



الجامعة الإسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

DEVELOPING CRITICAL THINKING THROUGH
THE USE OF QUESTIONS:
AN EMPIRICAL RESEARCH

AFIZA MOHAMAD ALI

A THESIS SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF HUMAN SCIENCES
IN
LANGUAGE STUDIES

KULLIYAH OF ISLAMIC REVEALED
KNOWLEDGE AND HUMAN SCIENCES
INTERNATIONAL ISLAMIC UNIVERSITY
MALAYSIA
NOVEMBER 2000

INTERNATIONAL 'S' WIC UNIVERSITY
LIBRARY
Copy no: 673203 (math)
Date: 23/03/02 (nhi)

t
LB
2395-35
A257D
2000

ABSTRACT OF THE THESIS

This study aims to shed light on the use of high cognitive questions, as a learner strategy in developing critical thinking skills, as well as facilitating comprehension and production of the second language among non-native second language students. The use of high cognitive questions in non-native student group discussions was examined. The focus of the study was to determine whether there is a statistically significant mean difference in students' comprehension and production of the second language and critical thinking skills when they were exposed to questioning treatments. Two groups of 10 non-native Malaysian students participated. One group was trained in incorporating high cognitive questions in group discussions while the other was not. Following this, both groups read a text, discussed and then summarized it. The discussion was recorded for transcription. The summaries were rated by two English teachers using the Communicative Profile Scale evaluation instrument to assess the students' performance in the second language. The transcribed discussions were assessed using the UNCG (University of North Carolina at Greensboro) evaluation instrument to investigate the students' critical thinking abilities, which were the ability to 'analyze and interpret', 'draw logical inferences', 'evaluate and justify inferences', 'make deductive and inductive reasoning'. Paired T-tests were used to interpret the results. The study showed that, the experimental group demonstrated a higher performance in their comprehension and production of the second language compared to the control group. The experimental group also demonstrated better results in their critical thinking abilities than the control group. It is, therefore, suggested that teachers should use high cognitive questions to help increase second language students' understanding and production of the language as well as develop their critical thinking skills.

خلاصة البحث

تهدف هذه الدراسة إلى معرفة إستعمال الأسئلة الإدراكية العالية، كإستراتيجية متعلم في تطوير مهارات التفكير النقدي، وأيضاً يُسهّل فهم وإنتاج اللّغة الثانية بين طلاب غير الناطقين بها. وقد لوحظ إستعمال الأسئلة الإدراكية العالية في المناقشات الجماعية بينهم. وكانت الدراسة تركز وتحاول الحصول على سواء كان هناك خلافٌ قليلٌ هامٌ بشكل إحصائي في فهم وإنتاج الطلاب للّغة الثانية ومهارات التفكير النقدي عندما عُرض لهم الأسئلة العلاجية. واشترك المجموعتان من عشرة طلاب ماليزيين غير الناطقين بها. وقد درّبت المجموعة الأولى في دمج الأسئلة الإدراكية العالية في المناقشات الجماعية بينما الأخرى ما كانت. ثمّ كانت كلتا المجموعتان تقرأ النصّ ثمّ تناقشانه وتلخصانه في الأخير. وقد سُجّلت المناقشة من أجل النسخ و أن التلخيصات قد قدرها المعلمان الإنجليزيان باستخدام آلة تقييم ميزان التواصل في دراسة إداء الطلاب في اللّغة الثانية. تمّ تقييم المناقشات المنسوخة باستعمال آلة تقييم يو. إن. سي. جي. (جامعة شمال كارولينا في جرينسبورو) لاستقصاء قدرات التفكير النقدي لدى الطلاب وهي القدرات في التحليل والتفسير، تصور الاستدلالات المنطقية، تقييم وتبريز الاستدلالات، استخدام التفكير الاستنتاجي والاستقرائي. وقد استعمل اختبار مزوج تي (Paired t-tests) في تفسير النتائج . وكانت تدل الدراسة على أنّ المجموعة التجريبية تؤدي أداء الأعلى في فهمهم وإنتاجهم للّغة الثانية من المجموعة الموجهة. تحصل المجموعة التجريبية كذلك نتائج الأفضل في مقدرتهم للتفكير النقدي من المجموعة الموجهة. واقترح ذلك إذن، أن المعلمين يجبُ عليهم أن يستعملوا الأسئلة الإدراكية العالية لمساعدة زيادة فهم وإنتاج الطلاب للّغة الثانية وتنمية مقدرتهم للتفكير النقدي.

APPROVAL PAGE

I certify that I have supervised and read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a thesis for the degree of Master of Human Sciences in Language Studies.



Nurairhan Mat Daud
Supervisor

Date: 21/12/2000

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a thesis for the degree of Master of Human Sciences in Language Studies.



Normala Hj. Othman
Examiner

Date: 21/12/2000

This thesis was submitted to the Department of English Language and Literature and is accepted as partial fulfillment of the requirement for the degree of Master of Human Sciences in Language Studies.



Nurairhan Mat Daud
Head, Department of
English Language and
Literature

Date: 21/12/2000

This thesis was submitted to the Kulliyah of Islamic Revealed Knowledge and Human Sciences and is accepted as partial fulfillment of the requirement for the degree of Master of Human Sciences in Language Studies.



Mohd Aris b Haji Othman
Dean, Kulliyah of
Islamic Revealed
Knowledge and Human
Sciences

Date: 22/3/2001

DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. Other sources are acknowledged by proper citations giving explicit references and a bibliography is appended.

Name: AFIZA MOHAMAD ALI

Signature:.....

Date:.....8/12/00.....

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

DECLARATION OF COPYRIGHT AND AFFIRMATION OF FAIR USE OF UNPUBLISHED RESEARCH


Copyright © 2000 by Afiza Mohamad Ali. All rights reserved.

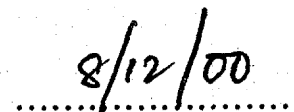
Developing Critical Thinking Through the Use of Questions:
An Empirical Research.

No part of this unpublished research may be reproduced or utilized in any form or by any means (mechanical, electronic or other), including photocopying or recording, without permission in writing from the researcher except as provided below.

1. Any material contained in or derived from this unpublished research may only be used by others in their writings with due acknowledgement.
2. IIUM or its library will have the right to make copies (print or electronic) for institutional or academic purposes but not for general sale.
3. The IIUM Library will have the right to make and supply copies of this unpublished research if requested by other university or research libraries.
4. The researcher will provide his/her latest address to the IIUM Library as and when the address is changed.
5. The researcher will be contacted for permission to copy this unpublished research for individuals at his/her postal/ e-mail address available at the Library. If the researcher does not respond within 10 weeks of the date of the letter, the IIUM Library will use its discretion to supply a copy to the requester.

Affirmed by Afiza Mohamad Ali


.....
Signature


.....
Date

ACKNOWLEDGEMENTS

Firstly, I am eternally grateful to Allah, the Almighty, for His mercy, guidance and blessings in my life. Alhamdulillah.

I highly thank Allah for blessing me with such wonderful parents, Hj. Mohamad Ali Othman and Hjh. Khamsiah Akram, who gave me good advice and constant support towards the completion of my thesis. Thank you, Abah and Mummy, for always thinking what is best for me. I love you both.

I acknowledge with great respect my supervisor, Assoc. Prof. Dr. Nuraihan Mat Daud, the Head of the English Language and Literature Department who persistently gave me the motivation to complete my thesis. Your helpful insights and constructive guidance helped me in finishing my thesis. Thank you for suggesting this topic to me and instilling the confidence in me to actually do it. May Allah bless you for your kind efforts.

I sincerely thank my second reader, Dr. Normala Hj Othman, whose suggestions helped in the final stages of my thesis.

I am truly grateful to Dr. Noor Haron Abdul Karim from the Department of Library Science, for kindheartedly lending his invaluable time and expertise in guiding me in the use of SPSS, and coached me in how to analyze my findings.

Much love and thanks to the lecturers who have taught me all about the English language. To Dr. Nora Nasir, Dr. Normala Othman, Dr. Adrian Hare, Dr. Haja Mohideen and Dr. Subramaniam whose classes I truly enjoyed. Your guidance and knowledge has truly inspired me.

A special thank you also goes out to Sister Edah, who has been the ever-helpful 'mediator' to my supervisor. Keep up the good work.

Lastly, I thank all those who have made it possible for me to complete this work, my students and colleagues in British Malaysian Institute and to the wonderful people who have been so patient with me throughout my thesis.

TABLE OF CONTENTS

ABSTRACT OF THESIS.....	ii
ABSTRACT OF THESIS (In Arabic).....	iii
APPROVAL PAGE.....	iv
DECLARATION.....	v
ACKNOWLEDGEMENTS.....	vi
LIST OF TABLES.....	x

CHAPTER 1: INTRODUCTION.....1

Introduction.....	1
Problem Statement	8
Background of the Study.....	10
Objectives of the Research.....	11
Research Questions.....	11
Significance of the Research.....	12
Organization of Chapters.....	13

CHAPTER 2: LITERATURE REVIEW.....14

Questioning and Critical Thinking in Language Learning.....	14
Questioning and Group Work in Language Learning.....	23
Group Work and Critical Thinking.....	26

CHAPTER 3: METHODOLOGY.....32

Introduction.....	32
The Background.....	32
The Subjects.....	33
The Design of the Research.....	35
The Training.....	37
Data Collection.....	40
Operationalization of Variables.....	41
Data Analysis.....	42
Statistical Treatment.....	43

CHAPTER 4: ANALYSIS OF RESULTS AND DISCUSSION.....44

Introduction.....44
Research Question 1: Is there a statistically significant mean difference in students' comprehension and production of the second language between those given the questioning treatment (experimental group) and those who were not given the questioning treatment (control group)?.....44
Research Question 2: Is there a statistically significant mean difference in students' ability to 'analyze and interpret' between the experimental and control group?.....45
Research Question 3: Is there a statistically significant mean difference in students' ability to 'draw logical inferences' between the experimental and control group?.....46
Research Question 4: Is there a statistically significant mean difference in students' ability to 'evaluate and justify inferences' between the experimental and control group?.....47
Research Question 5: Is there a statistically significant mean difference in students' ability to 'make deductive reasoning' between the experimental and control group?.....48
Research Question 6: Is there a statistically significant mean difference in students' ability to 'make inductive reasoning' between the experimental and control group?.....49
Discussion of Findings.....51
Additional Findings.....52

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS.....55

Introduction.....55
Research Summary.....55
Summary of Findings and Conclusions.....56
Implications to ESL Learning and Teaching.....59
Recommendations for Further Research.....60

APPENDIX.....63

BIBLIOGRAPHY.....84

LIST OF TABLES

Table 1: Composition of Subjects.....	34
Table 2: English Language Proficiency of Subjects.....	34
Table 3: The Detailed Design of the Study.....	37
Table 4: Stimulus Questions and Critical Thinking Skills.....	38
Table 5: Diagram of the Post-test Only Nonequivalent Control Group Design.....	41
Table 6: Results of Analysis of the Summaries of the Experimental and Control Groups.....	45
Table 7: Results of Analysis: Analyze and Interpret.....	46
Table 8: Results of Analysis: Draw Logical Inferences.....	47
Table 9: Results of Analysis: Evaluate and Justify Inferences.....	48
Table 10: Results of Analysis: Make Deductive Reasoning.....	49
Table 11: Results of Analysis: Make Inductive Reasoning.....	50
Table 12: Summary of the Analysis of the Five Critical Thinking Sub-skills.....	51
Table 13: The Total Number of Words Generated by the Experimental and Control Groups.....	53
Table 14: The Number of Questions Generated by the Experimental and Control Groups.....	54

CHAPTER 1: INTRODUCTION

Introduction

This research empirically examines the method of questioning used in group discussions, as part of a language learning strategy, especially in terms of how higher frequency of high cognitive questions encourage critical thinking skills and facilitate comprehension and production of the second language (L2) of non-native speakers (NNS) of English with particular emphasis on Malaysian students. Critical thinking is defined as a thinking process that goes beyond the recognition or recall of factual data (Davidson 1969). Kurfiss (1988, p.2), goes on to define critical thinking as "an investigation whose purpose is to explore or question a situation, phenomenon, or problem to arrive at a hypothesis or conclusion about it that integrates all available information and that can therefore be convincingly justified." Accordingly, Beyer (1985) discloses that asking open-ended or investigative questions like, "Why?", "How?", "What do you think would happen if...?" can elicit critical thoughts of students. Better comprehension can be achieved by employing such "high cognitive questions" (King 1990; 1992). Questions such as these can initiate negotiation of meaning and content as they give students the opportunities to speak and shape discourse together in the classrooms.

Generally, questioning has been, and is, a dominant method of instruction in the classroom. It is claimed that questioning is the most important technique in use today and comes second to lecturing (Dillon 1983). The greatest attribute of questioning is that it stimulates thinking in the classroom. Questioning is the strongest tool that a

teacher has for teaching students to think. They direct the student step by step through the process of concept formation and problem solving. A teacher can raise students' level of critical thinking and aid them in reflective thought by using questions properly (Rhodes 1980). However, in many classrooms, the variety of thinking tasks required of students is limited and may often be restricted to nothing more than recalling known or memorized information (Davis and Tinsley 1967; Gallagher and Aschner 1963; Christenburg and Kelly 1983). One of the most important rewards of learning, according to Rhodes (1980), is the learner's ability to use knowledge acquired to further his own thoughts. In order to establish a connection between learning and thinking, the process usually has to be incited by questions that go beyond that has been learned (Chaudari 1974). Therefore, questioning is a force that helps to shape students' thoughts and methods of inquiry.

The most popular system for classifying questions is known as Bloom's Taxonomy (Morgan and Saxton 1991). This taxonomy has proven to be a valuable tool for a teacher to determine the degree of accuracy in the kinds of intellectual activities that he or she requires of the students especially the type of questions asked (Mansion 1970). Bloom's Taxonomy involves six levels of cognitive processing, namely, knowledge, comprehension, application, analysis, synthesis and evaluation. Questions, according to the taxonomy, can be divided into lower and higher order questions. Lower order questions generally ask literal content of a text whereas higher order or rather, high-cognitive questions, strive to challenge students to think a step further, to be more critical (Carter and Long 1991). Once the teacher has inculcated the higher order or high cognitive questions in his or her students, each student will consequently

try to bring a frame of reference into the classroom based on his or her own sum of knowledge, experience or values (Rabow et. al 1994, p. 23). Here, each student will be encouraged to analyze or prove his or her statements. This process inevitably promotes the development of high cognitive thinking skills.

When students share and negotiate in expressing their opinions or views, they are actually learning through discussions (Gass and Varonis 1985). Teachers can place their students in groups in order for them to have the opportunity to evaluate each others' intellectual and interpersonal abilities (Rabow et. al 1994, p.11). While students learn the subject matter, they also master critical thinking skills – skills which are significant in today's work environment. In any educational environment, the concept of grouping or pairing of students for the purpose of achieving an academic goal has been widely researched and advocated through the professional literature (Bruffee 1993; Davis 1993; Downey 1997:6). By putting students in a 'collaborative' learning atmosphere, students' will develop learning competence by sharing and collaborating with other learners in a discussion of a particular subject. Students are encouraged to voice out their opinions by talking and discussing aloud, questioning and answering, as they work through a problem. Critical thinking skills can be developed and communicative skills can be sharpened through language use.

Davis (1993) claims that students who work in small groups, regardless of the subject matter, have the tendency to learn more of what is taught and retain it longer than when the same content is presented in other formats. Such learning will make students learn new concepts and use them in situations which call for complex exercise of

critical thinking skills. Students can henceforth benefit from using high-cognitive questions in group discussions, which will help to enhance a critical and active classroom interaction among students. This will also move the interaction more towards student-talk rather than teacher-talk. In a sense, the method moves away from the norms of traditional lecturing, where teachers actively present information and students passively receive it (Meyers and Jones 1993, p. 19). These featured outcomes will set out students or learners to use their thinking capacities in an attempt to facilitate their comprehension, which could ultimately assist their learning and acquiring a second language, in which the researcher attempts to prove.

Questioning from the Islamic Perspective

The pursuit for knowledge in Islam is regarded as everlasting. Man is constantly instructed to investigate Nature in order to find knowledge. Through this divine knowledge, mediated by sight, hearing, touch, and smell, man can ponder and think of the wonders of God's creation. This way man can find and understand God. As cited in the Quran,

“ Say, 'Behold all that is in the heaven and on Earth'. But neither signs nor warners profit those who believe not”. (10:101)

The quest for knowledge in Islam is significant. Those who possess knowledge are the ones who have leverage over the rest who do not. As cited in the Quran, in Chapter 39, verse 9,

“...Say: Are those who know and those who do not know? It is those who are endued with understanding that receive admonition.”

Here, understanding can be related to possessing knowledge. Thus, the significance of the quest and asking for knowledge is inherent in Islam.

When asking for knowledge, man is encouraged to question. Questioning breeds answers and man will be lagging behind in learning new ideas or concepts if he does not question. Thus, knowledge entails questioning. This intellectual tool, together with active reasoning can make mankind become well learned. In order to become so, one must ask from the well learned to ensure that his or her facts are correct and reliable,

“And before thee also The Messengers We sent were but
men, to whom We granted inspiration: if ye realize this not,
ask of those who possess the Message.” (16:43)

In fact, in Islam, if the source of knowledge (the teacher) does not possess an answer to a question, he or she should mainly say "Allahu aalam" in order to indicate that only the Almighty God has the answer. This is also to show that absolute knowledge is characteristically divine in nature and resides with Allah the Almighty. In spite of that, questioning is encouraged in Islam in order to seek rightful knowledge. There is no harm in asking questions, thus feelings of shyness or fear would be eliminated. It was once told that the Ansar women during the years of Prophet Muhammad (peace be upon him) were known to be very shy and timid in anything but asking for knowledge especially the divine knowledge of God. However, Al-Ghazali quotes that one must observe certain *adab* or ethics when executing the task (Abul Quasem 1975).

When man is encouraged to question, this leaves him with the capability to use his *'aql* or reason. With *'aql*, man possesses the ability to think and reflect upon things around him. According to al-Razi, man's rational soul will fail if it is unable to recognize, wonder and marvel at the world (Shawer 1973). He rationalizes that man with reason must meditate upon things with curiosity through discovery and investigation. In Islam, man is constantly instructed to investigate Nature in order to find knowledge. Hence, to assist the quest for knowledge, man must use his faculty of reason. In doing so, man should practice some deep and critical thinking. The present study attempts to prove that asking questions can be a part of inciting critical thinking abilities among students, in which they will ultimately use their faculty of reasoning.

The concepts of thinking in the Quran are conveyed by several verbs such as *aqila*, *faqiha*, and *tafakkara*, which are evidences of man's capacity to think (Wan Daud 1989, p. 84). But thoughts in Islam should be grounded in facts and data. A rational man bases his thoughts and ideas on pre-investigated facts or data. Therefore, man is asked not to follow anything without knowledge for hearing, sight, and the heart will be questioned in the Hereafter. As cited in the Quran,

“And pursue not that of which thou hast no knowledge; for every act of hearing, of seeing, or of feeling in the heart will be enquired into the Day of Reckoning.” (17:36)

While thinking and learning are highly proposed in Islam, the process must be based on objective data and facts. In truth, when man seek knowledge, he is encouraged to ask those who possess it. Whether the information being sought is correct or

otherwise, it still needs to be verified in terms of its source and basis. Falsified knowledge, which can harm society is to be rejected.

On the contrary, man's curiosity to ask questions in order to verify information is much needed as to ensure that his information is right. In Islam, the concept of *syura* can be adopted to help discuss issues, which need clarification and explanation. *Syura* enables a certain group of people to hold a meeting or *musyawarah*. This way, views and opinions of others can be obtained, and is in line with the establishment of *amar ma'ruf nahy munkar*- enjoining good and forbidding evil (Hamdan Muhammad 1999). This way, man can each learn and exchange sound information or knowledge through some kind of group learning, which can be done mutually and collaboratively. Again, the ethics or *adab* in conducting a *syura* or meeting groups need to be abided carefully to ensure the success of the learning for all.

Hence, in the pursuit for knowledge, man is constantly encouraged to question and be aware of the knowledge obtained, as it might be false or baseless. The Quran has mentioned that man must be truthful and speak nothing, which he knows nothing about. Those who speak falsely will not be allowed to enter Paradise. As stated in the Quran:

“ And they said, 'None shall enter Paradise unless he be a Jew or a Christian.' Those are their vain desires. Say, 'Produce your proof if you are truthful' ”. (2:111)

However, if there is a need to establish a more concrete perception of that knowledge or information, man possesses the freedom to discuss it in learning groups by sharing and exchanging opinions or views. This way, man can think critically of others' thoughts and views, which can actually help the learning process.

Problem Statement

English is taught as a second language in Malaysia; it is introduced in the primary and secondary schools as a core subject. The general aim of teaching English in schools in Malaysia is to develop students' language proficiency in reading, listening, speaking and writing in English (Jassem 1993). However, the education received does not seem to prepare them to be successful in following tertiary education. Many university undergraduates in Malaysia, particularly Malay students, have shown relatively poor performance in their studies, in such that they did not show much critical thinking abilities (Abraham 1999:6). According to the Rector of the International Islamic University Malaysia (IIUM), Professor Dr. Mohamad Kamal Hassan in his address to the new intake students for the 2000/2001 session at the IIUM oath-taking ceremony, it is not unusual to see that even though tertiary students in Malaysia are able to speak English, they still face difficulties in communicating their ideas correctly in written English (Marzita Abdullah July,4:2000, p 3). He reasons that the poor performance is due to the fact that students who have the tendencies to take language learning for granted and their lack of desire to fully master it. In fact, based on her experience as a student and a teacher, the researcher finds that Malaysian students are generally passive and are inclined to 'receive' and not offer their thoughts to the class. According to Nora (1997) in her doctorate research dissertation on ESL (English as a Second

Language) learner difficulties in Malaysia, students generally become reluctant to speak their minds in class discussions. She claims that “it is common among Malaysians and perhaps most Asians, due to their past mode of education, are afraid to ask questions or ask for more clarifications. They were never encouraged to ask questions The culture of these students is such that questioning the credibility of the teacher is uncalled for and disrespectful” (Nora Nasir 1997, p. 109-11).

However, questioning by students is very important in relation to stimulating their own thinking abilities. In fact, developing students’ critical thinking skills is important to teachers in every discipline. Hence, in helping to prepare students to attend an English speaking university, teachers of ESL should not only be devoted to the teaching of language skills, but they should also be committed to developing the thinking skills of their students. This can effectively be done through questioning.

There are several important reasons why integrating critical thinking in language teaching is necessary in the ESL classroom. Developing and incorporating critical thinking is an important aspect of preparing ESL students to be successful in their future studies. Teaching them how to think critically through questioning methods, for example, can challenge second language learners intellectually. It is important to allow students to use their minds and interact with difficult materials and ideas. Although ESL students may not be proficient enough to express their thoughts in English, they still have the chance to comprehend better by questioning critically (Pica, Young and Doughty 1987). Good and effective thinking skills can thus be regarded as one of the best tools ESL students could have against difficult words, challenging materials or

texts, as they are encouraged to question them (Runkle 1978). This can be more helpful when students discuss among themselves whereby they can question each other's opinions or views. When ESL students learn collaboratively as a group, they interact and work together, and this will enable them to test their thinking skills and be critical of each other. Thus proficiency can be increased hand in hand with the development of critical thinking skills.

Background of the Study

This study was conducted in British Malaysian Institute (BMI) in Gombak, Selangor. Here, English is the medium of instruction and is taught as one of the core-courses. This engineering college is a part product of Edexcel Foundation or Business and Technology Education Council (BTEC) of United Kingdom, together with Malaysia's semi-government organization, MARA. Hence, there is a big responsibility to ensure the ongoing instruction in English. The college pays great importance in acquiring the language as it is crucial for the development of proficiency among the students in helping them to communicate globally in the contemporary world of science and technology (BMI-A Convergence of Minds 1999).

To achieve this, the English Language Division of the General Studies Department holds the major task in teaching the students to upgrade their language proficiency. The staff consists of relatively highly experienced non-native speakers of English from various educational backgrounds. In contrast, the students of British Malaysian Institute range mainly from secondary schools to local technical institutes all over Malaysia. It also caters for local students from overseas who have completed their A-

Level there. The English programme in the college meets the requirement of the National Accreditation Board (LAN) under the Education Ministry. It is a board, which sets guidelines for public and private higher-education institutions.

Objectives of the Research

The objectives of this research are:

- 1) to determine whether there is a statistically significant mean difference in students' comprehension and production of the L2 between those given the questioning treatment (experimental group) and those who were not given the questioning treatment (control group).
- 2) to determine whether there is a statistically significant mean difference in students' critical thinking skills between those given the questioning treatment (experimental group) and those who were not given the questioning treatment (control group). The study seeks to find out whether or not non-native speakers of L2 can:
 - (i) analyze and interpret
 - (ii) draw logical inferences
 - (iii) evaluate and justify inferences
 - (iv) make deductive reasoning
 - (v) and make inductive reasoning while being engaged in group discussions.

Research Questions

In this study, the researcher tries to seek the answers to the following questions:

- 1) Is there a statistically significant mean difference in students' comprehension

and production of the L2 between those given the questioning treatment (experimental group) and those who were not given the questioning treatment (control group)?

- 2) Is there a statistically significant mean difference in students' ability to analyze and interpret between the experimental group and the control group?
- 3) Is there a statistically significant mean difference in students' ability to draw logical inferences between the experimental group and the control group?
- 4) Is there a statistically significant mean difference in students' ability to evaluate and justify inferences between the experimental group and the control group?
- 5) Is there a statistically significant mean difference in students' ability to make deductive reasoning between the experimental group and the control group?
- 6) Is there a statistically significant mean difference in students' ability to make inductive reasoning) between the experimental group and the control group?

Significance of the Research

The research presents a teaching and learning strategy that incorporates high-cognitive questions among students in group discussions in ESL classes. The findings of such a study might be helpful to ESL practitioners in using this strategy in order to help enhance the development of critical thinking skills among students in language teaching. It can also be a point of reference for other research to come.

Organization of Chapters

This study constitutes five chapters. Chapter One is an introductory chapter, which presents some general information pertaining the key issues supporting the study. It also draws out the research problems and objectives. Chapter Two discusses the relevant studies on classroom questioning. Chapter Three includes the detailed design of the study or procedures taken in the completion of research. Chapter Four looks at the results or findings of the research as well as discusses the findings. Chapter Five ends the dissertation with some implications for teaching and suggestions for further research.