficiency levels, all students with high proficiency levels (8) expressed that they have a negative

attitude towards learning English. In contrast, more students with low proficiency (4) claimed to have a positive attitude to learning English language in a conventional classroom. According to plans after graduation, the majority of the students who did not require English claimed to have a negative attitude as compared with those students who believed that they required a knowledge of English.

4.5.1.3 Students' desire towards learning English language in a conventional classroom.

Students were asked to respond to a statement that reflected their desire towards learning English language in a conventional classroom. Table 4.37 presents the responses of all the interviewees.

Table 4.37: Response to students' desire in a conventional classroom

Statement	Agree	
	n(16)	%
8. When you are in your English language class (conventional classroom), do you		
(a) wish the time would not pass quickly	5	31
(b) wish the time would pass quickly	11	69
(c) not sure	-	-

The results from Table 4.37 above show that more students wished for the time to pass quickly when learning English language in a conventional classroom. A Crosstabs analysis was carried out to examine the relationships between the

dependent variable of desire and the four independent variables. Table 4.38 shows the relationships between the variables.

Table 4.38: Frequency distribution according to gender, faculty, proficiency levels, and plans after graduation.

		DESIRE		
		Disagree/ No	Agree/Yes	Total *n* (16)
GENDER	Male	6	2	8
	Female	5	3	8
FACULTY	Chemical	2	4	6
	Electrical	9	1	10
PROFICIENCY	Low	7	1	8
	High	4	4	8
FUTURE	Require Eng.	2	2	4
PLAN	Require no Eng.	9	3	12

Table 4.38 shows that in terms of gender, most of the male and female students disagreed with the statement which suggests that they have the desire to learn English language in a conventional classroom. According to faculty, proportionally more students from the chemical engineering faculty believed that they have desire to learn English than students from electrical engineering. In terms of proficiency levels, the majority of the students with low proficiency levels (7) and students with high proficiency levels (4) indicated no desire for learning English. According to plans after graduation, 9 students who did not require a knowledge of English for their future plans did not have the desire to learn English while half the students who thought they needed a knowledge of English for their future plans believed that they had the desire to learn English. Thus, majority of students who did not have

any intentions to use English in their future plans, either for further studies or to use English in their work place did not have the desire to learn English in class.

4.5.1.4 Students' anxiety when learning English language in a conventional classroom.

Students were asked to respond to a statement concerning their feeling of anxiety when learning English in a conventional classroom. The results for all students are presented in Table 4.39. The table reveals that most students expressed that they have feelings of anxiety in the conventional English class.

Table 4.39: Response to students' anxiety in a conventional classroom

Statement	Agree	
	n (16)	%
6. When you are in the English language class (conventional classroom), do you feel		
(a) confident	5	31
(b) nervous	11	69
(c) not sure	-	-

A statistical analysis concerning students' anxiety in relation to the four independent variables was carried out. Table 4.40 shows the relationships between the dependent variable of anxiety and the independent variables.

Table 4.40: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		ANXIETY		
		Yes	No	Total *n* (16)
GENDER	Male	6	2	8
	Female	5	3	8
FACULTY	Chemical	2	4	6
	Electrical	9	1	10
PROFICIENCY	Low	7	1	8
	High	4	4	8
FUTURE PLAN	Require Eng.	2	2	4
	Require no Eng.	9	3	12

The findings show that in relation to gender, most of the male and female students agreed with statement suggesting that they were nervous in the class. According to faculty, the majority of the students from the electrical engineering faculty believed they had feelings of anxiety, while relatively more students from the chemical engineering faculty claimed they were not nervous when in the English class. Concerning proficiency levels, almost all the students with low proficiency levels and half the high proficiency students expressed feelings of anxiety. Relatively more students with high proficiency levels were confident when learning English in a conventional class than the students with the low proficiency levels. In terms of plans after graduation, most students who did not require a knowledge of English for their future plans expressed feelings of anxiety, and half the students who believed they require a knowledge of English also indicated feelings of anxiety when in class. Relatively more students who required a knowledge of English for their future plans were confident in English class than those students who did not.

4.5.1.5 Students' expectations when learning English language in a conventional classroom.

Students were asked about their expectations in learning English in a conventional classroom. They were to respond to one statement which was listed in the interview survey. The results for all students are presented in Table 4.41.

Table 4.41: Response to students' expectations in a conventional classroom

Statements	Agree	
	n (16)	%
14. When learning English language in a conventional classroom, do you		
(a) expect to learn well	4	25
(b) have no expectation to learn well	12	75
(c) not sure	-	-

The results in Table 4.41 suggest that, the students' expectations when learning English in a conventional classroom were low. The majority of the students said that they did not have expectations to learn English well. Table 4.42 shows the students' expectations in relation to the independent variables.

In relation to students' expectations to learning English in a conventional classroom, the frequency scores in Table 4.42 show that according to gender, most of the male and female students believed they have low expectations when learning English in a conventional classroom. However, relatively more of the female students claimed to have high expectations than the male students. According to

faculty, more students from the electrical engineering faculty disagreed with having expectations of learning English well in a conventional classroom.

Table 4.42: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		EXPECTATIONS		
		Disagree/ Low Exp.	Agree/ High Exp.	Total *n* (16)
GENDER	Male	7	1	8
	Female	5	3	8
FACULTY	Chemical	3	3	6
	Electrical	9	1	10
PROFICIENCY	Low	8	0	8
	High	4	4	8
FUTURE	Require Eng.	1	3	4
PLAN	Require no Eng.	9	3	12

In terms of proficiency levels, all students with low proficiency levels (8) and 4 students with high proficiency levels expressed their disagreement towards having expectations to learn English well in a conventional classroom. According to plans after graduation, the majority of the students (9) who did not require English and 1 student who required a knowledge of English seemed did not have high expectations. In general it can said that the students' responses showed that they did not have high expectations to learn English well in a conventional classroom.

4.5.2 The motivational orientations when learning English language in a CALL classroom

In the interview, students' responses were also analysed according to their effort, attitude, desire, anxiety, and expectations when learning English language specifically using computers. The section contained five statements. The statements were not classified according to their categories when they were presented in the interview survey. However, in the following analysis, the motivational orientations will be according to their categories (effort, attitude, desire, anxiety, and expectations). All statements in this analysis are numbered as in the interview survey.

4.5.2.1 Students' effort when learning English language in a CALL classroom

During the interview students were invited to respond to one statement which required them to provide information concerning the degree of effort they expended in learning English when using computers. The results of all the students' responses to the statements are presented in Table 4.43.

Table 4.43: Response to students' effort in a CALL classroom

Statement	Agree	
	n (16)	%
9. When you are in an English class (CALL classroom), do you		
(a) really put effort into trying to learn English as much as possible	13	81
(b) not really put effort into trying to learn English as much as possible	3	19
(c) not sure	-	-

Results gathered from the interview session as in Table 4.43 show that the majority of the students believed they expended a lot of effort in learning English using computers. A statistical analysis concerning students' effort put into learning English in a CALL classroom was conducted and the results are presented in Table 4.44.

Table 4.44: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		EFFORT		
		Disagree	Agree	Total *n* (16)
GENDER	Male	2	6	8
	Female	1	7	8
FACULTY	Chemical	1	5	6
	Electrical	2	8	10
PROFICIENCY	Low	1	7	8
	High	2	6	8
FUTURE PLAN	Require Eng.	0	4	4
	Require no Eng.	3	9	12

Table 4.44 shows the relationships between the dependent variable of effort and the independent variables of students' gender, faculty, proficiency levels, and plans after graduation. The results suggest that most students regardless of the four variables, claimed to put effort in the CALL classroom. In terms of gender, slightly more female students agreed they put effort into learning English language in the CALL classroom than male students. According to faculty, the majority of the students from both faculties expressed their agreement with putting effort into

learning in the CALL classroom. Slightly more students with low proficiency levels believed they put in effort. All the students who believed they required a knowledge of English for their future plans and most of the students who did not require English claimed to put effort into learning English in a computer-based classroom.

4.5.2.2 Students' attitude towards learning English language in a CALL classroom

During the interview session, a statement was addressed to explore the students' attitude towards learning English using computers. As Table 4.45 indicates, most of the students said that they agreed that learning English using computers was useful to them.

Table 4.45: Response to students' attitude in a CALL classroom

Statements	Agree	
	n (16)	%
4. Do you think that learning English language using computer is		
(a) useful to you	13	81
(b) a waste of your time	3	19
(c) not sure	-	-

A Crosstabs analysis concerning attitudes was carried out. Table 4.46 shows the relationships between attitudes to the CALL classroom in relation to the students' gender, faculty, proficiency levels, and plans after graduation.

Table 4.46: Frequency distribution according to gender, faculty, proficiency levels and plans after graduation.

		ATTITUDE		
		Negative	Positive	Total *n* (16)
GENDER	Male	2	6	8
	Female	1	7	8
FACULTY	Chemical	1	5	6
	Electrical	2	8	10
PROFICIENCY	Low	1	7	8
	High	2	6	8
FUTURE PLAN	Require Eng.	0	4	4
	Require no Eng.	3	9	12

Table 4.46 shows that, in terms of gender, most male and female students believed they have positive attitude. According to faculty, the majority of the students from the electrical engineering faculty and the chemical engineering faculty claimed to have a positive attitude. According to proficiency levels, slightly more students with low proficiency indicated having a positive attitude than the students with high proficiency levels. The majority of the students who did not require a knowledge of English claimed positive attitudes, while all the students who require a knowledge of English expressed have positive attitudes when learning English using computers.

4.5.2.3 Students' desire when learning English language in a CALL classroom

Students were asked to respond to a statement that reflected their desire towards learning English language in a computer-based classroom. Table 4.47 presents the

responses of all the interviewees.

Table 4.47: Response to students' desire in a CALL classroom

Statement	Agree	
	n(16)	%
16. When you are in your English language class (CALL classroom), do you		
(a) wish the time would not pass quickly	13	81
(b) wish the time would pass quickly	3	19
(c) not sure	-	-

The results from the table above show that the majority of the students wished for the time not to pass quickly when learning English language in a CALL classroom. A Crosstabs analysis was carried out to examine the relationship between the dependent variable of desire and the four independent variables. Table 4.48 shows the relationships between the variables.

Table 4.48: Frequency distribution according to gender, faculty, proficiency levels, and plans after graduation.

		DESIRE		
		Disagree/ No	Agree/Yes	Total *n* (16)
GENDER	Male	2	6	8
	Female	1	7	8
FACULTY	Chemical	5	1	6
	Electrical	2	8	10
PROFICIENCY	Low	1	7	8
	High	2	6	8
FUTURE	Require Eng.	0	4	4
PLAN	Require no Eng.	3	9	12

Table 4.48 shows that in terms of gender, again most male and female students agreed with the statement which suggests that they have the desire to learn English in a computer-based classroom. However, according to faculty, few students from the chemical engineering and most students from electrical engineering believed they have the desire to learn English using computers. There was little difference across proficiency levels with most expressing positive desires. All students who thought they needed a knowledge of English for their future plans and the majority of the students who did not require English for their future plans expressed themselves as having the desire to learn English in the CALL class.

4.5.2.4 Students' anxiety when learning English language in a CALL classroom

During the interview session, students were asked to respond to a statement concerning their feelings of anxiety when learning English using computers. The results are presented in Table 4.49.

Table 4.49: Response to students' anxiety in a CALL classroom

Statement	Agree	
	n(16)	%
13. When you are in the English language class (CALL classroom), do you feel		
(a) confident	15	94
(b) nervous	1	6
(c) not sure	-	-

The results revealed that almost all the students did not feel uneasy when learning English using computers. A Crosstabs analysis was carried out to examine the relationship between the dependent variable of anxiety and the independent variables. Table 4.50 illustrates the relationship between the variables.

Table 4.50: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		ANXIETY		
		Yes	No	Total *n* (16)
GENDER	Male	1	7	8
	Female	0	8	8
FACULTY	Chemical	1	5	6
	Electrical	0	10	10
PROFICIENCY	Low	0	8	8
	High	1	7	8
FUTURE	Require Eng.	0	4	4
PLAN	Require no Eng.	1	11	12

The results show that, in terms of gender, again most male and female students agreed with the statement which suggests that they were confident in the English class when using computers. According to faculty, all the students from electrical engineering and the majority of students from chemical engineering believed they expressed their confidence in the CALL classroom. In relation to proficiency levels, slightly more students with low proficiency expressed their agreement towards expressing their confidence than the students with high proficiency. The majority of students who did not require a knowledge of English for their future plans and all

the students who require English claimed they did not have feelings of anxiety when learning English in the CALL class.

4.5.2.5 Students' expectations when learning English language in a CALL classroom

Students were asked about their expectations in learning English using computers. They were to respond to a statement which was listed in the interview survey. The results for all students are presented in Table 4.51.

Table 4.51: Response to students' expectations in a CALL classroom

Statements	Agree	
	n (16)	%
5. When learning English language in a CALL classroom, do you		
(a) expect to learn well	15	94
(b) have no expectation to learn well	1	6
(c) not sure	-	-

The results in Table 4.51 suggest that most of the students (15) have high expectations when learning English using computers. A statistical analysis of the statement was conducted in order to examine the relationship between the dependent variable of expectations and the independent variables. Table 4.52 shows the students' expectations in relation to these variables.

Table 4.52: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		EXPECTATIONS		
		Disagree/ Low Exp.	Agree/ High Exp.	Total *n* (16)
GENDER	Male	1	7	8
	Female	0	8	8
FACULTY	Chemical	1	5	6
	Electrical	0	10	10
PROFICIENCY	Low	0	8	8
	High	1	7	8
FUTURE	Require Eng.	0	4	4
PLAN	Require no Eng.	1	11	12

In relation to students' expectations to learning English in a CALL classroom, the frequency scores in Table 4.52 show that according to gender, slightly more female students believed they have high expectations towards learning English using computers than the male students. In terms of faculty, all of the students from the electrical engineering faculty and most of the students from the chemical engineering faculty claimed to have high expectations. According to proficiency levels, all the students with low proficiency and most students with high proficiency expressed that they have high expectations when learning English using computers. All the students who require a knowledge of English and the majority of the students who did not require English believed they have high expectations. Regardless of gender, faculty, proficiency levels or future plans, the majority of the students all claimed to have high expectations to learn English in the CALL class.

4.5.3 The analysis of semi-structured interview data

In the final part of the interview, students were given opportunities to express their opinions freely concerning their motivational orientations when learning English language both in a conventional and in a CALL classroom. Out of the 16 interviewees, 14 offered to respond to this part. Table 4.53 demonstrates the frequency count of the kinds of comments made by the students. The information obtained from the semi-structured interviews was divided into three parts: conventional classroom, CALL classroom, and general comments.

Table 4.53: Students' comments from the semi-structured interview

Students' comments	Frequency count of comments
Conventional classroom	
Reduce the conventional class time	2
The conventional classroom is boring	2
Make conventional classroom interesting	1
CALL classroom	
Increase the number of computers	2
Increase the number of CALL activities	2
CALL classes are interesting	2
I like learning English using computer	1
Add more interesting CALL activities	1
Give students more time to work with CALL activities	2
General comments	
It is not necessary to have an English class	1
Allow students to work in groups more often	1

In relation to learning English in a conventional classroom, some students suggested that the conventional class time should be reduced. Some of the

students said that the conventional class was boring and requested a more interesting class. Students offered more opinions concerning the CALL class. Some of them believed that CALL class was interesting and that they liked learning English using the computer. The students felt that they would like to spend more time in such a class. Some of the students requested more computers to work with, including more interesting computer activities. One of the students said it was not necessary to have an English class at all, while another requested more group-work when in English classes.

4.6 Comparing students' motivational orientations in a conventional classroom and in a CALL classroom

So far I have examined each of the motivational orientations and related each category (effort, attitudes, desires, anxiety, and expectations) to the independent variables of students' gender, faculty, proficiency levels, and plans after graduation. In order to address the research questions, I shall now undertake a direct a comparison between the students' motivations regarding the conventional as compared with the CALL classroom. This section will be divided into three parts focusing on the following issues: (1) A comparison of students' motivational orientations (effort, attitude, desire, anxiety, and expectations) when learning English in a conventional and in a CALL classroom, (2) A comparison of students' overall motivation when learning English under both conditions, and (3) An examination of the relationships between students' motivation and the independent variables of students' gender, faculty, proficiency levels, and plans after graduation

under both conditions. Information obtained from interviews will also be discussed within the relevant sections.

4.6.1 Students' motivational orientations when learning English language in a conventional and in a CALL classroom

The analysis of the findings in this section will provide answers to research question no. 1 and its five sub-ordinate questions:

What are students' motivational orientations when learning English language in a conventional and in a CALL classroom?

a. Do students put effort into learning English language?

b. What are students' attitudes towards learning English language?

c. Do students have the desire to learn English language?

d. Do students feel anxious when in English language classes?

e. What are students' expectations regarding their learning of English language?

A statistical analysis of all statements in the questionnaire and interview survey in relation to each of the categories, that is effort, attitude, desire, anxiety, and expectations was carried out. Table 4.54 shows the structure of frequency scores and percentages of students' effort in learning English in both a conventional and CALL classroom.

Table 4.54: Frequency distribution and percentages of students' effort when learning English.

	QUESTIONNAIRE			
	EFFORT			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Disagree	111	69	20	12
Agree	51	31	142	88
Total	162	100	162	100

	INTERVIEW			
	EFFORT			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Disagree	12	75	3	19
Agree	4	25	13	81
Total	16	100	16	100

The findings in Table 4.54 show that the majority of students claimed that they did not put effort into learning English when in the conventional classroom. 69% of students who responded to the questionnaire and 75% of students who responded to the interview survey expressed their disagreement of making an effort when learning English in the conventional class. In contrast, an even higher proportion of the students claimed to put effort into learning English in the CALL classroom. 88% of students from the questionnaire samples and 81% from the interview samples believed that they put effort into learning English.

Table 4.55: Frequency distribution and percentages of students' attitude when learning English.

	QUESTIONNAIRE			
	ATTITUDE			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Negative	134	83	7	4
Positive	28	17	155	96
Total	162	100	162	100

	INTERVIEW			
	ATTITUDE			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Negative	12	75	3	19
Positive	4	25	13	81
Total	16	100	16	100

In relation to students' attitude when learning English language, the findings presented in Table 4.55 indicate that 17% of students had a positive attitude towards learning English language in the conventional classroom whilst 96% of students tended to have a positive attitude when learning English in the CALL classroom. The interview responses also seemed to confirm this pattern.

Table 4.56 following presents the results concerning desire towards learning English language. 86% of students expressed that they did not have the desire to learn English language in a conventional classroom whilst 94% claimed a positive desire to learn English when using computers. Again, the interview data generally confirms this trend.

Table 4.56: Frequency distribution and percentages of students' desire towards learning English.

	QUESTIONNAIRE			
	DESIRE			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Disagree	139	86	9	6
Agree	23	14	153	94
Total	162	100	162	100

	INTERVIEW			
	DESIRE			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Disagree	11	69	3	19
Agree	5	31	13	81
Total	16	100	16	100

Table 4.57 following presents the findings obtained in relation to students' anxiety when learning English language in both a conventional classroom and CALL classroom. 86% of students expressed that they did have feelings of anxiety when learning English language in a conventional classroom. In contrast, 94% of students expressed that they did not have feelings of anxiety when learning English language in a CALL classroom. As for the interview responses, the findings illustrate the same pattern regarding student anxiety as the responses in the questionnaire.

Table 4.57: Frequency distribution and percentages of students' anxiety when learning English.

	QUESTIONNAIRE			
	ANXIETY			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Agree	139	86	9	6
Disagree	23	14	153	94
Total	162	100	162	100

	INTERVIEW			
	ANXIETY			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Agree	11	69	1	6
Disagree	5	31	15	94
Total	16	100	16	100

Table 4.58 following demonstrates the findings concerning students' expectations when learning English language. The results suggest that, when learning English language in CALL classroom in particular, students had high expectations. 94% of responses in the questionnaire and 94% in the interview survey expressed high expectations when learning English in a CALL classroom. When learning English in a conventional classroom however, 72% of students suggested that they did not have high expectations in learning English while 75% of students in the interview survey also expressed low expectations.

Table 4.58: Frequency distribution and percentages of students' expectations when learning English.

	QUESTIONNAIRE			
	EXPECTATIONS			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Low	116	72	9	6
High	46	28	153	94
Total	162	100	162	100

	INTERVIEW			
	EXPECTATIONS			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Low	12	75	1	6
High	4	25	15	94
Total	16	100	16	100

4.6.2 Students' overall motivation to learn English language in a conventional and in a CALL classroom

After examining each component of the motivational orientations, I shall now overview the students' motivation when learning English. The students' motivations can be deduced by combining all the motivation orientations in relation to the two different learning situations. This section therefore, provides answers to the second research question: Is there a similarity or difference in students' motivation when learning English language in a conventional classroom as compared with a CALL classroom? Table 4.59 presents the frequency distribution and percentages of students' motivation when learning English in a conventional and in a CALL classroom.

Table 4.59: Frequency distribution and percentage of students' motivation

	QUESTIONNAIRE			
	MOTIVATION			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Disagree	137	85	9	6
Agree	25	15	153	94
Total	162	100	162	100

	INTERVIEW			
	MOTIVATION			
	Conventional		CALL	
	Frequency	Percentage	Frequency	Percentage
Disagree	12	75	3	19
Agree	4	25	13	81
Total	16	100	16	100

The overall results indicate that students appeared highly motivated when learning English in a CALL classroom. 94% of the students claimed that they were motivated when learning English in CALL classroom. While, only 15% of the students claimed to be highly motivated when learning English in a conventional classroom. The interview results also showed that the students were motivated to learn English when in the CALL classroom as compared to the conventional classroom with relative proportions being 81% to 25%. In general, the results obtained from both the questionnaires and interviews show that students did not vary much in their responses.

4.6.3 Students' motivation to learn English language according to gender, faculty, proficiency levels, and plans after graduation in a conventional and in a CALL classroom.

This section aims to examine the relationships between students' motivation and the independent variables of students' gender, faculty, proficiency levels, and plans after graduation in relation to the two learning conditions. Table 4.60 illustrates the analysis of the students' motivation to learn English language in both a conventional and in a CALL classroom according to these independent variables. The level of significance between the variables was also tested. The results obtained provide answers to the third research question: If there is a similarity or difference in students' motivation, can this similarity or difference be related to such independent variables as students' gender, faculty membership, proficiency levels, and their plans after graduation?

Table 4.60: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

			QUESTIONNAIRE			
			MOTIVATION			
			Conventional		CALL	
		n =162 (raw)	Low % (raw)	High % (raw)	Low % (raw)	High % (raw)
GENDER	Male	(148)	90 (133)	10 (15)	6 (9)	94 (139)
	Female	(14)	29 (4)	71 (10)	0 (0)	100 (14)
FACULTY	Chemical	(58)	74 (43)	26 (15)	7 (4)	93 (54)
	Electrical	(104)	90 (94)	10 (10)	5 (5)	95 (99)
PROFICIENCY	Low	(81)	90 (73)	10 (8)	1 (1)	99 (80)
	High	(81)	79 (64)	21 (17)	10 (8)	90 (73)
FUTURE PLAN	Require Eng.	(11)	55 (6)	45 (5)	9 (1)	91 (10)
	Require no Eng.	(151)	87 (131)	13 (20)	5 (8)	95 (143)

		INTERVIEW			
		MOTIVATION			
		Conventional		CALL	
	n(16)	Low	High	Low	High
GENDER	Male (8)	7	1	3	5
	Female (8)	5	3	0	8
FACULTY	Chemical (6)	3	3	2	4
	Electrical (10)	9	1	1	9
PROFICIENCY	Low (8)	4	4	1	7
	High (8)	0	8	2	6
FUTURE	Require Eng. (4)	1	3	0	4
PLAN	Require no Eng. (12)	9	3	3	9

In relation to gender, the findings demonstrate that 90% male and 29% female students expressed low motivation to learn English language in a conventional classroom. In contrast, 94% male and all of the female students suggested that they were highly motivated to learn English when using computers. The interview results did not differ from the results obtained through the questionnaire survey.

In relation to faculty, 74% of the students from chemical engineering and 90% of the students from electrical engineering expressed low motivation in learning English language when in a conventional classroom. Most of the students from both the faculties – 93% of the students from chemical engineering and 95% of the students from electrical engineering believed that they had high motivation to learn English language when in the CALL classroom. The interview results in relation to faculty also show that students from both the faculties were similarly motivated.

Concerning students' levels of proficiency, the majority of the low proficiency level students (90%) and the high proficiency level students (79%) seemed to have low motivation to learn English language in a conventional classroom whilst the opposite pattern emerged in relation to the CALL classroom. According to plans after graduation, 87% of the students who did not require a knowledge of English and 55% of the students who required a knowledge of English for their future plans expressed low motivation to learn English in the conventional class. On the other hand, 95% of the students who did not require English knowledge and 91% of the students who required English knowledge for their future plans indicated their high motivation to learn English specifically in the CALL classroom. The interview results show that students' responses to each of the independent variables did not differ from the responses in the questionnaire survey.

To investigate whether there were significant differences or not within the independent variables in relation to students' motivation to learn English language in a conventional and in a CALL classroom, a Chi-Square Test was carried out. The findings obtained from the test are presented in Table 4.61.

Table 4.61: Motivation v gender, faculty, proficiency levels, and future plans

	Questionnaire	
	Conventional	CALL
	Significance	Significance
Genders	0.000	1.000
Faculties	0.011	0.723
Proficiency levels	0.080	0.034
Future Plans	0.014	0.478

$p < 0.05$

According to gender whilst most were negatively motivated, there was a significant difference between male and female students in relation to their motivation to learn English in a conventional classroom. On the other hand, there was no significant difference between male and female students in their motivation when learning English in a CALL classroom. On closer examination, proportionally more female students claimed to be highly motivated in both the learning situations.

In terms of faculty although again mostly negatively motivated, there was a significant difference between students from the chemical engineering and the electrical engineering faculties when having to learn English in a conventional classroom. Relatively more students from the chemical engineering faculty expressed high motivation than the students from the electrical engineering faculty. There was no significant difference between students from the two faculties in their motivation when learning English in a computer-based classroom. However, proportionally more students from the electrical engineering faculty believed they had high motivation in such a context than did students from the chemical engineering faculty

In terms of proficiency levels, there was no significant difference between low and high proficiency students in their motivation when learning English in a conventional classroom. Relatively more students with high proficiency claimed to have high motivation in this situation than the students with low proficiency. There was a significant difference between students with low and high proficiency when

learning English in CALL classroom. Relatively more students with low proficiency levels suggested they had high motivation when learning English in a CALL classroom than students with high proficiency levels.

According to plans after graduation, there was a significant difference between students who required a knowledge of English and those who did not require a knowledge of English in their motivation when learning English in a conventional classroom. Proportionally more students who believed they required a knowledge of English seemed to have higher motivation than students who do not require a knowledge of English. There was no significant difference between students who required a knowledge of English and those who did not require a knowledge of English in their motivation when learning English in a CALL classroom. Both were positive while relatively more of those who believed they did *not* require a knowledge of English appeared highly motivated as compared with students who did require a knowledge of English.

The overall results obtained in this study therefore demonstrate that there were differences between students' motivation to learn English in a conventional and in a CALL classroom. These differences were sustained regardless of gender, faculty, proficiency levels and plans after graduation of the students. In this study it can said that the independent variables did not significantly influence students' motivation under either condition.

4.7 Chapter summary

This chapter began by discussing each of the statements in the questionnaire and interview survey. Then, statistical analyses were carried out so that all the statements could be grouped according to motivational orientations – effort, attitude, desire and so forth. A category-by-category description was also made. In this way the relationships between the dependent variables (effort, attitude, desire, anxiety, and expectations) and independent variables (gender, faculty, proficiency levels, and plans after graduation) were demonstrated. An overall comparison of students' motivation towards learning English in a conventional and CALL classroom was also presented.

In general, the analysis of the findings showed that students in this study indicated they expressed effort, a positive attitude, a strong desire, low anxiety, and high expectations when learning English in a computer-based classroom. Similarly, students expressed stronger overall motivation to learn English language when using computers. The result also demonstrated that the students' motivation was not affected by differences between them. This chapter therefore provided answers to the first three research questions with which the study began.

CHAPTER FIVE

The analysis of learners' strategies

5.1 Introduction

This chapter analyses the data and discusses the findings obtained through both the questionnaire and the interview survey relating to learners' strategies specifically when working with computer-based instruction. The chapter intends first to describe the findings for each of the statements in the questionnaire concerning learners' strategies. Second, it examines each of the strategy categories used by students (cognitive, metacognitive, affective, and social strategies) in relation to the independent variables of students' gender, faculty, proficiency levels, and plans after graduation. Third, the chapter analyses and discusses information gathered from the interview survey. Finally, an overall discussion of the analyses of findings will be provided. The students involved in this part of the study were the same as those who provided the motivational data.

5.2 Analysis of the questionnaire data

Section D of the questionnaire contained thirty-five statements concerning learners' strategies when working with computer-based instruction. The statements were not classified according to their categories when they were presented in the questionnaire. However, during the analysis and discussion, the strategies will be

described according to the categories as derived from the previous literature research – cognitive, metacognitive, social, and affective strategies. In this data analysis, all statements responded to by the students will be numbered as in the questionnaire.

5.2.1 The cognitive strategies used in learning English using computers.

The cognitive strategies were divided into six sub-categories: Resourcing, translation, note-taking, guessing, skipping, and quitting. The results for all students who responded to the questionnaires are presented in Table 5.1. Each of the sub-categories will be analysed and discussed in turn in the following analysis.

There are six statements exploring students' resourcing strategy when working with computers. The students' responses show that they referred a lot to the instructions of the computer exercise to confirm their understanding in completing a task. Combining the positive 'strongly agree' and 'agree' choices of the students in the questionnaire, 95% of students claimed that they referred to the instructions of the computer exercises. 94% of students believed that they used the 'help' or 'hint' menus when they were not sure of the answer to a task. 89% of students seemed to refer to an English-Malay dictionary when they did not know the meaning of certain words in the computer exercises. This contrasted with only 15% who favoured referring to an English only dictionary.

Table 5.1: The cognitive strategies when learning English using computers

	SD %	D %	A %	SA %
COGNITIVE				
Resourcing				
1. I use the 'help' or 'hint' menu when I am not sure of the answer to a task when working with a computer.	-	6	79	15
2. I refer to an English dictionary when I do not know the meaning of certain words in the computer exercises.	17	68	14	1
23. I refer to a English-Malay dictionary (bilingual dictionary) when I do not know the meaning of certain words in the computer exercises.	-	11	75	14
6. I refer to the instructions of the computer exercise to confirm my understanding in completing a task.	-	5	78	17
9. I refer to any English textbooks when I am not sure of the answer to a certain computer exercise.	18	74	8	-
13. I refer to the English class textbook when I am not sure of the answer to a certain computer exercise.	14	69	16	1
Translate				
28. I think in Bahasa Malaysia for the answer to the computer exercise, then translate it into English.	-	7	75	18
15. I try to translate what I have seen on the computer screen into Bahasa Malaysia for better understanding.	-	7	78	15

	SD %	D %	A %	SA %
Note-taking				
18. I take notes of certain rules or words from the computer.	16	73	9	2
4. I do not take notes of certain rules or words from the computer.	2	9	75	14
Quit				
5. I leave (quit) the computer exercise when I have problems understanding.	15	78	7	-
Skip				
14. I skip the computer exercise that I have problems understanding.	-	5	80	15
Guess				
19. I try to guess the meaning of unfamiliar words using information available on the computer screen.	-	4	76	20

The questionnaire results also revealed that only 8% of students said that they referred to English class textbooks when working with the computer. The students not only did not favour referring to their English class textbooks, they also appeared to dislike referring to any other English textbooks available (92%). 83% suggested that they did not refer to the English class textbook.

Concerning translation strategy, as Table 5.1 indicates, 75% of students agreed with the statement that said, "I think in Bahasa Malaysia for the answer to the computer exercise, then translate it into English" (statement 28). 78% of students agreed with the statement that said, "I try to translate what I have seen on the computer screen

into Bahasa Malaysia for better understanding"(statement 15). The results suggested that students widely used the translation strategies.

There were two statements addressed in the questionnaire concerning note-taking. The results obtained showed that students disagreed with using note-taking strategies. 73% of students disagreed with the statement that said, "I take notes of certain rules or words from the computer" (statement 18). Students were consistent in their responses as 75% agreed with the checking statement (statement 4).

Finally, students were invited to respond to statements relating to quitting, skipping, or guessing in their approach when having problems with computer activities. 93% of students expressed their disagreement with the statement that said, "I leave (quit) the computer exercises when I have problems understanding" (statement 5). The survey result also showed that 95% of students agreed with the statement that said, "I skip the computer exercise that I have problems understanding" (statement 14). It seems that the students much preferred to skip rather than to quit a computer program when they faced a problem of understanding. Concerning the guessing strategy, 96% of students agreed with the statement that said, "I try to guess the meaning of unfamiliar words using information available on the computer screen" (statement 19). The high agreement in favour of both guessing and skipping suggests that students may not give up easily.

Although the frequency distribution in Table 5.1 put forward a convincing image of the way students responded to statements addressing cognitive strategies, a further test was thought necessary. In order to obtain the average scores of cognitive strategies used by students when learning English using computers, a statistical analysis of all the statements concerned was carried out. Table 5.2 shows the frequency scores of students' cognitive strategies in relation to the independent variables of students' gender, faculty, proficiency levels and plans after graduation.

Table 5.2: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		COGNITIVE				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	n =162
GENDER	Male	10	(15)	90	(133)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	10	(6)	90	(52)	(58)
	Electrical	9	(9)	91	(95)	(104)
PROFICIENCY	Low	7	(6)	93	(75)	(81)
	High	11	(9)	89	(72)	(81)
FUTURE	Require Eng.	0	(0)	100	(11)	(11)
PLAN	Require no Eng.	10	(15)	90	(136)	(151)

The findings in Table 5.2 show that the majority of the male students (90%) and all the female students used the cognitive strategies when learning English using computers. 91% of the students from electrical engineering and 90% of the students from chemical engineering expressed their use of cognitive strategies when learning English language. The low proficiency level students (93%) indicate a slightly higher frequency agreement than the high proficiency level students (89%) towards

using the cognitive strategies. 90% of the students who did not see themselves as requiring a knowledge of English for their future plans and all the students who saw themselves as requiring English agreed to using the cognitive strategies when learning English language using computers.

In order to review the significant difference between cognitive strategy use and the independent variables, a Chi-Square Test was carried out. Table 5.3 presents the results of the significance test among the variables.

Table 5.3: Cognitive strategy v gender, faculty, proficiency levels, and future plans

	Significance
Gender	0.367
Faculty	0.722
Proficiency	0.416
Future plans	0.601

$p < 0.05$

The findings in Table 5.3 illustrate that there are no significant differences between male and female students, students from the chemical engineering faculty and the electrical engineering faculty, students with low or high proficiency, and students who require a knowledge of English and who do not require a knowledge of English in their use of cognitive strategy when learning English using computers. Although there are no significant differences within all the independent variables, the results of the analysis given in Table 5.3 can be summarised as follows:

- In terms of gender, proportionally slightly more female students seemed to use the cognitive strategies than the male students.

- According to faculty, proportionally slightly more students from the electrical engineering faculty believed that they used the cognitive strategies than the students from the chemical engineering faculty.
- According to proficiency levels, proportionally slightly more students with low proficiency claimed that they used the cognitive strategies than did students with high proficiency.
- In terms of future plans, proportionally slightly more students who thought that they required a knowledge of English for their future careers used the cognitive strategies than students who did not require a knowledge of English.

5.2.2 The metacognitive strategies used in learning English using computers.

In this study, the metacognitive strategies were divided into seven sub-categories: organising, planning a task, objective, self-monitoring, self-management, self-evaluating, and seeking practice. The results for all students who responded to the questionnaires are presented in Table 5.4. Each of the sub-categories will be discussed in turn in the following analysis.

Students were asked to respond to two statements concerning the organisation of the computer exercises. 75% of students claimed that they disagreed with the statement that said, " I keep records of all the computer exercises that I have tried" (statement 3). 74% agreed with the checking statement which said, "I do not keep records of all the computer exercises that I have tried" (statement 22).

Table 5.4: The metacognitive strategies when learning English using computers

	SD %	D %	A %	SA %
METACOGNITIVE				
Organising				
3. I keep records of all the computer exercises that I have tried.	4	71	13	12
22. I do not keep records of all the computer exercises that I have tried.	13	11	74	2
Planning task				
26. I make plans to complete all computer tasks.	18	65	17	-
34. I do not make plans to complete all computer tasks.	2	14	69	15
Objective				
24. I have clear objectives when choosing the computer exercises.	3	8	77	12
30. I do not have clear objectives when choosing the computer exercises.	17	68	13	2
Self-management				
20. I choose a challenging computer exercise.	3	27	54	16
8. I choose a non-challenging computer exercise.	16	52	26	6
17. I choose the computer exercises that are related or similar to the English lessons.	-	4	70	26
Seeking practice				
31. I look for opportunities to practice English language as much as possible when working with computer.	-	7	76	17
Self-monitoring				
27. I check my mistakes with the answers provided by the computer.	-	3	71	26
7. I do not check my mistakes with the answers provided by the computer.	24	73	2	1
Self-evaluating				
29. I check my score after I complete the computer exercise.	-	2	71	27

The majority of the students also revealed that they did not make plans to complete all tasks while working with computer instruction. 69% of students agreed with the statement that said, "I do not make plans to complete all computer tasks" (statement 34). Most of the students (89%) agreed with the statement that said, 'I have clear objectives when choosing the computer exercises" (statement 24).

Three statements were included to obtain information regarding the students' self-management strategy. 70% of the students expressed their agreement with the statement which said, "I choose a challenging computer exercise" (statement 20). The majority of the students also agreed that they chose exercises that were related or similar to the class lesson; 96% of the students agreeing with the statement which said, "I choose the computer exercises that are related or similar to the English lessons" (statement 17). The students' response to the statement concerning the seeking of practice showed that 93% of the students claimed that they looked for opportunities to practice English language as much as possible when working with computers. The students' response to the statements exploring self-monitoring strategy suggested that this strategy was also highly used. 97% of the students expressed their agreement with the statement which said, "I check my mistakes with the answers provided by the computer" (statement 27). The students appeared to use this strategy to understand their own mistakes, and also to find the answers to the questions that they got wrong. The students' response to the statement regarding a self-evaluating strategy suggested that almost all students checked their score after

completing their exercises, as 98% of the students agreed with statement which said, "I check my score after I complete the computer exercise" (statement 29).

A statistical analysis of all statements addressing metacognitive strategies in relation to the independent variables was conducted so that a clearer relationship between the variables could be traced. Table 5.5 shows the frequency scores of all the students' use of metacognitive strategies in relation to these variables.

Table 5.5: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		METACOGNITIVE				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	n =162
GENDER	Male	4	(6)	96	(142)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	2	(1)	98	(57)	(58)
	Electrical	5	(5)	95	(99)	(104)
PROFICIENCY	Low	0	(0)	100	(81)	(81)
	High	7	(6)	93	(75)	(81)
FUTURE	Require Eng.	9	(1)	91	(10)	(11)
PLAN	Require no Eng.	3	(5)	97	(146)	(151)

The frequency count according to gender shows that the majority of the male students (96%) and all the female students used the metacognitive strategies. According to faculty, 95% of students from electrical engineering and 98% of students from chemical engineering used metacognitive strategies when working with computer instruction to learn English. The results also indicate that all students with low proficiency and 93% of students with high proficiency used metacognitive

strategies. According to plans after graduation, 91% of students who believed they required a knowledge of English and 97% of students who do not require a knowledge of English also chose to use metacognitive strategies. This analysis suggests that the majority of students used the particular metacognitive strategies when learning English using computers.

In order to investigate whether there were significant differences or not in the use of the particular metacognitive strategies when dealing with CALL tasks, a Chi-Square Test was carried out. Table 5.6 presents the level of significance of the variables.

Table 5.6: Metacognitive strategy v gender, faculty, proficiency levels, and future plans

	Significance
Gender	1.000
Faculty	0.422
Proficiency	0.028
Future Plans	0.349

$p < 0.05$

According to Table 5.6, there are no significant differences in using metacognitive strategies between male and female students, students from chemical and electrical engineering faculties, and students who require a knowledge of English and those who do not require a knowledge of English. Although there are no significant differences, slightly more female students seemed to use the metacognitive strategies when working with the computer than the male students. Similarly,

slightly more students from the chemical engineering faculty claimed they used the strategies than students from the electrical engineering faculty. The students who believed that they did not require a knowledge of English appeared to use slightly more of the metacognitive strategies than those who required a knowledge of English. In relation to the differences in proficiency levels, there is a significant difference between students with low and high proficiency in their use of the metacognitive strategies. More students with low proficiency levels seemed to use metacognitive strategies than students with high proficiency levels.

5.2.3 The social strategies used in learning English using computers.

In this discussion, the social strategies were divided into two sub-categories: asking for help and cooperation. The results for all students who responded to the questionnaires are presented in Table 5.7. Each of the activities will be analysed and discussed in turn in the following analysis.

In the 'asking for help' strategy, two statements were included in the questionnaire to gather information from the students. 89% of the students expressed their disagreement with the statement which said, "I ask my teacher to help me when I have problems understanding certain computer exercises" (statement 21). Students appeared not to like getting help from teachers when working with computers. Interestingly, however, the majority of the students claimed they asked for help from their friends, with 94% of students agreeing with the statement which said, "I

ask my friends to help me when I have problems understanding certain computer exercises" (statement 25). So, when seeking help, friends were preferred to teachers.

Table 5.7: The social strategies when learning English using computers

	SD %	D %	A %	SA %
SOCIAL STRATEGIES				
Asking for help				
21. I ask my teacher to help me when I have problems understanding certain computer exercises.	17	72	11	-
25. I ask my friends to help me when I have problems understanding certain computer exercises.	-	6	77	17
Cooperation				
11. I try to work with a group in order to understand certain computer exercises better.	-	7	78	15
35. I try to work with a friend in order to understand certain computer exercises better.	-	11	69	20

Two statements were presented to examine the students' 'cooperation' strategy. 93% of the students agreed with the statement which said, "I try to work with a group in order to understand certain computer exercises better" (statement 11). And 89% expressed their agreement with the statement which said, "I try to work with a friend in order to understand certain computer exercises" (statement 35).

In order to enumerate more detailed relationships between the dependent variable of

social strategy and the independent variables of students' gender, faculty, proficiency, and plans after graduation, a Crosstab analysis was carried out. Table 5.8 presents the findings obtained from this analysis.

Table 5.8: Frequency distribution according to gender, faculty, proficiency levels and future plans.

		SOCIAL				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	n =162
GENDER	Male	14	(21)	86	(127)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	12	(7)	88	(51)	(58)
	Electrical	13	(14)	87	(90)	(104)
PROFICIENCY	Low	12	(10)	88	(71)	(81)
	High	14	(11)	86	(70)	(81)
FUTURE	Require Eng.	18	(2)	82	(9)	(11)
PLAN	Require no Eng.	13	(19)	87	(132)	(151)

Table 5.8 indicates that the majority of the male students (86%) and all of the female students expressed their agreement with using a social strategy when learning English using computer instruction. 87% of students from electrical engineering and 88% of students from chemical engineering also showed their agreement. The low proficiency level students (88%) indicated a slightly higher frequency of agreement with using such strategies than the high proficiency level students (86%) towards using a social strategy when working with the computer. The majority of students (87%) who do not have any intentions of using English in their future plans, either to further studies or to use English in their work place and

82% of students who see themselves as requiring a knowledge of English used the social strategies when dealing with CALL tasks.

Table 5.9: Social strategy v gender, faculty, proficiency levels, and future plans

	Significance
Gender	0.219
Faculty	0.800
Proficiency	0.815
Future plans	0.637

$p < 0.05$

Table 5.9 illustrates the level of significance gathered from the students' responses regarding the use of a social strategy in relation to gender, faculty, proficiency, and plans after graduation when dealing with CALL tasks. The result shows that there are no significant differences between students within each of the independent variables regarding their reliance on a social strategy when working with the computer. Specifically, there are no significant differences between male and female students, students from the chemical engineering faculty and the electrical engineering faculty, students with low and high proficiency, and students who require a knowledge of English and who do not require English in their future in using social strategy when dealing with CALL tasks. Although there are no significant differences between the variables, the results of the analysis given in Table 5.9 can also be summarised as follows:

- In terms of gender, proportionally slightly more female students believed that they used a social strategy than the male students.
- According to faculty, proportionally slightly more students from the chemical

engineering faculty claimed that they used the social strategies than the students from the electrical engineering faculty.

- According to proficiency levels, proportionally slightly more students with high proficiency appeared to use the social strategies than students with low proficiency.
- In terms of future plans, proportionally slightly more students who thought that they did not require a knowledge of English for their future careers used the social strategies than students who required English.

5.2.4 The affective strategies used in learning English using computers.

The affective strategies were further divided into two sub-categories: encouragement and the lowering of anxiety. The results for all students who responded to the questionnaires are presented in Table 5.10. Each of the strategies will be analysed and discussed in turn in the following analysis.

Three statements were presented to elicit information concerning the students' encouragement strategy. 95% of the students expressed their agreement with the statement which said, "I tell myself that I am working with a machine, I should not feel embarrassed when I make mistakes" (statement 12). 90% of the students agreed with the statement which said, "I tell myself that I did a good job when I did well" (statement 32). 95% expressed agreement with the statement which said, "I tell

myself that I am just practicing the computer exercises, the score obtained will not determine my course grade" (statement 33).

Table 5.10: The affective strategies when learning English using computers

	SD %	D %	A %	SA %
AFFECTIVE STRATEGIES				
Encouragement				
12. I tell myself that I am working with a machine, I should not feel embarrassed when I make mistakes	-	5	81	14
32. I tell myself that I did a good job when I did well.	1	9	75	15
33. I tell myself that I am just practicing the computer exercises, the score obtained will not determine my course grade.	-	5	78	17
Lowering Anxiety				
10. I try to laugh when the computer corrects my mistakes	1	10	77	12
16. I try to relax whenever I feel afraid of using computers to learn English.	12	5	82	1

The students also revealed their wish to lower anxiety when learning English using computers. 89% claimed they tried to laugh when the computer corrected their mistakes. 83% of students agreed that they tried to relax whenever they felt afraid of using computers to learn English.

Table 5.11: Frequency distribution according to gender, faculty, proficiency levels and future plans.

		AFFECTIVE				
		Disagree		Agree		Total
		%	(raw)	%	(raw)	n =162
GENDER	Male	7	(10)	93	(138)	(148)
	Female	0	(0)	100	(14)	(14)
FACULTY	Chemical	3	(2)	97	(56)	(58)
	Electrical	8	(8)	92	(96)	(104)
PROFICIENCY	Low	9	(7)	91	(74)	(81)
	High	4	(3)	96	(78)	(81)
FUTURE	Require Eng.	0	(0)	100	(11)	(11)
PLAN	Require no Eng.	7	(10)	93	(141)	(151)

Table 5.11 shows the relationships between the independent variables and the dependent variable of affective strategies. The findings show that the majority of the male students (93%) and all the female students used affective strategies in learning English language in the CALL classroom. 92% of students from electrical engineering and 97% of students from chemical engineering expressed their agreement with the use of positive affective strategies. 91% of students with low proficiency levels and 96% of students with high proficiency levels believed that they used the affective strategies. The majority of the students who saw themselves as not requiring a knowledge of English (93%) and all the students who required English for their future expressed their agreement with using affective strategies when dealing with CALL tasks.

In order to investigate whether there were significant differences or not within the students' independent variables when using affective strategies, a Chi-Square Test was carried out. Table 5.12 presents the level if significance of the variables.

Table 5.12: Affective strategy v gender, faculty, proficiency levels, and future plans

	Significant
Gender	0.603
Faculty	0.497
Proficiency	0.192
Future plans	1.000

$p < 0.05$

The results in Table 5.12 illustrate that there were no significant differences in using affective strategies when learning English language using computers in relation to each of the student variables. Although there are no significant differences between the variables, the results can be summarised as follows:

- In terms of gender, proportionally slightly more female students claimed that they used the affective strategies than the male students.
- According to faculty, proportionally slightly more students from the chemical engineering faculty appeared to use the affective strategies than the students from the electrical engineering faculty.
- According to proficiency levels, proportionally slightly more students with high proficiency believed that they use the affective strategies than students with low proficiency.

- In terms of future plans, proportionally slightly more students who thought that they required a knowledge of English for their future careers used the social strategies than students who did not require it.

5.3 Analysis of the interview data

As mentioned in the preceding chapter, the interview sessions were divided into parts: structured and semi-structured interview. The students in this study did not seem to express any opinions or make comments concerning learning strategies when dealing with CALL tasks. Therefore this analysis will be based upon data obtained from the structured interviews. The interview survey provided students with nine statements concerning learning strategies. The statements were not classified according to their categories when they were presented in the interview survey. However, as before, in this analysis and discussion, the strategies will be described according to their overall categories: cognitive, metacognitive, social, and affective strategies. In the analysis, the statements will be numbered as in the interview survey. In the following analysis and discussion, the students' strategies will be presented item-by-item and then by category profiles.

5.3.1 The cognitive strategies used in learning English using computers.

As with the questionnaire data, the cognitive strategies were further divided into the six sub-categories: Resourcing, translating, note-taking, guessing, skipping, and quitting. All questions examining each of the sub-categories were similar to those in

the questionnaire. The results for all students (16) who responded to the interview are presented in Table 5.13.

Table 5.13: The cognitive strategies when learning English using computers

Statements	Agree n (16)	Agree %
Resourcing		
7. What do you do when you don't know the answer to a certain computer exercise? Do you ..... (choose as many as you want from the list)		
(a) use the 'help' or 'hint' menu	15	94
(b) refer to the English class textbook	2	13
(c) refer to any English textbooks	1	6
(d) refer to an English dictionary	4	25
(e) refer to a English-Malay dictionary (bilingual dictionary)	14	88
Translate		
11. When you have difficulty in understanding certain computer exercises, do you		
(a) translate what you have seen on the computer screen into Bahasa Malaysia for better understanding.	14	88
(b) think in Bahasa Malaysia for the answer and then translate into English language.	14	88
(c) none of the above	0	0
Note-taking		
17. When you are working with computer exercises, do you, ...		
(a) take notes of certain rules or words	1	6
(b) not take notes of certain rules or words	15	94
(d) not sure	0	0
Quit		
7. What do you do when you don't know the answer to a certain computer exercise? Do you		
(j) just quit	1	6
Skip		
7. What do you do when you don't know the answer to a certain computer exercise? Do you		
(i) just leave it and try another (skip)	16	100
Guess		
7. What do you do when you don't know the answer to a certain computer exercise? Do you		
(h) guess	16	100

There are five main questions examining students' resourcing strategy when working with computers to learn English. Almost all of the students (15) used the 'help' or 'hint' menus when they were not sure of the answer to a task when working with computers. Most students (14) referred to a bilingual dictionary, that is, English-Malay dictionary when they did not know the meaning of certain words in the computer exercises. Few claimed to refer to an English dictionary. The interview revealed that only 2 students claimed that they referred to their English class textbook.

The students' response to the question concerning translation showed that most of the students believed that they translated what they saw on the computer screen into Bahasa Malaysia for better understanding. Similarly, most suggested that when working with computers, they think in Bahasa Malaysia for the answer and then translate it into English. The result in Table 5.13 also indicates that students did not favour using the note-taking strategy when dealing with computer instruction. Only 1 student appeared to use the strategy as compared to 15 students who did not like to use it.

Concerning the approach they would use when having difficulties in doing an exercise when working with computer activities, very few students claimed that they would quit completing the exercise. All of them agreed that they would guess when they did not know the answer. Similarly, all students appeared to skip the

exercises that they had a problem with understanding. It seems that the students preferred to guess or skip rather than to quit a computer program when they faced a problem of understanding.

A Crosstabs analysis explored the relationship between the dependent variable of cognitive strategy and the independent variables of students' gender, faculty, proficiency levels and plans after graduation. Table 5.14 illustrates the relationship between these variables.

Table 5.14: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		COGNITIVE		
		Disagree	Agree	Total n=16
GENDER	Male	3	5	8
	Female	0	8	8
FACULTY	Chemical	0	6	6
	Electrical	3	7	10
PROFICIENCY	Low	0	8	8
	High	3	5	8
FUTURE	Require Eng.	0	4	4
PLAN	Require no Eng.	3	9	12

The findings in Table 5.14 show high agreement among students in using the particular cognitive strategies. According to gender, relatively more female students appeared to use the cognitive strategies than the male students. In terms of faculty, relatively more students from chemical engineering seemed to use the cognitive strategies than students from electrical engineering when learning English using

computers. In terms of proficiency levels, relatively more students with low proficiency appeared to use this particular strategy than those with high proficiency. According to plans after graduation, relatively more students who required a knowledge of English for their future plans used the cognitive strategies than those who did not.

5.3.2 The metacognitive strategies used in learning English using computers.

In the interview, questions on metacognitive strategies were presented in seven sub-categories: organising, planning tasks, objective, seeking of practice, self-management, self-monitoring, and self-evaluating. These questions are similar to those in the questionnaire. The results for all interviewees are presented in Table 5.15. Each of the sub-categories will be analysed and discussed in turn.

In relation to the organisation of the computer exercises, very few students appeared to keep records of all the computer exercises that they had tried. When practising CALL exercises, also very few students thought they made plans to complete all the tasks. A small number of the students seemed to agree with the statement that revealed that they had clear objectives when choosing the computer exercises. The students' response to the question concerning the seeking of practice showed that all of the students claimed that they looked for opportunities to practice the language as much as possible when working with computers.

Table 5.15: The metacognitive strategies when learning English using computers

Statements	Agree n (16)	%
Organising		
15. When practising CALL exercises, do you ..... (a) keep records of the exercises	1	6
Planning task		
15. When practising CALL exercises, do you ..... (b) make plans to complete all the tasks	1	6
Objective		
15. When practising CALL exercises, do you ..... (c) have clear objectives of choosing the exercises	4	25
Seeking practice		
17. When you are working with your computer exercises, do you		
(c) look for opportunities to practice as much as possible	16	100
(d) not sure	0	0
Self-management		
19. What kind of English language exercises do you like to work on with when working with computers?		
(a) A challenging exercise	11	69
(b) A non-challenging exercise	5	31
(c) Exercises that are related or similar to the English lessons	15	94
(d) Exercises that are not related or similar to the English lessons	1	6
Self-monitoring		
20. How important do you think it is to check your mistakes with the answers provided by the computer?		
(a) Important	14	88
(b) Not important	2	12
(c) Not sure	0	0
Self- evaluating		
3. How important do you think it is to check the score provided by the computer?		
(a) Important	15	94
(b) Not important	1	6
(c) Not sure	0	0

Students were asked during the interview to respond to questions concerning self-management. The majority of the students expressed their agreement with choosing computer exercises that have a relation to or similarities with those in the English lesson. More than half of the students expressed that they would like to work with a challenging computer exercise, and while a third would choose non-challenging kinds of exercise.

In relation to self-monitoring strategy, the students' responses revealed that the strategy was thought to be important when working with computer instruction. Most of the students thought it was important to read the comments made by computers. The students' responses to self-evaluating strategy showed that this strategy was highly used. The majority of the students thought it was important to check the score provided by the computer. The students' responses showed that almost all students claimed to check their score after completing their exercises.

A statistical analysis of all statements addressing metacognitive strategies in relation to the independent variables was conducted. Table 5.16 presents the relationship between these variables.

The findings in Table 5.16 show that in relation to gender, relatively more female students claimed to use metacognitive strategies than the male students when learning English. According to faculty, proportionally more students from electrical

engineering seemed to use metacognitive strategies than students from chemical engineering.

Table 5.16: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		METACOGNITIVE		
		Disagree	Agree	Total n=16
GENDER	Male	1	7	8
	Female	0	8	8
FACULTY	Chemical	1	5	6
	Electrical	0	10	10
PROFICIENCY	Low	0	8	8
	High	1	7	8
FUTURE PLAN	Require Eng.	1	3	4
	Require no Eng.	0	12	12

In terms of proficiency levels, proportionally more students with low proficiency expressed their claim to using the metacognitive strategies as compared with students with high proficiency. According to future plans, proportionally more students who did not require a knowledge of English used metacognitive strategies than those who required it.

5.3.3 The social strategies used in learning English using computers.

In the following discussion, the social strategies are divided into two sub-categories: asking for help and cooperation. The responses of all interviewees are

presented in Table 5.17. Each of the activities will be discussed in turn in the following analysis.

Table 5.17: The social strategies when learning English using computers

Statements	Agree n (16)	%
Asking for help		
7. What do you do when you don't know the answer to a certain computer exercise? Do you		
(f) ask for help from friends	14	88
(g) ask for help from teacher	2	12
Cooperation		
1. When you are practicing your computer exercises, do you like to work		
(a) individually	2	12
(b) in a group	10	63
(c) with a partner	4	25

In relation to the 'asking for help' strategy, the students show variations in their choices. The majority of the students claimed that they preferred to get help from friends, and very few would ask their teacher for help when they have problems with their exercises. In the 'cooperation' strategy, over half of the students preferred to work in a group, and a quarter preferred to work with a partner. Interestingly, a minority preferred to work individually.

Table 5.18 shows the relationships between the independent variable of social strategy and the independent variables. According to gender 4 male and all of the female students expressed their agreement with using the social strategies when

learning English using computer instruction. In terms of faculty, proportionally more students from chemical engineering seemed to use the social strategies than students from electrical engineering.

Table 5.18: Frequency distribution according to gender, faculty, proficiency levels, and future plans.

		SOCIAL		
		Disagree	Agree	Total n=16
GENDER	Male	4	4	8
	Female	0	8	8
FACULTY	Chemical	1	5	6
	Electrical	3	7	10
PROFICIENCY	Low	1	7	8
	High	3	5	8
FUTURE	Require Eng.	0	4	4
PLAN	Require no Eng.	4	8	12

According to proficiency levels, the majority of students with low proficiency (7) and 5 students with high proficiency stated that they used social strategies when working with computer instruction. Proportionally more students with low proficiency indicated their agreement with using the social strategies when learning English language using computer than students with high proficiency. In terms of future plans, proportionally more students who required a knowledge of English believed to use the social strategies than those who did not require it.

5.3.4 *The affective strategies used in learning English using computers.*

The affective strategies, are divided into two sub-categories: encouragement and the lowering of anxiety. The results for all students who responded to the interview are presented in Table 5.19. Each of the strategies will be discussed in turn.

Table 5.19: The affective strategies when learning English using computers

Statements	Agree n (16)	Agree %
Encouragement		
10. When you practice your English exercises with computer, do you tell yourself that ..... (Choose as many as you want from the following list)		
(a) you did a good job when you did well	16	100
(b) the score obtained would not determine your course grade	16	100
(c) you should not feel embarrassed when you make mistakes because you are practicing with a machine	15	94
(d) none of the above	0	0
Lowering Anxiety		
12. When you feel nervous in a CALL classroom, how do you overcome it?		
(a) Try to laugh	14	88
(b) Try to relax	16	100
(c) None of the above	0	0

Students were asked during the interview to respond to a question concerning encouragement when dealing with CALL tasks. All of the interviewees agreed that they told themselves that they did a good job when they did well and the score they obtained while completing the tasks would not determine their course grade. Almost all of the students believed that they should not feel embarrassed when they made mistakes because they were practicing with a machine. In terms of lowering anxiety,

the students also revealed their wish to lower anxiety when learning English using computers. Most claimed they tried to laugh and all of the students agreed that they tried to relax whenever they felt nervous when working with computers to learn English.

A Crosstabs analysis was conducted to explore the relationship between the dependent variable of affective strategy and the independent variables of students' gender, faculty, proficiency levels, and future plans. Table 5.20 illustrates the relationship between these variables.

Table 5.20: Frequency distribution according to gender, faculty, proficiency levels and future plans.

		AFFECTIVE		
		Disagree	Agree	Total n=16
GENDER	Male	2	6	8
	Female	0	8	8
FACULTY	Chemical	2	4	6
	Electrical	0	10	10
PROFICIENCY	Low	2	6	8
	High	0	8	8
FUTURE PLAN	Require Eng.	0	4	4
	Require no Eng.	2	10	12

According to gender, most male students and all the female students used affective strategies in learning English language in CALL classroom. Relatively more female students claimed to use affective strategies than the male students. In terms of faculty, relatively more students from electrical engineering seemed to use affective

strategies. According to proficiency levels, the majority of the students with low proficiency and all students with high proficiency believed that they used the affective strategies when learning English. Relatively more students with high proficiency believed that they used the affective strategies than students with low proficiency. In terms of future plans, relatively more students who thought they required a knowledge of English used affective strategies than students who did not require it when dealing with CALL tasks.

5.4 Overall findings on learners' strategies

After examining each of the statements concerning strategies used by students, and relating each type category (cognitive, metacognitive, social, and affective strategies) to the independent variables (gender, faculty, proficiency levels, and plans after graduation), I shall address the main research questions concerning the learning strategies students claimed that they used when working with computer-based instruction. I also intend to examine whether the students' claims in the use of learning strategies varied according to gender, faculty, proficiency levels, and plans after graduation. The specific questions I will address are:

1. What range of learning strategies do students seem to use when dealing with CALL tasks?
2. Do students' learning strategies appear to vary according to gender, faculty, proficiency levels, and plans after graduation?

5.4.1 The use of learning strategies (cognitive, metacognitive, social, and affective) among students when dealing with CALL tasks.

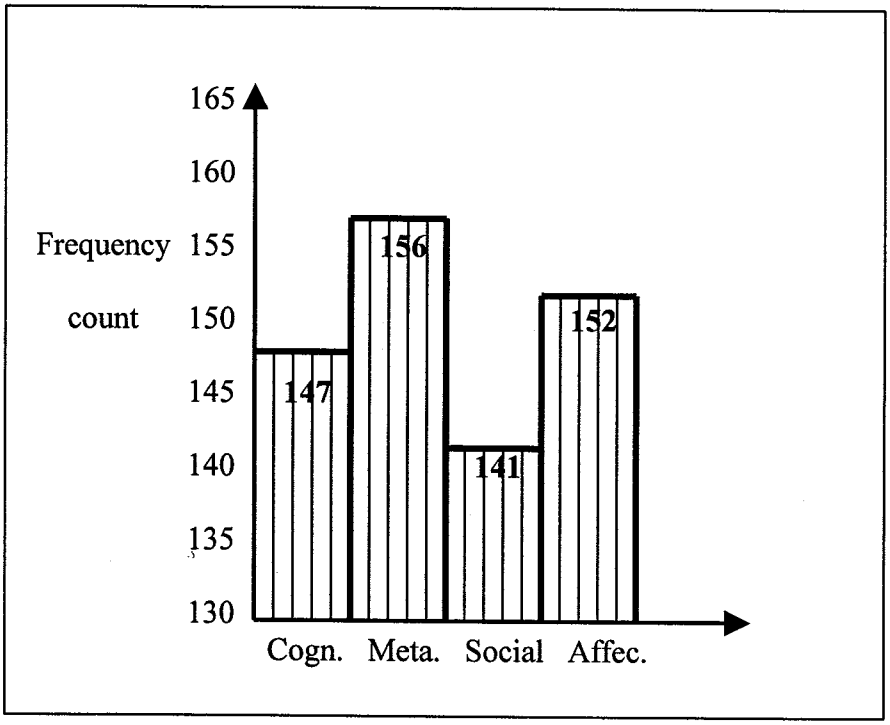
This section will provide answers to research question: What range of learning strategies do students seem to use when dealing with CALL tasks? The results of the analysis indicates that the students in this study used the full range of learning strategies; that is cognitive, metacognitive, social, and affective strategies. Table 5.21 shows the frequency distribution and percentage of students' average scores on the use of the strategies when using the computer.

Table 5.21: Frequency Distribution and Percentage of Students' Learning Strategies

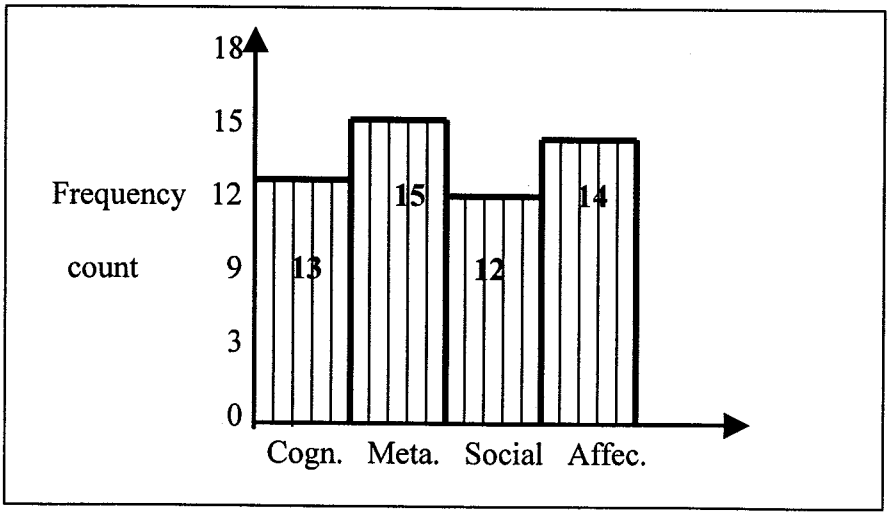
		Questionnaire		Interview	
		Frequency	Percent	Frequency	Percent
Cognitive	Not Used	15	9	3	19
	Used	147	91	13	81
	Total	162	100	16	100
Metacognitive	Not Used	6	4	1	6
	Used	156	96	15	94
	Total	162	100	16	100
Social	Not Used	21	13	4	25
	Used	141	87	12	75
	Total	162	100	16	100
Affective	Not Used	10	6	2	12
	Used	152	94	14	88
	Total	162	100	16	100

The table above (Table 5.21) shows that students claimed to use the full range of strategies that were explored in this study. For further discussion, the findings are exemplified as in Figure 5.1.

Figure 5.1: Students' response to four strategy categories (Questionnaire)



Students' response to four strategy categories (Interview)



As illustrated, the students very closely rated each of the strategies. The majority of students claimed to use metacognitive strategies in particular. For example, most students said they checked their answers with the answers offered by computers, chose exercises which corresponded to their objectives, and they also checked their score from the computers to assess their progress. The second most favoured strategy type was affective strategies. This is interesting but perhaps it is not surprising to see that they favoured encouragement and lowering anxiety strategies a great deal.

The third most favoured strategy type was cognitive. The fact that students were working with computers, activities such as resourcing, note-taking did not seem to them very useful when compared to the other strategies. For example, students certainly seemed more interested in the on-screen activities than referring to books. The least preferred strategy type in this study was social strategy. Perhaps the benefits that the computer offers such as being user-friendly, providing a help menu may provide students with enough help that they feel that there is no need for them to ask for help even from friends.

5.4.2 The use of learning strategies among students according to their gender, faculty, proficiency levels, and plans after graduation.

The purpose of this section is to see whether the strategies used by students varied according to their gender, faculty, proficiency levels, and plans after graduation.

The analysis here therefore provides answer to the research question: Do students' learning strategies appear to vary according to gender, faculty, proficiency levels, and plans after graduation? In the earlier part of this chapter, the level of significance of the independent and dependent variables of the questionnaires were tested and, in this section, I intend to provide an overview of the significance in order to better inform the second research question. As mentioned earlier, there were no significant tests conducted on the interview variables because of the relatively small size of the sample. Table 5.22 demonstrates the overall results concerning learning strategies.

Table 5.22: Strategies v gender, faculty, proficiency levels and future plans

	Significance			
	Cognitive	Metacognitive	Social	Affective
Gender	0.367	1.000	0.219	0.603
Faculty	0.722	0.422	0.800	0.497
Proficiency	0.416	0.028	0.815	0.192
Future Plans	0.601	0.349	0.637	1.000

The overall significance test of learning strategies in relation to the independent variables can be expressed as follows:

1. In terms of gender, there are no significant differences between male and female students in using the range of strategies (cognitive, metacognitive, social and affective) investigated in this study.

2. In terms of faculty, there are no significant differences between students from the chemical engineering and students from the electrical engineering faculty in using the range of strategies investigated.
3. In terms of proficiency, students with high and low proficiency show no significant differences in preferring cognitive, social and affective strategies. However, there is a significant difference between students with high and low proficiency in using metacognitive strategies.
4. In terms of future plans after graduation, there is no significant difference between students who see themselves requiring a knowledge of English and those who do not in relation to the preferred strategies.

From the viewpoint of the foregoing analysis, it can be concluded that the students' preference in metacognitive strategies may vary according to their proficiency levels. In other words, there may be a difference in the students' preferred learning strategies according to their proficiency level. However, there may be no differences in preferred learning strategies among students when dealing with CALL tasks according to their gender, faculty, and plans after graduation.

5.5 Chapter summary

This chapter has analysed the findings concerning language learning strategies used by students when dealing specifically with CALL tasks. The chapter examined data obtained from the questionnaire and the interview. Statistical analyses were used to explore the relationships between the independent and the dependent variables. In

general, the results showed that the students used wide varieties of strategies. Among the four strategies investigated, the metacognitive strategies were found to be the most favoured type, followed in turn by the affective, cognitive, and social strategies when learning English using computers. The results also suggested that there was a difference between students with low and high proficiency in using the metacognitive strategies. However, there were no significant differences in relation to the other independent variables. This chapter provided answers to two of the research questions in this study. The following chapter will provide an overview and discussion of the findings of the present study. Recommendations for research and pedagogy will also be offered in the chapter.

CHAPTER SIX

Discussion and conclusions

6.1 Introduction

This chapter presents an overview of the major findings of the investigation and examines the implications for language learning and teaching. The chapter also discusses the relevance of the findings to previous research. It puts forward suggestions and recommendations for the direction of future research and provides concluding remarks about the investigation carried out here.

6.2 Summary and discussion of research findings

In the last two preceding chapters, I have, among other things, examined in detail students' motivational orientations in a conventional and a computer-based classroom and students' learning strategies specifically when dealing with CALL tasks. The aim of this section is to address each of the research questions of the study. A summary and discussions of the findings of the study in relation to each of the overall research questions will be presented.

6.2.1 *What are students' motivational orientations when learning English language in a conventional and in a CALL classroom? (RQ1)*

As identified in previous research literature, motivational orientations comprise of effort, attitude, desire, anxiety, and expectation. As an attempt to understand the students' motivational orientations when learning English language in a conventional and in a CALL classroom, I investigated these orientations concerned by addressing five subordinate questions. The following are summaries of the findings in relation to each of these five questions.

Do students put effort into learning English language?

In relation to students' effort, the students' overall response suggested that they did not put effort into learning English when in a conventional classroom. They also expressed a lack of effort to attend the English class. This seeming lack of effort to learn and attend English class may be explained in the students' response to the statement which addressed their plans after graduation. All of the students who did not require English in their future career expressed their disagreement with statements in the survey concerning effort put into learning and attending English class. The students' future plans may have influenced the effort to learn. The lack of effort might also be due to uninteresting teaching and expected learning approaches in a conventional classroom.

In contrast, when learning English using computers, the students expressed their readiness to put effort into learning and to attending the English classes. The fact that the majority of the students expressed persistence in trying to learn English when computers were used may be because they were keen to try out a new learning approach. Not many courses in UTM involve the use of computers. It is also possible that the students liked the challenge of a new approach, therefore they put their effort into the challenge of the CALL exercises.

What are students' attitudes towards learning English language?

In terms of attitudes towards learning English language in a conventional classroom, most of the students in this study expressed negative attitudes. They claimed that they disliked learning English language, they thought learning English language was dull and it was a waste of time to learn it. These negative attitudes expressed by the students when learning English in a conventional classroom may also be explained in the students' response to the statement which addressed their plans after graduation. When students' intentions after graduation were examined in relation to the statement that concerned the usefulness of learning English, the majority of students claimed that they did not require English for their future plans, that is, either to further their studies at English speaking universities or to use English in the work place. This may explain why most of the students thought that it was not useful to learn English. Again, the teaching and learning approaches in the conventional classroom may be another possible reason for students having negative attitudes.

Concerning attitudes towards learning English using computers, the students revealed positive attitudes. They claimed that they enjoyed learning English when using computers. The students seemed to suggest that learning English using computers was interesting and useful. The learning of English language becomes interesting to the students, perhaps, because of the movement, colour, and sound effect that computers offer. They would not be able to have all these qualities when working with normal textbooks. Other benefits that computers offered such as, the ability to work at one's own pace, or the privacy, may be further reasons.

Do students have the desire to learn English language?

The students' overall response to the items that revealed their desire to learn English showed that they did not appear to have the desire to learn English language when in a conventional classroom. The possible reason for wanting the English class to end quickly was that students were not interested in the subject. The students expressed their views that learning English was dull and that they were just wasting their time in the English class. They hated learning English and they did not have any intention to use English in their future plan, either to further studies or to use in their work place. Again, the results of the students' attitude and plans after graduation may be linked to their unfavourable longer terms desires towards learning English. The teaching and learning approach in a conventional classroom, where students may be expected to sit back and listen to teachers may also be the reason for students wishing for the time to pass quickly in such classes.

However, the students expressed their strong desire to learn English when using computers. The possible reason for wishing the time would not pass quickly when they were in the CALL classroom is that the students actually preferred learning English language when using computers. The interest for the challenge of a new approach and the ability to keep working all the time (the nature of computer activities) may be other reasons for students to wish for the time not to pass quickly. The results obtained from the attitude statements which expressed their liking of, interest in, and belief in the usefulness of learning English using computers may have a positive effect upon their desire to learn the language. The joy and novelty of working with computers may have made them wish that the class time did not pass quickly.

Do students feel anxious when in English language classes?

In response to the items concerning students' feeling of nervousness in the English class, most of the students expressed their feelings of anxiety or discomfort when learning English in a conventional classroom. Significantly, the majority of students with low proficiency expressed agreement with the statements that reflected feelings of anxiety in the English class. The inability to comprehend the language may be the reason for the feelings of nervousness or discomfort in the class. Also having the teacher correct the students' mistakes in front of the whole class may also raise their anxiety.

However, they demonstrated in their responses that they were comfortable with using computers to learn English. In addition, they did not feel embarrassed when the computers corrected their mistakes. This may be because when computers corrected their mistakes, there were no direct human factors involved. The benefits that computers offer, such as, privacy, where mistakes made while learning may not be made known to the whole class, may build up the students' confidence. Also, the capacity to work according to their own proficiency levels which the computer can offer may have made students feel more confident when learning English in CALL classrooms.

What are students' expectations regarding their learning of English language?

Regarding students' expectations to learn English well in their English class, their responses indicated that their expectations when learning English in a conventional classroom were low. In other words, the students did not expect to learn English well and they also believed that the English class would not help them to improve their English. The students' expectations most probably had been influenced by their negative attitudes and vice versa. Given their low motivations, they also did not have high hopes of doing well in the English class.

In contrast, the students indicated that they had high expectations of learning English when using computers. Using computers to learn English is a new learning approach to most students in UTM. The students' responses revealed that they were

attracted by this approach. They thought computer programs could help them to learn English. The benefits the computer offered, such as, allowing students to work at their own pace, may have attracted the students to work with the computers, as they could work according to their individual proficiency levels. Also, the positive attitudes which they expressed and the effort they put into learning English using computers most probably raised their expectations of doing well and improving their proficiency.

In summing up, it can be said that in relation to motivational orientations, the overall results indicated that the students expressed consistently high motivation when they learning English using computers. This was in stark contrast to their belief about learning English in the conventional classroom. The lack of personal interest to learn English such as believing they did not require a knowledge of English for their future careers may be a major reason for them not having positive motivational orientations when learning in a conventional classroom. The teaching and learning approach of the conventional classroom, where students are usually required to provide answers to the whole class, to be determined as right or wrong, or to be challenged by other students in the class may explain their feeling of nervousness, or discomfort. These experiences may influence them not to expect to learn English well specifically in an English classroom. There something happens in the conventional classroom which appears to be compensated for in the CALL class. The students' effort, attitude, desire, anxiety, and expectations are, of course likely to be inter-related and may influence students' achievement in class, lower

achievement, in turn, affects their motivation.

6.2.2 Is there a similarity or difference in students' motivation when learning English language in a conventional classroom as compared with a CALL classroom? (RQ2)

The analyses of the results clearly show that the students in this study express differences in their motivation when learning English language in a conventional and CALL classroom. Although the process of the teaching and learning of English language in a conventional and CALL classroom may not differ extensively (as the computer is the only additional teaching and learning aid in the CALL classroom), the overall findings however, suggest that the CALL classroom was still favoured by most students in the study. The possible reasons for the students in this research being motivated to learn English language when in CALL classroom may be because they like to try out a new learning approach. The other possible reason is that, perhaps, a CALL class offers benefits which a conventional class may not. It may be more interesting to some students to work with machines which provide movements, attractive colours and sound effects, rather than to flip through English textbooks. Students who prefer to work individually and at their own pace are likely to find that computers are useful for their preferred learning approach. The benefits which computers offer may therefore unconsciously draw them to prefer learning in this way.

6.2.3 If there is a similarity or difference in students' motivation, can this similarity or difference be related to such independent variables as students' gender, faculty, proficiency levels, and plans after graduation? (RQ3)

As mentioned in the last chapter, there were unequal numbers of students representing each of the independent variables except for the students' proficiency levels. Therefore, the analyses of the variables in relation to motivation were undertaken with caution. The general pattern of the students' motivation in relation to their proficiency levels would be more reliable as compared to the other independent variables because there were equal number of students in the low and high proficiency levels. The summary in section 6.2.2 illustrated that the students in this study were motivated to learn English language when using computers. This shows that there were differences between students' motivation to learn English language in a conventional and CALL classroom. Therefore, in this section I will summarise the findings in relation to the third research question: "If there is a difference in the students' motivation, can the difference be related to the students' gender, faculty, proficiency levels, and future plans?"

Concerning students' motivation, although all students in this study strongly agreed that they were poorly motivated when learning English in a conventional classroom, the test of significance showed that there were some differences in students' motivation in relation to the students' gender, faculty and plans after graduation. However, the analysis of the results also showed that there was no significant

difference in students' motivation on the basis of students' different proficiency levels. The male students, students from the electrical engineering faculty, students with low proficiency levels, and students who did not require a knowledge of English were even less motivated to learn English in a conventional classroom.

In relation to students' motivation when learning English in a CALL classroom all students expressed high motivation. However, male students, students from the chemical engineering faculty, students with high proficiency levels, and students who required a knowledge of English did not express as high motivation as female students, students from the electrical engineering faculty, students with low proficiency levels and students who did not require a knowledge of English.

More precisely, the patterns of the independent variables that exist in this study in relation to the students' motivation were as follows:

- In terms of gender, relatively more female students believed they were more motivated to learn English language in the conventional classroom than were the male students. Similarly, relatively more of the female students claimed they were more motivated to learn English language in the CALL classroom than did the male students.
- In terms of faculty, relatively more students from the chemical engineering faculty appeared to be motivated to learn English language when in the conventional classroom. However, relatively more students from the electrical

engineering seemed to be motivated to learn English language when in the CALL classroom.

- In terms of proficiency levels, more of the students with high proficiency levels believed that they were more motivated to learn English language when in the conventional classroom than were the students with low proficiency levels. In contrast, more of the students with low proficiency levels claimed to be more motivated to learn English language in the CALL classroom than did the students with high proficiency levels.
- In terms of future plans, more students who believed they required a knowledge of English indicated that they were more motivated to learn English language in the conventional classroom than were the students who did not. However, more students who did not require a knowledge of English suggested they were more motivated to learn English language in the CALL classroom than did the students who required a knowledge of English.

The summary of the results shows that students' motivation when learning English language in both a conventional and a CALL classroom may differ according to gender, faculty, proficiency levels, and future plans. (It needs to be emphasised that, in this study, although more female students claimed to have stronger motivation to learn English language in the conventional and in the CALL classroom, the sample size of the female students was relatively small as compared with sample sizes covering the other variables).

6.2.4 What range of learning strategies do students seem to use when dealing with CALL tasks? (RQ4)

The students' responses to questions concerning learners' strategies showed that they used a full range of strategies, that is, cognitive, metacognitive, social, and affective strategies. However the degree of the claimed usage varied. Metacognitive strategies were claimed to be the most preferred type of strategy, followed in turn by affective, cognitive, and social strategies. The following is a discussion of the four strategy types explored in the study.

Metacognitive strategies

The most favoured type of strategy was metacognitive. This strategy allowed students to have active interaction between students and computers. The students have to interact with computers because the computers act as the medium for learning. The nature of the medium appears to encourage students to develop self-monitoring strategies, self-management strategies, and self-evaluating strategies when learning English. For example, students said they checked their answers with the answers offered by computers, chose exercises which corresponded to their objectives, and they also checked their score from the computers to assess their progress. All these activities involved the use of computers. Concerning the seeking of practice, the results showed that students looked for opportunities to practice English as much as possible when dealing with CALL tasks. The students' interest in working with computers and the relatively limited time offered to work with

them may cause students to take the opportunities to practice learning English as much as possible.

In relation to the organisation strategy, the results showed that, although students enjoyed working with computer instruction, they did not, however, keep records of all the activities that they had done. The nature of the computer activities, where students were persuaded to complete their activities and also to complete their tasks within the class time, may have discouraged them to keep records of the activities. In relation to the organising strategy, students also revealed that they did not make plans to complete all tasks while working with the computer. Most probably the students would prefer to work thoroughly with one task at a time, hence, they would not be able to plan out the number of tasks that they could complete within one class period. In addition, the level of difficulty of one task may also be a reason for students not being able to plan out the number of tasks they could complete while working with computer instruction. A challenging task may require them to spend more time in completing it. The students in this study may not have kept records of all the computer exercises that they had done or have planned their tasks. However, they did express the view that they had objectives concerning the exercises which they chose. Being exam-oriented students, they most probably were more careful in choosing the kind of exercises which they would see as appropriate practice. It appears quite common for most UTM students to choose exercises which are quite similar to the class lessons or examination format. This tendency and their claim to

having clear objectives when choosing exercises might reflect a concern with the tests.

Affective strategies

The second most favoured strategy type was the affective strategies. Since the students were learning English language using computers, it is not surprising to see that they favoured encouragement and lowering anxiety strategies. Students would have to motivate themselves and try to lower their anxiety on their own because computers are not able to provide advice or opinions. The interest in learning English using computers may have also helped students to build up their courage and lower their anxiety. The affective strategies did not require students to involve their friends or the teacher. Students only needed to remind themselves or act for themselves so that they could build up their courage and confidence. The computer appears to call on quite simple strategies that most students appear to be able to use without having to feel embarrassed.

Cognitive strategies

The third strategy type which was used was cognitive strategies. The cognitive strategies results have showed that students favoured strategies which were related directly to the computer programme, such as using the 'help' or 'hint' menu. Convenience and easy access may be the main reasons for students choosing these strategies over the others. They do not have to move away from their computer screen when referring to the computer menu and instructions as compared to the

other activities. They appeared not to want to 'waste' their time to move and get English dictionaries or English textbooks which are, in fact, placed at one corner of the computer room at UTM. The enjoyment of working with computers may also be the reason for students not wanting to leave their computers.

Concerning using the dictionary, students referred to the bilingual dictionary, that is, the English-Malay dictionary more than to the English dictionary. All students in this study used Bahasa Malaysia as the medium of instruction throughout their education, therefore, the bilingual dictionary may have been seen as very useful for them to understand the meaning of difficult words. The students' responses concerning translation showed that they widely used this strategy. Since most of the students appeared to have positive attitudes towards learning English through using computers, they may seek to complete the exercises successfully and, therefore, it seems important for them to be able to understand and respond correctly.

Students in this study used the note-taking strategy less. Students may not want to take notes while working with computers possibly because they are engrossed in the computer exercises that they were working on. Time is another factor that may cause students not to use a note-taking strategy. Students are given one class period, that is, fifty minutes to practice computer activities. If they were to take notes, they would have to spend time jotting down the required information, hence, they would have less time to practice CALL activities. In relation to the quit strategy, the results suggested that students in this study did not give up easily when working

with computer instruction. They expressed the view that they put a lot of effort into learning and attending English class when using computers. Thus, with all the effort they claim to put into working with the computer instruction, they appear not to want to give up easily, such as quitting computer programs when they have problems working with them. The results also showed that the students preferred to skip rather than to quit CALL activities when facing difficulties. It may be because, if they try another exercise, they possibly may be able to complete it. However, if they quit that may mean they are not trying at all, hence little learning may be likely to take place. The guess strategy was also highly favoured by the students. Similarly, this may also suggest that they did not give up easily.

Social strategies

The fourth strategy type which was used was social strategies. Since most computer programs offer a great deal of help and are user-friendly, the cooperation strategy and asking friends for help strategy were therefore less favoured. This may reflect the typical situation in which students would like to take the opportunities to try out the new technology. The students may not have wanted to 'waste' their time talking to friends when they knew they had limited time to work with computers.

In summing up, it can be said that the students in this study seemed to use a wide range of strategies. The students claimed that metacognitive strategies were the most preferred type of strategy, followed by affective, cognitive, and social strategies. Since the nature of the cognitive and social strategies mostly require

students to refer to a source, it may not be surprising to see that students rated both these strategies quite closely. The students expressed that they were more interested with the on-screen activities (computer activities) than referring to books. The fact that students were working with computers, activities such as keeping records, resourcing, note-taking or discussing with friends appeared not to be so useful as self-evaluating, using help or hint menu, and skip or guess strategies. The students appeared more interested in getting direct help from the computer.

6.2.5 Do students' learning strategies appear to vary according to gender, faculty, proficiency levels, and plans after graduation? (RQ5)

It has been mentioned earlier that there were unequal numbers of students representing each of the independent variables except for the students' proficiency levels. Therefore, the descriptions of the variables in relation to students' learning strategies were done with caution. The general pattern of the students' learning strategies in relation to their proficiency levels would be more reliable as compared to the other independent variables of this study because there were equal number of students in each of the proficiency levels. The findings indicated that the students in this study used the full range of the strategies, that is, cognitive, metacognitive, social, and affective strategies. In relation to these learning strategies, the focus in this section will be upon whether the strategies vary according to the independent variables.

According to the analysis of students' learning strategies when dealing with CALL tasks, there were no significant differences in relation to the cognitive, social, and affective strategies between male and female students, students from chemical engineering and electrical engineering, students' with low and high proficiency levels, and students who believed they required a knowledge of English and those who did not. There were no significant differences in relation to metacognitive strategies between male and female students, students from chemical engineering and electrical engineering, and students who believed they required a knowledge of English and who did not when dealing with CALL tasks. However, there was a significant difference in relation to metacognitive strategies between students' with low and high proficiency levels. Relatively more students with low proficiency used metacognitive strategies than students with high proficiency. Perhaps, students with low proficiency thought it was important for them to choose and practice exercises that they claimed to be right for them. These students might also want to take the opportunities to practice the CALL exercises as much as possible and evaluate their progress in the learning situation where they would have more privacy. As we have seen, the students with low proficiency claimed that they much preferred to work in a computer-based classroom.

More precisely, the patterns of learning strategies revealed in this study in relation to the students' characteristics were as follows:

- In terms of gender, all female students seemed to favour all the learning strategies that is cognitive, metacognitive, social, and affective strategies. As

for the male students, the sequence of the most favoured to the least favoured strategies was: metacognitive, affective, cognitive, and social.

- In terms of faculty, there was proportionally a very slight difference in the students' preference towards the four strategy types. Students from chemical engineering appeared to favour a wider range of learning strategies than students from electrical engineering. The students from chemical engineering favoured the metacognitive, social, and affective strategies, while students from electrical engineering favoured only the cognitive strategy.
- In terms of proficiency levels, students with low proficiency levels expressed their preference for wider range of learning strategies than the students with high proficiency levels. The students with low proficiency levels favoured cognitive, metacognitive, and social strategies, while the students with high proficiency levels favoured the affective strategy when learning English language in the CALL classroom.
- In terms of future plans, all students who believed they required a knowledge of English claimed to favour the cognitive, and affective strategies. The students who did not require English however, seemed to prefer metacognitive and social strategies.

The summary of the results shows that there were differences in students' preferred strategies in relation to the independent variables of students' gender, faculty, proficiency levels, and plans after graduation when dealing with CALL tasks. In this study it can be said that there is some evidence that the independent variables

seemed to influence students learning strategies when dealing with CALL tasks. In other words, the differences in the students learning strategies when using computers are affected by their gender, faculty, proficiency levels, and plans after graduation. Again, it needs to be emphasized that, in this study, in terms of gender, the sample size of the female students was relatively small as compared with sample sizes covering the other variables.

6.3 The findings of the current study and their relevance to previous research findings.

The purpose of the present section is to relate the findings of this study with the relatively small amount of recent research that addresses aspects of motivational orientations and learners' strategies when learning English using computers. The results obtained from this investigation mostly confirm previous research findings on both students' motivational orientations and learners' strategies when learning English using computers. It has to be emphasised that the present study has been a comprehensive investigation with a large sample of students concerning aspects of motivation and learning strategies when learning English language using computers in a specific situation. This study has examined all the components of motivation – effort, attitude, desire, anxiety, and expectation, and a broader range of learning strategies – cognitive, metacognitive, social, and affective than any previous research in English language learning. All of the previous research studies in this area have not included all the components of motivation and a broad spread of

learning strategies in a single investigation. Therefore, I am obliged to relate only parts of my findings to these previous investigations.

In relation to students' interest (desire) to learn English language using computers, the results of the present study are compatible with that of Windeatt (1986) and Dhaif (1990). Windeatt (1986) found that students perceived exercises on the computer as more enjoyable than non-CALL exercises. Students liked using computers, enjoyed computer activity and insisted on continuing the task which they were working on despite the limited time of a lesson. Results obtained in Dhaif's (1990) study showed that students enjoyed practicing English language in a computer laboratory and they requested to spend more time in the laboratory learning English.

Simonsen (1985) and Brett (1996) examined students' attitudes when learning English language using computer. In these studies, students showed positive attitudes towards the use of computer programs in their course. In relation to students' interest (desire) and attitudes to learning English language using computers, the results of the present study are also compatible with that of Adamson (1996). The results of the survey conducted by Adamson on students' attitudes towards working with computers showed that students enjoyed it and they felt considerably more relaxed than when working in a conventional class setting.

Gray (1996), Marsh (1997) and Stevens (1991) investigated students' interest

(desire), attitudes, and anxiety in relation to learning English language using computers. In Gray's (1996) research, the students agreed that they felt much more confident, and enjoyed working with computers. They had also developed positive attitudes towards the use of computers in the classroom, and intended to use them in their future careers. Marsh (1997) indicated that students in her research enjoyed performing tasks involving computers. The computer approach had helped the students to improve their spoken English and build their confidence. Stevens (1991) examined students' feelings of anxiety when working with computers. The students studied did not have prior exposure to computers and the research revealed that students were particularly confident and enjoyed learning English using computers.

The results of the present study are also compatible with that of Schcolnik and Rubin (1991) in relation to students' interest (desire), attitude, and expectations. They investigated the development of a group of students working with computers for two semesters and the results obtained showed that students enjoyed working with computers, they devoted a lot of their time to computer work, and their expectations improved. Most importantly, the students expressed their favourable attitudes towards using computers to learn language skills. The students in Schcolnik and Rubin's (1991) study suggested computers should be used in their future language classes at Tel Aviv University.

To date, there has been very limited research undertaken in relation to learners' strategies when learning English using computers. The results of the current

research confirmed Hussin's (1994) investigation that students preferred to use computer-related strategies, such as getting help from the computers, than non-computer related strategies, such as asking for help from teachers or friends. Particularly in relation to the non-computer related strategies, findings from this study confirm Hussin's (1994) and Marsh's (1997) findings that students preferred to get help from friends rather than teachers when they had problems understanding certain computer tasks. However, Dhaif's (1990) findings concerning the non-computer related strategies, contradict the findings obtained in this study, for he found that students asked for help mainly from their teachers. In the present study, friends were seen as the primary source for students seeking help.

Chapelle and Mizuno (1989) found that students in their study used the strategies, of resourcing, practice, self-monitoring, self-management, and self-evaluation. The present study confirms their finding in relation to the use of the five sub-categories within two major strategy types; that is the cognitive and metacognitive types. In the present study, however, seventeen sub-categories were examined within the four main strategy types of cognitive, metacognitive, affective, and social. Therefore, this study has significantly extended the investigation of learners' strategies in relation to CALL instruction.

In addition to a more comprehensive study of learning strategies using CALL, the present study is also unique in examining *all* of the components that are generally seen to comprise motivation; effort, attitude, desire, anxiety, and expectations.

These have been usually treated separately in previous studies. In addition, the students sample of the present study has been relatively large, having 162 ESL students participating in the investigation. Most of the previous studies concerning computer learning and teaching, have had samples that were relatively small. In Simonsen's (1985) study, only 17 students participated in the research. Chapelle and Mizuno (1986) conducted a research with 48 students. Stevens (1991) selected 75 students to be the subjects of his study. 17 students participated in McEnery's (1995) research. In Adamson's (1996) research, 16 students were involved, and 26 students participated in Gray's (1996) study. In addition to the range of variables investigated and relatively large sample size, this present study is also unique in its focus on a specific teaching situation in a Malaysian Institution of higher education.

6.4 Pedagogical Implications

The overall findings obtained from the main study showed that students preferred to learn English when using computers. Specifically, the students claimed that they put in more effort, showed positive attitudes, were more interested, had less feelings of anxiety, and had high expectations in learning English when using computers. However, when learning English in a conventional classroom, that is, a teacher-centred classroom, the results obtained were the opposite of learning English in a CALL classroom. In a conventional classroom, the students said they were less motivated, that they did not put effort into learning English, they revealed negative attitudes, they were less interested, they had more feelings of anxiety, and they had low expectations in learning English.

If students were motivated and believed they could learn better in a CALL classroom then this study seems to suggest that CALL classrooms might usefully replace the conventional classroom. This may be an extreme implication and, therefore, before any recommendations are made, the reasons for students favouring the CALL more than the teacher-centred classroom need to be more closely examined. The question that requires further answers in relation to this study is that, "Why do students actually prefer to use computers when learning English language?" Generally, the benefits that computers offer such as immediate feedback, privacy, and operating with endless patience may have attracted students to favour computers rather than teachers when learning English. In addition to the benefits offered, the students may at present prefer to work with computers because their use in language classrooms is relatively new. There is a novelty effect. The students would easily be attracted with the new sophisticated 'gadget' that could help them manage their own language learning, not at least in feeling they are able to have individual control of learning pace and procedures.

The students in this study revealed their dislike of learning English in a conventional classroom, that is, learning English in the presence of a language teacher, despite the fact that they had undergone eleven years of learning English in this situation. The reasons could be that perhaps they have experienced learning in such a context for sometime and may like to try an alternative approach for a change regardless of whether it is actually effective or not. Another possible reason

is that there may be some specific features in the conventional classroom context that the students dislike. In a conventional classroom students are likely to be required to provide answers to the whole class and, if their responses are wrong, they may feel embarrassed. Sometimes students may feel humiliated if peers laugh at their mistakes or teachers correct their mistakes in front of the whole class.

Although the conventional classroom might have some limitations, if carefully examined it could offer benefits which the computer could not. For instance, language teachers can provide personal attention, they are able to provide personal advice to the students and, as human beings, language teachers understand some of the students' problems. The benefits that language teachers can offer, in turn, reveal the limitations of computers. (This has been discussed in Chapter Two of this thesis). Understanding the benefits and limitations of learning English in a conventional classroom and in a CALL classroom, it is suggested that the beneficial characteristics of both should be incorporated into language teaching. The integration may provide varieties of interesting ways of teaching and learning English language. Jones and Fortescue (1987) believed that working with computers is not an end in itself, the more it is integrated with normal classroom work, the more relevant it will be – and the more relevant the learner may perceive it to be.

Since the findings in this study revealed that students at UTM were not in favour of learning English when in conventional classrooms, it is therefore necessary for the

language teachers at the institution to provide students with the best possible approaches of teaching English in the classroom that will attract and help them to learn English language. For example, language teachers should avoid correcting students' mistakes by making their names known in front of the whole class. In the present study, the findings showed that students seemed to prefer taking charge of their own learning and becoming more self-directed. As such, language teachers might consider delegating more responsibility to the learners in their language learning and should think of possible ways of assisting learners to become autonomous learners, especially in large classes in which giving individual attention to learners is often more difficult. If teachers enable learners to be more responsible for their own learning, then they can hope that the learner will carry on learning outside the classroom. The question is how or what language teachers can do to facilitate what learners do outside the classroom.

Carver (1984) believed that teachers can assist learners to formulate a plan of work for out-of-class practice. One alternative is to create a self-access centre. This self-access centre can play a role to help develop learners' out-of-class interest to learn. This centre should contain a wide range of reading, listening, speaking and writing materials for learners' use with or without the teacher. The materials offered to the learners should be organised according to learners' proficiency levels. The learners could be involved in selecting the materials. With proper planning and implementation, such a centre can offer learners exposure to extensive input in the target language.

The extension to some of the classroom implications discussed is that teacher education should include a component of learner training. Trainees' perceptions should be moved from an image of themselves as future imparters of knowledge to see themselves as facilitators of learning; giving students greater independence and responsibility for learning. Teacher training should involve immersion in tasks that help trainees themselves to learn 'how to learn' and 'how to build up interest' – trainees can far more easily help their students to learn how to learn if they themselves have had such experience. In this regard, Wenden (1985) suggests that teacher training institutions should include provision for trainees to experience learning another language as one of the required training activities. Trainees should also be provided with knowledge about motivational orientations and learning strategies that affect learners' motivation to learn and their use of learning strategies. According to Green and Oxford (1995), the more language teachers acquaint themselves with factors affecting learners' strategy choice the better the teachers can be equipped with the knowledge to plan lessons to cater for students' different characteristics.

In this study, since most of the students claimed that they were in favour of the computer approach in learning English language, it is therefore also important to train the language teachers to adapt to the new technological environment. Being able to participate in the development of computer-based materials means that the teacher would be able to integrate computerised language lessons into the broader

English language curriculum. There are, therefore, important advantages which could be gained from training teachers appropriately.

6.5 Limitations of the present study and implications for future research

The present study has established that students claim they are motivated to learn English when using computers. They also identified the use of certain strategies when dealing with computer-based instruction. It has, in its own right, brought forth some interesting aspects of motivational orientations and learners' strategies in ESL classroom which will have practical implications for teaching and learning and research. In UTM, no research of this kind has been done, thus the findings obtained help to provide new insights into the use of computers in that context.

Although the main study was refined after carefully examining the findings from the pilot investigation, it is still felt that certain aspects of this kind of study could be improved. An investigation on all student populations is ideal if a good representation of UTM students who are attending English courses is to be obtained. In general, the samples in this study were large, but they were not sufficiently large enough to give even generalisable results specific to UTM. The use of more samples across faculties could increase generalisability of findings and implications.

Generally, it would be useful to undertake a study similar to this one. The

replication of the study should also examine the long-term effects of learning English using computers. The potential questions for future investigation concerning long-term effects is that, "Do students' effort, attitude, desire, anxiety, and expectation towards learning English using computers change over time?" Also "What is the effect of this mode on language learning as compared with conventional classrooms?" It is important to examine language learners' strategies for long-term effect. It will be necessary in the long run to find out if certain strategies are a factor in successful language learning using computers. A longitudinal study could be extremely valuable in order to trace students' motivation and their language learning strategies and the gradual impact of both on learning outcomes.

The replication of this study should also focus more precisely on how learners strategically use CALL. The present study failed to obtain a clear picture from observations and only a general picture from the questionnaire and interviews. In-depth observations, self-report protocols, and interviews at different time intervals, probably at the beginning, the middle and at the end of a language programme may provide a more informative and in-depth view.

Finally, an investigation of strategies using computers should explore students' reason for the strategies they adopt, their beliefs about learning and their metacognitive knowledge will surely have an impact upon their learning behaviour.

6.6 Conclusion

The present study examined three research issues: the motivational orientations of students when learning English in a conventional and in a CALL classroom, and their learning strategies when dealing with CALL tasks. The contributive value of this study lies in its projection of CALL as an influential factor in motivating students to learn English in the ESL classroom in UTM in Malaysia. This study also provides some insights about learners' strategies specifically when using computers. The research findings provided evidence that students put effort into learning English, showed positive attitudes, strong desires, low anxiety, and high expectations when learning English using computers. The results also showed that students used a wide range of strategies when working with computers. Most of the research in language learning strategies report that good learners use a wide variety of strategies (Oxford, 1989; Oxford and Ehrman, 1990; O'Malley and Chamot, 1990). Accordingly, students' responses suggest that the computer could serve a crucial role in the English language programme at UTM in drawing upon beneficial learner behaviours.

By understanding the motivational orientations, there are implications for the integration of CALL in the English language curriculum at UTM. If CALL is to be integrated, students' motivational orientations can be considered so that effective teaching and learning materials can be developed and therefore enhance students' motivation towards learning English in particular. Based on the research findings, implications suggest that CALL implementation in the Department of Modern

Languages at UTM could be carried out to its fullest capacity. However, the kind of research initiated here should be pursued to evaluate such implementation.

In this chapter, I have suggested some implications of the research findings for the teaching and learning of English language in UTM. I have demonstrated how investigations of motivational orientations and learning strategies such as this study do have something to offer language pedagogical. As such, I believe that, with proper research design and effective administration of data collection procedures and analysis, motivation orientations and learning strategies research promises a great deal in extending our knowledge concerning how students as individuals differ in their approach to language learning.

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APPENDIX 1

PILOT STUDY

QUESTIONNAIRE

Noor Zainab Abdul Razak
Ph.D. Postgraduate
University of Stirling,
Scotland, UK.

Dear student,

This questionnaire is designed to find out your motivational factors when learning English in a conventional classroom and in a computer assisted language learning classroom. The findings from this research will be used to improve computer assisted language learning instruction and materials development at UTM.

The information obtained will be used for research purposes only and all responses will be kept confidential.

Your kind cooperation in spending time answering this questionnaire is highly appreciated.

Thank you.

QUESTIONNAIRE

Section A

Please tick (✓) in the relevant boxes or write in the spaces where applicable.

1. Student I.D. No.: .....

2. Gender:
   Male ☐ Female ☐

3. Age group:
   17-19 ☐ 20-22 ☐ 23-25 ☐ Above 26 ☐

4. SPM English Language Result: .....

5. Year of study at UTM:
   1st year ☐ 2nd year ☐ 3rd year ☐ 4th year ☐

6. English Courses Attend(ed):
   Present: UHB .....
   Past: UHB..... UHB..... UHB..... UHB.....

7. Faculty: .....

8. What is your intention after graduation?
   ☐ Continue education in Malaysia
   ☐ Continue education abroad at an English speaking university
   ☐ Get a job that requires a knowledge of English
   ☐ Get a job that does not require a knowledge of English

Section B

The following statements concern your effort, attitude, desire, and anxiety when learning English in the conventional classroom.

For each statement, choose one from the following five options are given:

1. Strongly Disagree ---------- (SD)
2. Disagree ---------- (D)
3. Undecided ---------- (N)
4. Agree ---------- (A)
5. Strongly Agree ----------(SA)

How much do you agree to the following:

		SD	D	N	A	SA
1.	I put in effort to prepare for my English class.	☐	☐	☐	☐	☐
2.	When it comes to doing English homework, I put effort into it.	☐	☐	☐	☐	☐
3.	I enjoy learning English	☐	☐	☐	☐	☐
4.	I plan to continue learning English	☐	☐	☐	☐	☐
5.	I feel that learning English is useful for me.	☐	☐	☐	☐	☐
6.	I would like to learn as much English as possible.	☐	☐	☐	☐	☐
7.	When I am in the English class, I wish the time would pass quickly	☐	☐	☐	☐	☐
8.	I like to read English newspapers and magazines	☐	☐	☐	☐	☐

9.	I feel nervous and confused when I speak English in class.	☐	☐	☐	☐	☐
10.	I feel embarrassed when I answer wrongly in class.	☐	☐	☐	☐	☐
11.	I am afraid the other students will laugh at me when I speak English in class	☐	☐	☐	☐	☐

Section C

The following statements concern your effort, attitude, desire, and anxiety when learning English in a computer assisted language learning classroom.

How much do you agree to the following:

	SD	D	N	A	SA
1. I put in effort to try out the CALL exercises which the teacher discussed in class.	☐	☐	☐	☐	☐
2. When I see difficult words on the screen, I always put effort into getting the meaning.	☐	☐	☐	☐	☐
3. When the teacher asks us to work outside class time using computer programs, I put effort into it.	☐	☐	☐	☐	☐
4. Computer programs make learning English interesting.	☐	☐	☐	☐	☐
5. After working with the computer programs, I like the English language course more.	☐	☐	☐	☐	☐
6. I think computer programs can help me to learn English.	☐	☐	☐	☐	☐
7. I feel pleased when the teacher asks us to work on computer programs.	☐	☐	☐	☐	☐
8. When I work on computers, I wish the time would not pass quickly.	☐	☐	☐	☐	☐

	SD	D	N	A	SA
9. I wish that computer programs be used in the future in language classes.	☐	☐	☐	☐	☐
10. I feel anxious when I work on computer programs.	☐	☐	☐	☐	☐
11. I feel anxious when the computer corrects my mistakes.	☐	☐	☐	☐	☐

Thank you for your cooperation

Section D

STRATEGIES QUESTIONNAIRE

Noor Zainab Abdul Razak
Ph.D. Postgraduate
University of Stirling,
Scotland, UK.

Dear student,

This questionnaire is designed to find out the strategies you used when dealing with the computer assisted language learning exercises available at the Language Lab/Resource Room in learning English language. The findings from this research will be used to improve computer assisted language learning instruction and materials development at UTM.

The information obtained will be used for research purposes only and all responses will be kept confidential.

Your kind cooperation in spending time answering this questionnaire is highly appreciated.

Thank you.

STRATEGIES QUESTIONNAIRE

1. Student I.D. No.: .....

2. Gender:
   Male ☐ Female ☐

3. English Course: UHB .....

4. Faculty: .....

5. The following statements are concerning your strategies when learning English using the computer.

How much do you prefer the following strategies:

	Do not prefer	Prefer a little	Do not know	Prefer	Prefer very much
a. I ask for help from my teacher	☐	☐	☐	☐	☐
b. I ask for help from my friend	☐	☐	☐	☐	☐
c. I get help from the computer-menu choices	☐	☐	☐	☐	☐
d. I look up in a dictionary	☐	☐	☐	☐	☐
e. I look for an answer pattern	☐	☐	☐	☐	☐
f. I type anything that comes to my mind (guess)	☐	☐	☐	☐	☐

g. I leave the exercise and try another one (skip)	☐	☐	☐	☐	☐
h. I leave all programs (quit)	☐	☐	☐	☐	☐

Thank you for your cooperation

APPENDIX 2

PILOT STUDY

OBSERVATION FORM/GUIDE

1. Student I.D. No.: .....

2. Gender:
   Male ☐ Female ☐

3. English Course: UHB .....

4. Faculty: .....

5. The following statements are concerning students' learning strategies when learning English in a computer assisted language learning classroom.

How much do the students prefer the following strategies:

	Do not prefer	Prefer a little	Do not know	Prefer	Prefer very much
a. Ask for help from friend	☐	☐	☐	☐	☐
b. Get help from the computer-menu choices	☐	☐	☐	☐	☐
c. Look up in a dictionary	☐	☐	☐	☐	☐
d. Type anything that comes to mind (guess)	☐	☐	☐	☐	☐
e. Leave the exercise and try another one (skip)	☐	☐	☐	☐	☐
f. Leave all programs (quit)	☐	☐	☐	☐	☐

APPENDIX 3

MAIN STUDY

QUESTIONNAIRE

Noor Zainab Abdul Razak
Ph.D. Postgraduate
University of Stirling,
Scotland, UK.

Dear student,

This questionnaire is designed to find out your motivational orientations when learning English in a conventional classroom and in a computer assisted language learning classroom. The findings from this research will be used to improve computer assisted language learning instruction and materials development at UTM.

The information obtained will be used for research purposes only and all responses will be kept confidential.

Your kind cooperation in spending time answering this questionnaire is highly appreciated.

Thank you.

QUESTIONNAIRE

Section A

Please tick (✓) in the relevant brackets or write in the spaces where applicable.

1. Student I.D. No.: .....

2. Gender:
   Male ( ) Female ( )

3. Age group:
   17-19 ( ) 20-22 ( ) 23-25 ( ) Above 26 ( )

4. SPM English Language Result: .....

5. Year of study at UTM:
   1st year ( ) 2nd year ( ) 3rd year ( ) 4th year ( )

6. English Courses Attend(ed):
   Present: UHB .....
   Past: UHB..... UHB..... UHB..... UHB.....

7. Faculty: .....

8. What is your intention after graduation?
   ( ) Continue education in Malaysia
   ( ) Continue education abroad at an English speaking university
   ( ) Get a job that requires a knowledge of English
   ( ) Get a job that does not require a knowledge of English

Section B

The following statements comprised of components of motivational orientations when learning English in a conventional classroom.

Read the statement, and choose a response (1 through 5 as below), and circle the point on the scale beneath each one which best represent your choose.

For each statement, the following five options are given:

1. Strongly Disagree ---------- (SD)
2. Disagree ---------- (D)
3. Undecided ---------- (N)
4. Agree ---------- (A)
5. Strongly Agree ----------(SA)

Example:

	SD	D	N	A	SA
I plan to continue learning English.	1	2	3	4	5

If you strongly agree that you plan to continue learning English, you circle the point 5 (5) which represents "Strongly Agree" (SA).

No.	Item	SD	D	N	A	SA
1.	The English class will definitely help me improve my English.	1	2	3	4	5
2.	I don't really put effort into trying to learn English.	1	2	3	4	5

	SD	D	N	A	SA
3. I feel confident when I am in the English class.	1	2	3	4	5
4. I think that learning English is interesting	1	2	3	4	5
5. I do not expect to learn English well in an English class.	1	2	3	4	5
6. When I am in the English class, I I wish the time would not pass quickly.	1	2	3	4	5
7. The English class will definitely not help me improve my English.	1	2	3	4	5
8. I think that learning English is useful to me.	1	2	3	4	5
9. I really put effort into trying to learn English.	1	2	3	4	5
10. I think that learning English is a waste of time.	1	2	3	4	5
11. I don't put effort into attending English class.	1	2	3	4	5
12. I think that learning English is dull.	1	2	3	4	5
13. I feel nervous and confused when I am in the English class.	1	2	3	4	5
14. I love learning English.	1	2	3	4	5
15. When I am in the English class, I wish the time would pass quickly.	1	2	3	4	5
16. I put effort into attending English class.	1	2	3	4	5
17. I hate learning English.	1	2	3	4	5
18. I expect to learn English well in an English class.	1	2	3	4	5

Section C

The following statements comprised components of motivational orientations when learning English in a computer assisted language learning classroom.

Read the statement, and choose a response (1 through 5 as below), and circle the point on the scale beneath each one which best represent your choose.

For each statement, the following five options are given:

1. Strongly Disagree ---------- (SD)
2. Disagree ---------- (D)
3. Undecided ---------- (N)
4. Agree ---------- (A)
5. Strongly Agree ----------(SA)

Example:

	SD	D	N	A	SA
I plan to continue learning English.	1	2	3	4	5

If you strongly agree that you plan to continue learning English, you circle the point 5 (5) which represents "Strongly Agree" (SA).

No.	Item	SD	D	N	A	SA
1.	The computer assisted language learning class will definitely help me improve my English.	1	2	3	4	5
2.	I do not expect to learn English well in a computer assisted language learning class.	1	2	3	4	5
3.	I put effort into attending English class when I know that I will be working with computers.	1	2	3	4	5
4.	I think that learning English using computers is interesting	1	2	3	4	5

5. I think that learning English using computers is a waste of time.	1	2	3	4	5
6. I hate learning English using computers.	1	2	3	4	5
7. I really put effort into trying to learn English using computers.	1	2	3	4	5
8. I think that learning English using computers is dull.	1	2	3	4	5
9. I think that learning English using computers is useful for me.	1	2	3	4	5
10. I love learning English using computers.	1	2	3	4	5
11. I feel nervous and confused when I am in the computer assisted language learning class to learn English.	1	2	3	4	5
12. I don't put effort into attending English class when I know that I will be working with computers.	1	2	3	4	5
13. I feel confident when I am in the computer assisted language learning class to learn English.	1	2	3	4	5
14. When I am in the computer assisted language learning class, I wish the time would pass quickly.	1	2	3	4	5
15. I don't really put effort into trying to learn English using computers.	1	2	3	4	5
16. I expect to learn English well in a computer assisted language learning class.	1	2	3	4	5
17. When I am in the computer assisted language learning class, I wish the time would not pass quickly.	1	2	3	4	5
18. The computer assisted language learning class will definitely not help me to improve my English.	1	2	3	4	5

STRATEGIES QUESTIONNAIRE

Noor Zainab Abdul Razak
Ph.D. Postgraduate
University of Stirling,
Scotland, UK.

Dear student,

This questionnaire is designed to find out the learning strategies you used when dealing with the computer assisted language learning exercises available at the Language Lab/Resource Room in learning English language. The findings from this research will be used to improve computer assisted language learning instruction and materials development at UTM.

The information obtained will be used for research purposes only and all responses will be kept confidential.

Your kind cooperation in spending time answering this questionnaire is highly appreciated.

Thank you.

Section D

COMPUTER ASSISTED LANGUAGE

LEARNING STRATEGIES

1. Student I.D. No.: .....

2. Gender:

   Male ☐ Female ☐

3. English Course: UHB .....

4. Faculty: .....

5. SPM English Language Result: .....

The following statements are about your English language learning strategies when using computer.

Read the statement, and choose a response (1 through 5 as below), and circle the point on the scale beneath each one which best represent your choose.

For each statement, the following five options are given:

1. Strongly Disagree ---------- (SD)
2. Disagree ---------- (D)
3. Undecided ---------- (N)
4. Agree ---------- (A)
5. Strongly Agree ----------(SA)

Example:

	SD	D	N	A	SA
I help my friends to complete their computer exercises.	1	2	3	4	5

If you strongly agree that you help your friends to complete their computer exercises, you circle the point 5 (5) which represents "Strongly Agree" (SA).

No.	Item	SD	D	N	A	SA
1.	I use the 'help' or 'hint' menu when I am not sure of the answer to a task when working with a computer.	1	2	3	4	5
2.	I refer to an English dictionary when I do not know the meaning of certain words in the computer exercises.	1	2	3	4	5
3.	I keep records of all the computer exercises that I have tried.	1	2	3	4	5
4.	I do not take notes of certain rules or words from the computer.	1	2	3	4	5
5.	I leave the computer exercise (quit) when I have problem understanding.	1	2	3	4	5
6.	I refer to the instructions of the computer exercise to confirm my understanding in completing a task.	1	2	3	4	5
7.	I do not check my mistakes with the answers provided by the computer.	1	2	3	4	5
8.	I choose a non-challenging computer exercise.	1	2	3	4	5

		SD	D	N	A	SA
9.	I refer to any English textbooks when I am not sure of the answer to a certain computer exercise.	1	2	3	4	5
10.	I try to laugh when the computer corrects my mistakes.	1	2	3	4	5
11.	I try to work with a group in order to understand certain computer exercises better.	1	2	3	4	5
12.	I tell myself that I am working with a machine, I should not to feel embarrassed when I make mistakes.	1	2	3	4	5
13.	I refer to the English class textbook when I am not sure of the answer to a certain computer exercise.	1	2	3	4	5
14.	I skip the computer exercise that I have problem understanding.	1	2	3	4	5
15.	I try to translate what I have seen on the computer screen into Bahasa Malaysia for better understanding.	1	2	3	4	5
16.	I try to relax whenever I feel afraid of using computers to learn English.	1	2	3	4	5

		SD	D	N	A	SA
17.	I choose the computer exercises that have relation or similar to the English lessons.	1	2	3	4	5
18.	I take notes of certain rules or words from the computer.	1	2	3	4	5
19.	I try to guess the meaning of unfamiliar words using information available on the computer screen.	1	2	3	4	5
20.	I choose a challenging computer exercise.	1	2	3	4	5
21.	I ask my teacher to help me when I have problems understanding certain computer exercises.	1	2	3	4	5
22.	I do not keep records of all the computer exercises that I have tried.	1	2	3	4	5
23.	I refer to a English-Malay dictionary (bilingual dictionary) when I do not know the meaning of certain words in the computer exercises.	1	2	3	4	5
24.	I have clear objectives when choosing the computer exercises.	1	2	3	4	5

		SD	D	N	A	SA
25.	I ask my friends to help me when I have problems understanding certain computer exercises.	1	2	3	4	5
26.	I make plans to complete all computer tasks.	1	2	3	4	5
27.	I check my mistakes with the answers provided by the computers.	1	2	3	4	5
28.	I think in Bahasa Malaysia for the answer to the computer exercise, then translate it into English.	1	2	3	4	5
29.	I check my score after I complete the computer exercise.	1	2	3	4	5
30.	I do not have clear objectives when choosing the computer exercises.	1	2	3	4	5
31.	I look for opportunities to practice English language as much as possible when working with computer.	1	2	3	4	5
32.	I tell myself that I did a good job when I did well.	1	2	3	4	5
33.	I tell myself that I am just practicing the computer exercises, the score obtained will not determine my course grade.	1	2	*3*	*4*	*5*

	SD	D	N	A	SA
34. I do not make plans to complete all computer tasks.	1	2	3	4	5
35. I try to work with a friend in order to understand certain computer exercises better.	1	2	3	4	5

Thank you for your cooperation

APPENDIX 4

MAIN STUDY

INTERVIEW

Noor Zainab Abdul Razak
Ph.D. Postgraduate
University of Stirling,
Scotland, UK.

Dear student,

This interview is designed to find out your motivational orientations when learning English in a conventional classroom and in a computer assisted language learning classroom. It is also to find out the strategies you used when dealing with the computer assisted language learning exercises available at the Language Lab/Resource Room in learning English language. The findings from this research will be used to improve computer assisted language learning instruction and materials development at UTM.

The information obtained will be used for research purposes only and all responses will be kept confidential.

Your kind cooperation in spending time answering this questionnaire is highly appreciated.

Thank you

INTERVIEW QUESTIONS

Please tick (✓) in the relevant brackets or write in the spaces where applicable.

Student I.D. No.: .....
English Course: .....
Faculty: .....
SPM English Language Result: .....

1. When you are practicing your computer exercises, do you like to work .....

   (a) individually.
   (b) in a group.
   (c) with a partner.

2. When you are in an English class (conventional classroom), do you .....
   (a) really put effort into trying to learn as much as possible
   (b) not really put effort into trying to learn as much as possible
   (c) not sure

3. How important do you think it is to check the score provided by the computer?

   (a) Important ---------- ( )
   (b) Not important---------- ( )
   (c) Not sure ---------- ( )

4. Do you think that learning English language using computer is .....
   (a) useful to you
   (b) a waste of your time
   (c) not sure

5. When learning English language in a CALL classroom, do you .....
   (a) expect to learn well
   (b) have no expectation to learn well
   (c) not sure

6. When you are in the English language class (conventional classroom), do you feel .....
   (a) confident
   (b) nervous
   (c) not sure

7. What do you do when you don't know the answer to a certain computer exercise? Do you .....(Choose as many as you want from the following list)
   (a) use the 'hint' or 'help' menu ( )
   (b) refer to the English class textbook ( )
   (c) refer to any English textbooks ( )
   (d) refer to an English dictionary ( )
   (e) refer to a bilingual dictionary (English-Malay dictionary) ( )
   (f) ask for help from friends ( )
   (g) ask for help from teacher ( )
   (h) guess ( )
   (i) just leave it and try another (skip) ( )
   (j) just quit ( )

8. When you are in your English language class (conventional classroom), do you .....
   (a) wish the time would not pass quickly
   (b) wish the time would pass quickly
   (c) not sure

9. When you are in an English class (CALL classroom), do you .....
   (a) really put effort into trying to learn English as much as possible
   (b) not really put effort into trying to learn English as much as possible
   (c) not sure

10. When you practice your English exercises with computer, do you tell yourself that ..... (Choose as many as you want from the following list)
   (a) you did a good job when you did well
   (b) the score obtained would not determine your course grade
   (c) you should not feel embarrassed when you make mistakes because you are practicing with a machine
   (d) none of the above

11. When you have difficulty in understanding certain computer exercises, do you .....
    (a) translate what you have seen on the computer screen into Bahasa Malaysia for better understanding
    (b) think in Bahasa Malaysia for the answer and then translate into English language
    (c) non of the above

12. When you feel nervous in a CALL classroom, how do you overcome it? (Choose as many as you want from the following list)
    (a) Try to laugh
    (b) Try to relax
    (c) None of the above

13. When you are in the English language class (CALL classroom), do you feel .....
    (a) confident
    (b) nervous
    (c) not sure

14. When learning English language in a conventional classroom, do you .....
    (a) expect to learn well
    (b) have no expectation to learn well
    (c) not sure

15. When practising CALL exercises, do you .....
    (a) keep records of the exercises
    (b) make plans to complete all the tasks
    (c) have clear objectives of choosing the exercises
    (d) non of the above

16. When you are in your English language class (CALL classroom), do you .....
    (a) wish the time would not pass quickly
    (b) wish the time would pass quickly
    (c) not sure

17. When you are working with your computer exercises, do you .....
    (a) take notes of certain rules or words
    (b) not take notes of certain rules or words
    (c) look for opportunities to practice as much as possible
    (d) not sure

18. Do you think that learning English language in a conventional classroom is .....
    (a) useful to you
    (b) a waste of your time
    (c) not sure

19. What kind of English language exercises do you like to work on when working with computers? (Choose as many as you want from the following list).
    (a) A challenging exercise. ( )
    (b) A non-challenging exercise ( )
    (c) Exercises that have relation or similar to the English lessons. ( )
    (d) Exercises that have no relation or similar to the English lessons. ( )

20. How important do you think it is to check your mistakes with the answers provided by the computer?
    (a) Important ---------- ( )
    (b) Not important---------- ( )
    (c) Not sure ---------- ( )

21. Please add any other comments you like to make about learning English in a conventional and in a computer-based classroom, and learning strategies when dealing with CALL tasks.

Raw Data

(Main Study)

QUESTIONNAIRE

Section B

The motivational orientations: Effort, attitude, desire, anxiety and expectations when learning English in a conventional classroom.

(Note: Questions were numbered as in the questionnaire).

Table 4.2: Response to students' effort in a conventional classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
9. I really put effort into trying to learn English.	30	18	100	62	23	14	9	6
2. I don't really put effort into trying to learn English.	13	8	21	13	103	64	25	15
16. I put effort into attending English class.	16	10	84	52	51	31	11	7
11. I don't put effort into attending English class.	15	9	44	27	91	56	12	8

Table 4.5: Response to students' attitude in a conventional classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
4. I think that learning English is interesting.	59	37	75	46	28	17	-	-
12. I think that learning English is dull.	-	-	26	16	81	50	55	34
8. I think that learning English is useful to me.	50	31	71	44	31	19	10	6
10. I think that learning English is a waste of time.	6	4	19	12	82	50	55	34
14. I love learning English.	51	32	84	52	23	14	4	2
17. I hate learning English.	2	1	19	12	94	58	47	29

Table 4.8: Response to students' desire in a conventional classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
6. When I am in the English class, I wish the time would not pass quickly	44	27	96	59	21	13	1	1
15. When I am in the English class, I wish the time would pass quickly	1	1	18	11	96	59	47	29

Table 4.11: Response to students' anxiety in a conventional classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
3. I feel confident when I am in the English class.	46	29	91	56	18	11	7	4
13. I feel nervous and confused when I am in the English class.	6	4	18	11	91	56	47	29

Table 4.14: Response to students' expectation in a conventional classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
1. The English class will definitely help me improve my English.	45	28	88	54	26	16	3	2
7. The English class will definitely not help me improve my English.	5	3	25	15	85	53	47	29
18. I expect to learn English well in an English class.	15	9	84	52	45	28	18	11
5. I do not expect to learn English well in an English class.	17	10	50	31	79	49	16	10

Section C

The motivational orientations: Effort, attitude, desire, anxiety and expectation when learning English in a CALL classroom.

(Note: Questions were numbered as in the questionnaire).

Table 4.17: Response to students' effort in a CALL classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
7. I really put in effort into trying to learn English using computers.	-	-	22	14	107	66	33	20
15. I don't really put in effort into trying to learn English using computers.	40	25	102	63	20	12	-	-
3. I put effort into attending English class when I know that I will be working with computers.	-	-	8	5	121	75	33	20
12. I don't put effort into attending English class when I know that I will be working with computers.	36	22	117	72	9	6	-	-

Table 4.20: Response to students' attitude in a CALL classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
4. I think that learning English using computers is interesting.	-	-	7	4	117	72	38	24
8. I think that learning English using computers is dull.	37	23	118	73	7	4	-	-
9. I think that learning English using computers is useful for me.	-	-	9	5	118	73	35	22
5. I think that learning English using computers is a waste of time.	33	20	120	74	9	6	-	-
10. I love learning English using computers.	-	-	9	6	117	72	36	22
6. I hate learning English using computers.	31	19	120	74	8	5	3	2

Table 4.23: Response to students' desire in a CALL classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
17. When I am in the computer assisted language learning class, I wish the time would not pass quickly	-	-	7	4	115	71	40	25
14. When I am in the computer assisted language learning class, I wish the time would pass quickly	38	24	115	71	8	4	1	1

Table 4.26: Response to students' anxiety in a CALL classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
13. I feel confident when I am in the computer assisted language learning class to learn English.	1	1	8	5	120	74	33	20
11. I feel nervous and confused when I am in the computer assisted language learning class to learn English.	35	21	118	73	8	5	1	1

Table 4.29: Response to students' expectation in a CALL classroom

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
1. The computer assisted language learning class will definitely help me improve my English.	-	-	8	5	120	74	34	21
18. The computer assisted language learning class will definitely not help me improve my English.	35	22	113	70	11	7	2	1
16. I expect to learn English well in computer assisted language learning class.	1	1	9	6	114	70	38	23
2. I do not expect to learn English well in computer assisted language learning class.	34	21	118	73	10	6	-	-

Section D

The learners' strategies when learning English using computers: Cognitive strategies, metacognitive strategies, social strategies, and affective strategies.

(Note: Questions were numbered as in the questionnaire).

Table 5.1: The cognitive strategies when learning English using computers

Response to resourcing strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
1. I use the 'help' or 'hint' menu when I am not sure of the answer to a task when working with a computer.	-	-	9	6	128	79	25	15
2. I refer to an English dictionary when I do not know the meaning of certain words in the computer exercises.	28	17	110	68	23	14	1	1
23. I refer to a English-Malay dictionary (bilingual dictionary) when I do not know the meaning of certain words in the computer exercises.	-	-	18	11	121	75	23	14
6. I refer to the instructions of the computer exercise to confirm my understanding in completing a task.	-	-	9	5	126	78	27	17
9. I refer to any English textbooks when I am not sure of the answer to a certain computer exercise.	30	18	119	74	13	8	-	-
13. I refer to the English class textbook when I am not sure of the answer to a certain computer exercise.	23	14	111	69	26	16	2	1

Response to translate strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
28. I think in Bahasa Malaysia for the answer to the computer exercise, then translate it into English.	-	-	11	7	122	75	29	18
15. I try to translate what I have seen on the computer screen into Bahasa Malaysia for better understanding.	-	-	11	7	127	78	24	15

Response to note-taking strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
18. I take notes of certain rules or words from the computer.	26	16	118	73	15	9	3	2
4. I do not take notes of certain rules or words from the computer.	3	2	15	9	121	75	23	14

Response to quit strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
5. I leave (quit) the computer exercise that I have problems understanding.	24	15	127	78	11	7	-	-

Response to skip strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
14. I skip the computer exercise that I have problems understanding.	-	-	8	5	129	80	25	15

Response to guess strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
19. I try to guess the meaning of unfamiliar words using information available on the computer screen.	-	-	6	4	123	76	33	20

Table 5.4: The metacognitive strategies when learning English using computers

Response to organising strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
3. I keep records of all the computer exercises that I have tried.	6	4	116	71	21	13	19	12
22. I do not keep records of all the computer exercises that I have tried.	21	13	18	11	120	74	3	2

Response to planning task strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
26. I make plans to complete all computer tasks.	29	18	105	65	28	17	-	-
34. I do not make plans to complete all computer tasks.	3	2	23	14	112	69	24	15

Response to objective strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
24. I have clear objectives when choosing the computer exercises.	5	3	13	8	124	77	20	12
30. I do not have clear objectives when choosing the computer exercises.	27	17	111	68	21	13	3	2

Response to self-management strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
20. I choose a challenging computer exercise.	4	3	44	27	88	54	26	16
8. I choose a non-challenging computer exercise.	26	16	84	52	42	26	10	6
17. I choose the computer exercises that have relation or similar to the English lessons.	-	-	6	4	114	70	42	26

Response to seeking practice strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
31. I look for opportunities to practice English language as much as possible when working with computer.	-	-	11	7	123	76	28	17

Response to self-monitoring strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
27. I check my mistakes with the answers provided by the computer.	-	-	5	3	115	71	42	26
7. I do not check my mistakes with the answers provided by the computer.	39	24	119	73	3	2	1	1

Response to self-evaluating strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
29. I check my score after I complete the computer exercise.	-	-	3	2	115	71	44	27

Table 5.7: The social strategies when learning English using computers

Response to ask for help strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
21. I ask my teacher to help me when I have problems understanding certain computer exercises.	28	17	116	72	18	11	-	-
25. I ask my friends to help me when I have problems understanding certain computer exercises.	-	-	9	6	125	77	28	17

Response to cooperation strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
11. I try to work with a group in order to understand certain computer exercises better.	-	-	10	7	127	78	25	15
35. I try to work with a friend in order to understand certain computer exercises better.	-	-	18	11	112	69	32	20

Table 5.10: The affective strategies when learning English using computers

Response to encouragement strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
12. I tell myself that I am working with a machine, I should not feel embarrassed when I make mistakes	-	-	8	5	131	81	23	14
32. I tell myself that I did a good job when I did well.	1	1	15	9	122	75	24	15
33. I tell myself that I am just practicing the computer exercises, the score obtained will not determine my course grade.	-	-	8	5	127	78	27	17

Response to lowering anxiety strategy

	SD		D		A		SA	
	n	%	n	%	n	%	n	%
10. I try to laugh when the computer corrects my mistakes	1	1	16	10	125	77	20	12
16. I try to relax whenever I feel afraid of using computers to learn English.	19	12	8	5	133	82	2	1

APPENDIX 5

(Questionnaire: Bahasa Malaysia version)

SOALAN KAJISELIDIK

Noor Zainab Abdul Razak
Ijazah Lanjutan, Ph.D.
University of Stirling,
Scotland, UK.

Pelajar-pelajar,

Soalan kajiselidik ini adalah bertujuan untuk mengenalpasti faktor-faktor motivasi anda apabila mempelajari Bahasa Inggeris di dalam kelas tradisional, dan apabila mempelajari Bahasa Inggeris menggunakkan komputer. Hasil dari kajian ini dapat digunakan untuk membantu memperbaiki bahan pengajaran yang menggunakkan komputer bagi membantu mempelajari bahasa dan juga meningkatkan lagi mutu bahan pengajaran di UTM.

Maklumat yang diperolehi adalah untuk kegunaan kajian semata-mata and semua jawapan adalah disimpan secara sulit.

Kerjasama anda dalam melengkapkan soalan kajiselidik ini amat dihargai dan diucapkan terima kasih.

(Questionnaire – Bahasa Malaysia version)

SOALAN KAJISELIDIK

Bahagian A

Sila tanda (✓) atau isi di dalam ruang yang disediakan.

1. No. Kad Pengenalan Pelajar: .....

2. Jantina:
   Lelaki ( ) Perempuan ( )

3. Kumpulan Umur:
   17-19 ( ) 20-22 ( ) 23-25 ( ) 26 Keatas ( )

4. Keputusan Bahasa Inggeris dalam SPM : .....

5. Tahun belajar di UTM:
   Tahun 1 ( ) Tahun 2 ( ) Tahun 3 ( ) Tahun 4 ( )

6. Kursus Bahasa Inggeris:
   Sekarang: UHB .....
   Dahulu : UHB ..... UHB..... UHB..... UHB.....

7. Fakulti: .....

8. Apakah cadangan anda setelah tamat pengajian sekarang?
   ( ) Sambung pengajian di Malaysia.
   ( ) Sambung pengajian di universiti yang menggunakan Bahasa Inggeris di luar negara.
   ( ) Dapatkan pekerjaan yang memerlukan pengetahuan Bahasa Inggeris.
   ( ) Dapatkan pekerjaan yang tidak memerlukan pengetahuan Bahasa Inggeris.

Bahagian B

Berikut adalah kenyataan-kenyataan yang terdiri dari komponen faktor motivasi apabila mempelajari Bahasa Inggeris di dalam kelas Bahasa Inggeris biasa.

Sila baca setiap kenyataan, dan pilih salah satu daripada lima pilihan di bawah. Tanda pilihan anda dengan membuat bulatan pada nombor di skala bagi menggambarkan pilihan anda.

Berikut adalah lima opsyen untuk setiap kenyataan:

1. Amat Tidak Setuju---------- (ATS)
2. Tidak Setuju ---------- (TS)
3. Berkecuali ---------- (B)
4. Setuju ---------- (S)
5. Amat Setuju ---------- (AS)

Contoh:

	ATS	TS	B	S	AS
Saya bercadang untuk terus mempelajari Bahasa Inggeris.	1	2	3	4	5

Sekiranya anda amat bersetuju bahawa anda bercadang untuk terus mempelajari Bahasa Inggeris, bulatkan nombor 5 (5) bagi menggambarkan "Amat Setuju".

No.	Item	ATS	TS	B	S	AS
1.	Kelas Bahasa Inggeris akan pasti dapat membantu saya memperbaiki Bahasa Inggeris saya.	1	2	3	4	5
2.	Saya tidak berusaha bersungguh-sungguh untuk mempelajari Bahasa Inggeris.	1	2	3	4	5
3.	Saya berasa penuh yakin apabila berada di dalam kelas Bahasa Inggeris.	1	2	3	4	5
4.	Saya berpendapat bahawa belajar Bahasa Inggeris adalah menarik.	1	2	3	4	5

		ATS	TS	B	S	AS
5.	Saya tidak mengharapkan untuk belajar Bahasa Inggeris dengan baik di dalam kelas Bahasa Inggeris.	1	2	3	4	5
6.	Apabila berada di dalam kelas Bahasa Inggeris,saya tidak mengharapkan masa tamat dengan cepat.	1	2	3	4	5
7.	Kelas Bahasa Inggeris akan pasti tidak dapat membantu saya memperbaiki Bahasa Inggeris saya.	1	2	3	4	5
8.	Saya berpendapat bahawa adalah berguna untuk saya mempelajari Bahasa Inggeris.	1	2	3	4	5
9.	Saya berusaha bersungguh-sungguh untuk mempelajari Bahasa Inggeris.	1	2	3	4	5
10.	Belajar Bahasa Inggeris adalah membuang masa.	1	2	3	4	5
11.	Saya tidak berusaha untuk hadir dalam kelas Bahasa Inggeris.	1	2	3	4	5
12.	Saya berpendapat bahawa belajar Bahasa Inggeris adalah menjemukan.	1	2	3	4	5
13.	Saya berasa tidak tenteram dan keliru apabila berada di dalam kelas Bahasa Inggeris.	1	2	3	4	5
14.	Saya suka belajar Bahasa Inggeris.	1	2	3	4	5
15.	Apabila berada di dalam kelas Bahasa Inggeris, saya mengharapkan masa tamat dengan cepat.	1	2	3	4	5
16.	Saya berusaha untuk hadir dalam kelas Bahasa Inggeris.	1	2	3	4	5
17.	Saya tidak suka belajar Bahasa Inggeris.	1	2	3	4	5
18.	Saya mengharapkan untuk belajar Bahasa Inggeris dengan baik di dalam kelas Bahasa Inggeris.	1	2	3	4	5

Bahagian C

Berikut adalah kenyataan-kenyataan yang terdiri dari komponen faktor motivasi apabila mempelajari Bahasa Inggeris menggunakan komputer membantu mempelajari bahasa.

Sila baca setiap kenyataan, dan pilih salah satu daripada lima pilihan di bawah. Tanda pilihan anda dengan membuat bulatan pada nombor di skala bagi menggambarkan pilihan anda.

Berikut adalah lima opsyen untuk setiap kenyataan:

1. Amat Tidak Setuju---------- (ATS)
2. Tidak Setuju ---------- (TS)
3. Berkecuali ---------- (B)
4. Setuju ---------- (S)
5. Amat Setuju ---------- (AS)

Contoh:

	ATS	TS	B	S	AS
Saya bercadang untuk terus mempelajari Bahasa Inggeris.	1	2	3	4	5

Sekiranya anda amat bersetuju bahawa anda bercadang untuk terus mempelajari Bahasa Inggeris, bulatkan nombor 5 (5) bagi menggambarkan "Amat Setuju".

No.	Item	ATS	TS	B	S	AS
1.	Kelas Bahasa Inggeris yang menggunakkan komputer bagi membantu mempelajari bahasa,pasti dapat menolong saya memperbaiki Bahasa Inggeris saya.	1	2	3	4	5
2.	Saya tidak mengharapkan untuk belajar Bahasa Inggeris dengan baik di dalam kelas yang menggunakkan komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
3.	Saya berusaha untuk hadir dalam kelas Bahasa Inggeris apabila saya dapati saya akan menggunakkan komputer.	1	2	3	4	5

		ATS	TS	B	S	AS
4.	Saya berpendapat bahawa belajar Bahasa Inggeris dengan menggunakkan komputer adalah menarik.	1	2	3	4	5
5.	Belajar Bahasa Inggeris dengan menggunakkan komputer adalah membuang masa.	1	2	3	4	5
6.	Saya tidak suka belajar Bahasa Inggeris dengan menggunakkan komputer.	1	2	3	4	5
7.	Saya berusaha bersungguh-sungguh untuk mempelajari Bahasa Inggeris apabila menggunakkan komputer.	1	2	3	4	5
8.	Saya berpendapat bahawa belajar Bahasa Inggeris dengan menggunakkan komputer adalah menjemukan.	1	2	3	4	5
9.	Saya berpendapat bahawa mempelajari Bahasa Inggeris dengan menggunakkan komputer adalah berguna untuk saya.	1	2	3	4	5
10.	Saya suka belajar Bahasa Inggeris dengan menggunakkan komputer.	1	2	3	4	5
11.	Saya berasa tidak tenteram dan keliru apabila berada di dalam kelas Bahasa Inggeris yang menggunakkan komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
12.	Saya tidak berusaha untuk hadir dalam kelas Bahasa Inggeris apabila saya dapati saya akan menggunakkan komputer.	1	2	3	4	5
13.	Saya berasa penuh yakin apabila berada di dalam kelas Bahasa Inggeris yang menggunakkan komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
14.	Apabila berada di dalam kelas Bahasa Inggeris yang menggunakkan komputer bagi membantu mempelajari bahasa, saya mengharapkan masa tamat dengan cepat.	1	2	3	4	5

		ATS	TS	B	S	AS
15.	Saya tidak berusaha bersungguh-sungguh untuk mempelajari Bahasa Inggeris apabila menggunakkan komputer.	1	2	3	4	5
16.	Saya berharap untuk belajar Bahasa Inggeris dengan baik di dalam kelas yang menggunakkan komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
17.	Apabila berada di dalam kelas Bahasa Inggeris yang menggunakkan komputer bagi membantu mempelajari bahasa, saya tidak mengharapkan masa tamat dengan cepat.	1	2	3	4	5
18.	Kelas Bahasa Inggeris yang menggunakkan komputer bagi membantu mempelajari bahasa,pasti tidak dapat menolong saya memperbaiki Bahasa Inggeris saya.	1	2	3	4	5

Bahagian D

STRATEGI PEMBELAJARAN BAHASA INGGERIS MENGGUNAKKAN KOMPUTER

Noor Zainab Abdul Razak
Ijazah Lanjutan, Ph.D.
University of Stirling,
Scotland, UK.

Pelajar-pelajar,

Soalan kajiselidik ini adalah bertujuan untuk mengenalpasti strategi-strategi yang anda gunakan semasa belajar Bahasa Inggeris menggunakkan komputer. Hasil dari kajian ini dapat digunakan untuk membantu memperbaiki bahan pengajaran yang menggunakkan komputer bagi membantu mempelajari bahasa dan juga meningkatkan lagi mutu bahan pengajaran di UTM.

Maklumat yang diperolehi adalah untuk kegunaan kajian semata-mata and semua jawapan adalah disimpan secara sulit.

Kerjasama anda dalam melengkapkan soalan kajiselidik ini amat dihargai dan diucapkan terima kasih.

Bahagian D

STRATEGI PEMBELAJARAN BAHASA INGGERIS

MENGGUNAKKAN KOMPUTER

No Kad Pengenalan Pelajar.: .....

Kursus: .....

Fakulti: .....

Keputusan Bahasa Inggeris dalam SPM: .....

Kenyataan-kenyataan berikut adalah mengenai strategi anda mempelajari Bahasa Inggeris menggunakkan komputer.

Sila baca setiap kenyataan, dan pilih salah satu daripada lima pilihan di bawah. Tanda pilihan anda dengan membuat bulatan pada nombor di skala bagi menggambarkan pilihan anda.

Berikut adalah lima opsyen untuk setiap kenyataan:

1. Amat Tidak Setuju---------- (ATS)
2. Tidak Setuju ---------- (TS)
3. Berkecuali ---------- (B)
4. Setuju ---------- (S)
5. Amat Setuju ---------- (AS)

Contoh:

	ATS	TS	B	S	AS
Saya membantu rakan-rakan bagi menyelesaikan latihan komputer mereka..	1	2	3	4	5

Sekiranya anda amat bersetuju bahawa anda membantu rakan-rakan bagi menyelesaikan latihan mereka, bulatkan nombor 5 (5) bagi menggambarkan "Amat Setuju".

No.	Item	ATS	TS	B	S	AS
1.	Saya menggunakkan menu 'help' atau 'hint' apabila saya tidak pasti jawapan bagi sesuatu latihan semasa mengguna komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
2.	Saya rujuk pada kamus Bahasa Inggeris apabila saya tidak tahu makna sesetengah perkataan semasa membuat latihan menggunakkan komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
3.	Saya menyimpan rekod semua latihan komputer yang telah saya praktis.	1	2	3	4	5
4.	Saya tidak mengambil nota tentang sesetengah peraturan atau perkataan daripada komputer membantu mempelajari bahasa.	1	2	3	4	5
5.	Saya tinggalkan latihan komputer (quit) apabila saya menghadapi masalah bagi memahaminya.	1	2	3	4	5
6.	Saya rujuk pada arahan-arahan yang terdapat pada latihan komputer bagi memastikan pemahaman saya dalam menyelesaikan latihan.	1	2	3	4	5
7.	Saya tidak memeriksa kesalahan saya dengan jawapan yang diberikan oleh komputer.	1	2	3	4	5
8.	Saya memilih latihan komputer yang tidak mencabar.	1	2	3	4	5
9.	Saya rujuk pada mana-mana buku teks Bahasa Inggeris apabila saya tidak pasti jawapan bagi sesetengah latihan yang menggunakkan komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
10.	Saya cuba ketawa apabila komputer memperbaiki kesalahan saya.	1	2	3	4	5

		ATS	TS	B	S	AS
11.	Saya cuba bekerja dalam kumpulan supaya saya dapat memahami sesetengah latihan komputer dengan lebih baik.	1	2	3	4	5
12.	Saya memberitahu diri saya bahawa saya berlatih dengan mesin, oleh yang demikian saya tidak sepatutnya berasa malu apabila saya membuat kesalahan.	1	2	3	4	5
13.	Saya rujuk pada buku teks kelas Bahasa Inggeris apabila saya tidak pasti jawapan bagi sesetengah latihan yang menggunakkan komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
14.	Saya melangkah (skip) ke latihan lain apabila saya menghadapi masalah bagi memahaminya.	1	2	3	4	5
15.	Saya cuba untuk alihbahasa apa yang terdapat pada komputer ke dalam Bahasa Malaysia bagi memudahkan pemahaman.	1	2	3	4	5
16.	Saya cuba bertenang apabila saya terasa gentar untuk menggunakkan komputer untuk belajar Bahasa Inggeris.	1	2	3	4	5
17.	Saya pilih latihan komputer yang berkaitan atau ada persamaan dengan pelajaran Bahasa Inggeris.	1	2	3	4	5
18.	Saya mengambil nota tentang sesetengah peraturan atau perkataan daripada komputer membantu mempelajari bahasa.	1	2	3	4	5
19.	Saya cuba teka makna perkataan-perkataan yang saya tidak biasa dengan menggunakkan informasi yang terdapat pada komputer..	1	2	3	4	5
20.	Saya memilih latihan komputer yang mencabar.	1	2	3	4	5

		ATS	TS	B	S	AS
21.	Saya meminta bantuan daripada pensyarah apabila saya menghadapi masalah untuk memahami sesetengah latihan komputer.	1	2	3	4	5
22.	Saya tidak menyimpan rekod semua latihan komputer yang telah saya praktis.	1	2	3	4	5
23.	Saya rujuk pada kamus dwi-bahasa (Bahasa Inggeris- Bahasa Malaysia) apabila saya tidak tahu makna sesetengah perkataan semasa membuat latihan menggunakkan komputer bagi membantu mempelajari bahasa.	1	2	3	4	5
24.	Saya mempunyai objektif yang jelas apabila memilih sesuatu latihan komputer.	1	2	3	4	5
25.	Saya meminta bantuan daripada rakan-rakan apabila saya menghadapi masalah untuk memahami sesetengah latihan komputer.	1	2	3	4	5
26.	Saya membuat perancangan bagi menyelesaikan semua latihan.	1	2	3	4	5
27.	Saya memeriksa kesalahan saya dengan jawapan yang diberikan oleh komputer.	1	2	3	4	5
28.	Saya berfikir di dalam Bahasa Malaysia bagi mencari jawapan untuk latihan komputer dan kemudiannya saya alihkan ke dalam Bahasa Inggeris.	1	2	3	4	5
29.	Saya memeriksa markah setelah saya selesai membuat latihan komputer.	1	2	3	4	5
30.	Saya tidak mempunyai objektif yang jelas apabila memilih sesuatu latihan komputer.	1	2	3	4	5
31.	Saya mencari peluang untuk mencuba latihan Bahasa Inggeris sebanyak yang boleh semasa mengguna komputer.	1	2	3	4	5

	ATS	TS	B	S	AS
32. Saya memberitahu diri saya bahawa saya telah membuat kerja yang baik apabila saya berjaya.	1	2	3	4	5
33. Saya memberitahu diri saya bahawa saya hanya berlatih, markah yang diperolehi tidak akan menentukan gred kursus saya.	1	2	3	4	5
34. Saya tidak membuat perancangan bagi menyelesaikan semua latihan.	1	2	3	4	5
35. Saya cuba bekerja dengan seorang rakan supaya saya dapat memahami sesetengah latihan komputer dengan lebih baik.	1	2	3	4	5

SOALAN TEMUBUAL

Noor Zainab Abdul Razak
Ijazah Lanjutan, Ph.D.
University of Stirling,
Scotland, UK.

Pelajar-pelajar,

Temubual ini adalah bertujuan untuk mengenalpasti faktor-faktor motivasi anda apabila mempelajari Bahasa Inggeris di dalam kelas tradisional, dan apabila mempelajari Bahasa Inggeris menggunakkan komputer. Temubual ini juga bertujuan untuk mengenalpasti strategi-strategi yang anda gunakan semasa belajar Bahasa Inggeris menggunakkan komputer. Hasil dari kajian ini dapat digunakan untuk membantu memperbaiki bahan pengajaran yang menggunakkan komputer bagi membantu mempelajari bahasa dan juga meningkatkan lagi mutu bahan pengajaran di UTM.

Maklumat yang diperolehi adalah untuk kegunaan kajian semata-mata and semua jawapan adalah disimpan secara sulit.

Kerjasama anda dalam melengkapkan soalan kajiselidik ini amat dihargai dan diucapkan terima kasih.

TEMUBUAL

Sila tanda (✓) atau isi di dalam ruang yang disediakan.

No Kad Pengenalan Pelajar.: .....

Kursus: .....

Fakulti: .....

Keputusan Bahasa Inggeris dalam SPM: .....

1. Apabila anda membuat latihan dengan menggunakkan komputer, adakah anda suka bekerja .....
   (a) bersendirian.
   (b) dalam kumpulan.
   (c) secara pasangan.

2. Apabila anda berada di dalam kelas Bahasa Inggeris (tradisional), adakah anda .....
   (a) berusaha bersungguh-sungguh untuk mendapat sebanyak boleh
   (b) tidak berusaha bersungguh-sungguh untuk mendapat sebanyak boleh
   (c) tidak pasti

3. Adakah penting pada pendapat anda untuk memeriksa markah yang disediakan oleh komputer ?
   (a) Amat penting ( )
   (b) Tidak penting ( )
   (c) Tidak pasti ( )

4. Adakah anda berpendapat belajar Bahasa Inggeris menggunakkan komputer ....
   (a) berguna pada anda
   (b) membuang masa
   (c) tidak pasti

5. Apabila belajar Bahasa Inggeris di dalam kelas yang menggunakkan komputer, adakah anda .....
   (a) mengharapkan untuk belajar dengan baik
   (b) tidak mengharapkan untuk belajar dengan baik
   (c) tidak pasti

6. Apabila anda berada di dalam kelas Bahasa Inggeris (tradisional), adakah anda berasa .....
   (a) yakin
   (b) tidak tenteram dan keliru
   (c) tidak pasti

7. Apakah yang anda lakukan apabila anda tidak dapat menyelesaikan sesuatu latihan komputer? Adakah anda.....(Pilih seberapa banyak yang anda suka.)
   (a) guna menu 'hint' atau 'help' ( )
   (b) rujuk pada buku teks kelas Bahasa Inggeris. ( )
   (c) rujuk pada mana-mana buku teks Bahasa Inggeris. ( )
   (d) rujuk pada kamus Bahasa Inggeris. ( )
   (e) rujuk pada kamus dwi-bahasa (kamus Bahasa Inggeris-Bahasa Malaysia). ( )
   (f) minta bantuan rakan-rakan. ( )
   (g) minta bantuan pensyarah. ( )
   (h) teka. ( )
   (i) langkah ke latihan lain (skip). ( )
   (j) tinggalkan latihan sama sekali (quit). ( )

8. Apabila berada di dalam kelas Bahasa Inggeris (tradisional), adakah anda .....
   (a) mengharapkan masa tidak tamat dengan cepat
   (b) mengharapkan masa tamat dengan cepat
   (c) tidak pasti

9. Apabila anda berada di dalam kelas Bahasa Inggeris yang menggunakkan komputer, adakah anda .....
   (a) berusaha bersungguh-sungguh untuk mendapat sebanyak boleh
   (b) tidak berusaha bersungguh-sungguh untuk mendapat sebanyak boleh
   (c) tidak pasti

10. Apabila anda membuat latihan Bahasa Inggeris menggunakkan komputer, adakah anda mengingatkan diri anda yang .....
    (a) anda membuat kerja yang baik apabila anda berjaya menyelesaikan
    (b) markah yang diperolehi tidak menentukan gred kursus anda
    (c) anda berlatih dengan mesin, oleh yang demikian saya tidak sepatutnya berasa malu apabila saya membuat latihan
    (d) bukan semua di atas

11. Apabila anda menghadapi masalah memahami setengah-setengah latihan yang menggunakkan komputer, adakah anda .....
    (a) saya alihbahasa apa yang terdapat pada komputer bagi membantu pemahaman
    (b) berfikir dalam Bahasa Malaysia untuk mendapatkan jawapan dan kemudian alihkan ke dalam Bahasa Inggeris
    (c) bukan semua di atas

12. Apabila anda berasa tidak tenteram di dalam kelas Bahasa Inggeris, bagaimana anda hadapi masalah ini?
    (a) Cuba ketawa
    (b) Cuba bertenang
    (c) Bukan semua di atas

13. Apabila anda berada di dalam kelas Bahasa Inggeris yang menggunakkan komputer, adakah anda berasa .....
    (a) yakin
    (b) tidak tenteram dan keliru
    (c) tidak pasti

14. Apabila belajar Bahasa Inggeris di dalam kelas tradisional, adakah anda .....
    (a) mengharapkan untuk belajar dengan baik
    (b) tidak mengharapkan untuk belajar dengan baik
    (c) tidak pasti

15. Apabila membuat latihan menggunakkan komputer, adakah anda .....
    (a) menyimpan rekod latihan
    (b) membuat preancangan untuk selesaikan semua latihan
    (c) mempunyai objektif yang jelas dalam memilih latihan
    (d) Bukan semua di atas

16. Apabila berada di dalam kelas Bahasa Inggeris yang menggunakkan komputer adakah anda .....
    (a) mengharapkan masa tidak tamat dengan cepat
    (b) mengharapkan masa tamat dengan cepat
    (c) tidak pasti

17. Apabila anda membuat latihan dengan menggunakkan komputer, adakah anda .....
    (a) mengambil nota setengah-setengah peraturan atau perkataan
    (b) tidak mengambil nota setengah-setengah peraturan atau perkataan
    (c) memgambil peluang untuk membuat latihan sebanyak yang boleh
    (d) tidak pasti

18. Adakah anda berpendapat belajar Bahasa Inggeris di dalam kelas tradisional .....
    (a) berguna pada anda
    (b) membuang masa
    (c) tidak pasti

19. Latihan Bahasa Inggeris yang bagaimanakah yang anda gemar untuk membuat apabila menggunakkan komputer?(Pilih seberapa banyak yang anda suka)
    (a) Mencabar
    (b) Tidak mencabar
    (c) Latihan yang mempunyai ada kaitan atau persamaan dengan pelajaran Bahasa Inggeris
    (d) Latihan yang tidak mempunyai kaitan atau persamaan dengan pelajaran Bahasa Inggeris

20. Adakah penting pada pendapat anda untuk membaca komen-komen yang disediakan oleh komputer?
    (a) Amat penting ( )
    (b) Tidak penting ( )
    (c) Tidak pasti ( )

21. Sila tambahkan lain-lain komen anda tentang pembelajaran Bahasa Inggeris samada di dalam kelas tradisional atau kelas yang menggunakkan komputer, dan strategi pembelajaran anda.

    _____
    _____
    _____
    _____
    _____
    _____