THE EFFECTIVENESS OF INDUCTIVE AND DEDUCTIVE APPROACH IN TEACHING ADVERBS OF FREQUENCY AMONG LOW ACHIEVERS

SURYANI BINTI SULAIMAN

A project report submitted in partial fulfillment of the requirements for the award of the degree of Master of Education in Teaching English as a Second Language (TESL)

Faculty of Education
Universiti Teknologi Malaysia

JULY 2012

I wish to dedicate this work to:

my parents,

Sulaiman bin Yahya and Sapinah binti Mohamed,

my beloved husband,

Mohd Norhelmi bin Mohd Aris,

my children,

Syasya Irdina, Danish Fikry, Danial Anaqy, Sofea Iqlyma

my sisters,

Suzana, Suhaila, Salwani, Syuhaida, Syahirah, Syukrina

and

my brothers,

Syazwan, Syarafi, Syahrun, and Syafiq Helmi

ACKNOWLEDGEMENT

In the name of Allah the Most Gracious, the Most Merciful,

First and foremost, I would like to express my sincere gratitude to my project supervisor, Assoc. Prof. Dr. Noor Abidah bt Mohd Omar for her patience and constant guidance to guide me through the completion of the project. This thesis would not be completed without her encouragement, indispensable guidance and advice.

I would like to thank both of the panel for my project, Dr. Hanita Hassan and Assoc. Prof. Dr. Zaidah Zainal for the suggestions and insightful feedback during my presentation of chapter 1 – 3 in semester 3. I really appreciate the comment in order to improve my final project. Special thanks to all UTM lecturers who taught me how to write academic writing especially Assoc. Prof. Dr Hadina Habil, Dr Adlina Abd Samad and Assoc. Prof. Khairi Izwan Abdullah.

My deepest appreciation goes to my parents who always give me motivation to further study, my beloved husband and children who sacrifice a lot for me and my siblings who always give me moral support especially to my sister, Salwani who sacrifice her time looking after my children when I am busy preparing for the thesis.

Special thanks to my friends who always support me when I need them the most especially to Sheimah Nalla, Yogamalar, Ruhaida, Huda and Hadenan for sharing their idea and thought. I would not have come so far without all of you. Also, I would like to thank my colleague of SMKBBU for the love and support throughout the completion of the project. Thank you my friends.

My sincere appreciation to my students of SMK Bandar Baru UDA, Johor Bahru especially 4PD2 and 4PD3 classes of 2012. Thank you for your cooperation and participation.

ABSTRACT

Nowadays, many students experience problems to understand English grammar as a second language, especially in secondary schools. In teaching and learning grammar, there are several methods of choice for teachers to realize the objectives to be achieved. Accordingly, there is much debate among teachers about methods which is appropriate to the level of students, especially for low achievers. Until now, teachers have not reached agreement on an effective method to teach low achievers and enhance their understanding of grammar. With many of the methods of teaching grammar, the debate among teachers still occur. The methods that become a matter of debate are Inductive and Deductive methods of teaching. A case study was conducted involving sixty students of secondary four who failed English subject in their PMR trial examination. The purpose of this study was to identify the most effective method to be applied to students who are weak in mastering Adverbs of Frequency. In addition, the study is to identify students' perceptions of two methods of teaching grammar which are inductive and deductive. Sixty students with low marks in PMR trial exam were chosen. Students are then divided into two classes for the treatment of two different methods of teaching grammar. The instruments used to obtain the data are pre-test, post-test and questionnaires. In determining the performance of students receiving inductive and deductive teaching, student performance is measured based on their performance in the pre-test and post-test. Mean scores for both test obtained by each group and the margin of improvement are analyzed and compared. The findings showed that both groups of students who receive the inductive and deductive teaching had shown improvement in performance, but the inductive group showed a higher margin of improvement compared to deductive.

ABSTRAK

Dewasa ini, ramai pelajar mempunyai masalah dalam penguasaan tatabahasa bahasa inggeris sebagai bahasa kedua terutamanya di peringkat sekolah menengah. Dalam pengajaran dan pembelajaran tatabahasa ini, terdapat beberapa kaedah yang menjadi pilihan guru untuk merealisasikan objektif yang hendak dicapai. Sehubungan dengan itu, banyak perdebatan di kalangan guru berkenaan kaedah yang bertepatan dan bersesuaian dengan tahap penguasaan pelajar terutamanya untuk pelajar yang lemah. Sehingga kini, para guru belum mencapai kata sepakat berkenaan kaedah yang berkesan untuk mengajar pelajar lemah dan meningkatkan kefahaman mereka dalam tatabahasa bahasa inggeris. Dengan wujudnya pelbagai kaedah mengajar tatabahasa, perdebatan dikalangan guru masih berlaku. Di antara kaedah yang menjadi tajuk perdebatan adalah induktif dan deduktif. Satu kajian kes telah dijalankan melibatkan 60 orang pelajar tingkatan empat yang gagal dalam peperiksaan percubaan PMR. Tujuan kajian ini dilaksanakan adalah untuk mengenalpasti kaedah manakah yang lebih berkesan untuk diaplikasikan kepada pelajar yang lemah ini dalam menguasai 'Adverbs of Frequency'. Selain daripada itu, kajian dijalankan bertujuan untuk mengenalpasti persepsi pelajar terhadap kaedah pengajaran induktif dan deduktif. 60 pelajar telah dipilih berdasarkan keputusan peperiksaan percubaan PMR di mana mereka adalah 60 pelajar yang mempunyai markah terendah. Pelajar ini kemudiannya di bahagikan kepada 2 kelas untuk mengikuti 2 kaedah pengajaran tatabahasa yang berlainan. Instrumen yang digunakan untuk memperolehi data adalah pra ujian (pre-test), ujian selepas pengajaran (post-test) dan juga soalan kaji selidik. Dalam mengenalpasti prestasi pelajar yang menerima pengajaran induktif dan deduktif, ianya berdasarkan pencapaian mereka dalam 'pre-test' dan 'post-test'. Perbezaan min di antara 2 kaedah tersebut akan di analisa dan dibandingkan. Dapatan kajian menunjukkan kedua-dua kumpulan induktif dan deduktif telah mempamerkan peningkatan prestasi, namun begitu kumpulan induktif menunjukkan peningkatan yang lebih baik berbanding deduktif.

TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENTS	iv
	ABSTRACT	v
	ABSTRAK	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	X
	LIST OF FIGURES	xi
	LIST OF ABBREVIATIONS	xii
	LIST OF APPENDICES	xiii
1	INTRODUCTION	
	1.0 Introduction	1
	1.1 Background of the study	2
	1.2 Statement of Research Problem	4
	1.3 Purpose of the study	6
	1.4 Objectives of the study	6
	1.5 Research Questions	7
	1.6 Significance of the study	7
	1.7 Scope of the study	8
	1.8 Limitation of the study	9
	1.9 Definition of terms	10

2	LITERATURE REVIEW	
	2.0 Introduction	12
	2.1 Approaches of teaching grammar	12
	2.1.1 Deductive teaching approach	13
	2.1.2 Inductive teaching approach	15
	2.2 Theories and research findings related to Deductive	
	-Inductive approaches	17
	2.3 Recommendations for teaching approaches in grammar	19
	2.4 Adverbs of Frequency (AoF)	20
	2.4.1 The rule of AoF	20
	2.4.2 Problem of learning AoF	22
	2.5 Conclusion	23
3	RESEARCH METHODOLOGY	
	3.0 Introduction	24
	3.1 Research Design	24
	3.1 Research Design	24
	3.2 Participants and Sampling	26
	-	
	3.2 Participants and Sampling	26
	3.2 Participants and Sampling3.3 Research Instrument	26 29
	3.2 Participants and Sampling3.3 Research Instrument3.3.1 Pre-test	26 29 29
	 3.2 Participants and Sampling 3.3 Research Instrument 3.3.1 Pre-test 3.3.2 Post-test 	26 29 29 30
	3.2 Participants and Sampling 3.3 Research Instrument 3.3.1 Pre-test 3.3.2 Post-test 3.3.3 Deductive Lesson Plan	26 29 29 30 30
	3.2 Participants and Sampling 3.3 Research Instrument 3.3.1 Pre-test 3.3.2 Post-test 3.3.3 Deductive Lesson Plan 3.3.4 Inductive Lesson Plan	26 29 29 30 30 30
	3.2 Participants and Sampling 3.3 Research Instrument 3.3.1 Pre-test 3.3.2 Post-test 3.3.3 Deductive Lesson Plan 3.3.4 Inductive Lesson Plan 3.3.5 Questionnaires (Likert Scale)	26 29 29 30 30 30 31

4	RESULTS AND DI	SCUSSION	
	4.0 Introduction		36
	4.1 Interpreta	tion of the data	37
	4.1.1	Result of Pre-test	37
	4.1.2	Result of Post-test	38
	4.1.3	Individual Group Performance	39
		4.1.3.1 The Inductive Teaching Group	40
		4.1.3.2 The Deductive Teaching Group	42
	4.1.4	Comparison of the mean score	44
	4.1.5	Findings based of the Questionnaires	45
	4.2 Discussio	n of the result	52
5	CONCLUSION AN	D RECOMMENDATIONS	
	5.0 Introduction		54
	5.1 Research	summary	54
	5.2 Conclusio	on	55
	5.3 Recomme	endations	56
REFERENC	CES		58
Appendices	A-H		64-84

LIST OF TABLES

TABLE NO.	TITLE	PAGE
2.1	The position of Adverbs of Frequency (with auxiliary/be)	21
2.2	The position of Adverbs of Frequency (without auxiliary/be)	21
3.1	The distribution data based on class and gender	27
3.2	The treatment schedule	34
4.1	Scores for Inductive teaching group on the two tests	40
4.2	Scores for Deductive teaching group on the two tests	42
4.3	Margin of improvement for each group in the two tests	44
4.4	Students' perception on Deductive approach	46
4.5	Students' perception on Inductive approach	49

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
3.1	The research plan	25
3.2	The process of purposive sampling	28
3.3	The procedure of the research	33
4.1	Mean scores for the two tests obtained by each group	44

LIST OF ABBREVIATIONS

AoF - Adverbs of Frequency

L1 - First language/Mother tongue

L2 - Second language/Target language

LSRW - Listening, Speaking, Reading and Writing

MCQ - Multiple Choice Questions

PLSPQ - Perceptual Learning Style Preference Questionnaire

PMR - Penilaian Menengah Rendah

PTAPQ - Perceptual Teaching Approach Preference Questionnaire

SAPS - Sistem Analisis Peperiksaan Sekolah

SPM - Sijil Pelajaran Malaysia

SPSS - Statistical Packages for Social Sciences

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A	The scores of low achievers in PMR trial examination	64
В	Pre-test	66
C	Post-test	69
D	Perceptual Teaching Approach Style Preference Questionnaire	72
E	Pre-test scores by all participants in the two groups	76
F	Post-test scores by all participants in the two groups	77
G	Deductive lesson plan	78
Н	Inductive lesson plan	82

CHAPTER 1

INTRODUCTION

1.0 Introduction

Over the years, there has been an on-going argument among English teachers about the best approach to teach grammar. Some teachers believe in applying Deductive approach whereas some of them agree with the implementation of Inductive approach in English classroom. The effects of both approaches become a controversial issue that existed for quite a long time (DeKeyser 1995, Fischer 1979, Nagata 1997). The situation becomes more crucial in teaching grammar when dealing with students who are considered weak in English or often referred as low achievers. These low achievers are defined as those who have difficulties in speaking, reading, writing and understanding English language. Therefore, in Malaysia context, low achievers obtain E grade in English subject most of the time with the average mark between 0 to 39 marks. This type of target students is a big challenge for the teachers to create an appropriate way to make them understand grammar. Although there is a lot of exposure on grammar teaching approach among teachers at present, it is still not sufficient to realize the goal to build students' understanding of grammar. To make low achievers meet the acquired

proficient level of achievement and success in the learning process is not an easy task even with the presence of suitable approaches.

The deductive and the Inductive are two main approaches which are largely used by English teachers in school. Some English teachers argue which of the two approaches provide great implications for the students even though there are other voices of doubt about the most effective way to be used to teach grammar in English language classrooms. According to Widodo (2006), some students understand better in deductive language classes but some achieve better in inductive language classes. However, common opinion suggests that Deductive approach is one of the approaches cater for weak students and common opinion also believes that Inductive approach is applicable for higher proficiency level students. Therefore, the researcher believes that discovering the effect of applying deductive and inductive approaches in teaching grammar to low achievers is necessary.

1.1 Background of the study

To begin with, low achievers are classified as 'weak' students with low academic achievement in Malaysia context, who obtain E grade in English subject during internal or main examinations such as Penilaian Menengah Rendah (PMR) and Sijil Pelajaran Malaysia (SPM). In addition, these students are known as students who achieve less than the average target with low cognitive ability to comprehend, retain and reproduce inputs or information.

In other words, the low achievers are surrounded by the environment where English is not the dominant language to be used. In the context of my study, low achievers can be defined as students who are weak in English, with minimal English background knowledge and no motivation and interests to learn English subject. Teachers are also labeled them as lazy students with no motivation to learn, naughty or

probably trouble maker with negative attitude towards learning and not outstanding in academic performance.

As a result, these students are having problems in understanding English language especially the instruction and they do not have the opportunity to contribute and participate fully in the real life society. However, according to Chan & Chan (2003), regardless the level of academic performance, a student can develop positive feeling towards learning. In order to help low achievers in acquiring grammar, extra guidance should be provided in making them understand English grammar. Therefore, the perception about low achievers who are not outstanding in academic performance with poor grades in examination can be disputed as they still have potential to build up their maximum ability with proper approach. Appropriate teaching methods such as deductive and inductive is significant to be used to indicate which approach in teaching Adverbs of Frequency suits low achievers better. Adverbs are chosen because the teacher realized that students of low achievers continue making the same error in adverb placement even though with a lot of drills, practice and exposure in English classroom. Therefore, instead of identifying the best approach to help them improve their understanding of grammar, the teacher wants to help them to acquire the structure in order to improve the way of composing sentences especially in writing.

In Malaysia's Syllabus of English for secondary students, there are plenty of grammar components to be covered for the whole semester. According to the syllabus, grammar should not be taught in separate lesson and should be integrated with the themes provided. Currently, English syllabus design focuses more on topical based and exam oriented teaching whereby the total emphasis of grammar acquisition to practice is neglected. In addition, students' lack of motivation, poor proficiency level makes the situation become worse. This situation is very crucial mainly when dealing with the presence of low achievers who are not interested to learn, lack of motivation and with minimal English background knowledge. Therefore, grammar are taught in separate lesson (one part of grammar topic within one period of English lesson) for these low achievers to make them understand better. Teachers have to be sensitive and alert to the

special needs of these students and that makes teacher's task becomes even more demanding in teaching low achievers the rules of grammar.

1.2 Statement of Research Problem

In educational institutions in our country, apart from a teacher who is a major asset in determining the effectiveness of the education system, students are also an important human capital in realizing the mission and vision that have been outlined. The students are our asset as they are our future leader for our future generation and also our precious resources which should be developed. If human capital is not managed properly, many problems will occur such as discipline problems, attitude and personality problems, failure in academics and others especially involving the low achievers. These problems can lead to lack of quality in human capital that indirectly affects the credibility of teachers and it gives impact on the effectiveness of the education system in our country.

According to Westwood (2008), there are various reasons that contribute to learning difficulties among students. In addition to factors stemming from the attitudes of students, it is also caused by inappropriate school curriculum and ineffective selection of teaching methods. The Selection of appropriate teaching methods provides tremendous impact in ensuring the effectiveness of teaching and learning towards the performance of low achievers in learning grammar. It is supported by Ellis (2005) who says '...teaching practices for those with learning difficulties need to be considered in the context of the 'generally effective pedagogy'. By using appropriate teaching methods, students can master the grammar better, thus enhancing their understanding of sentence structure to produce a better meaningful context. Therefore, it can be concluded that the increased performance of students, poor or not depends on the selection of appropriate teaching methods in order to help the students to acquire better understanding and upgrade their levels. In order to ensure the effectiveness of teaching in the classroom, teachers need to be smart to make adjustments in teaching methods depending on the level of their students.

Questions have arisen that teaching grammar using inductive approach improves learners' ability in mastering grammar skill compared to deductive approach as acquisition of a language takes place when the learners are able to use the language subconsciously. Based on the current situation in one of national secondary school in Johor Bahru, there is an argument about which approach benefit the students to improve their understanding of the topic being taught. English language teachers are commonly in dilemma on the most effective approach to apply in teaching grammar in English classroom. Deductive and Inductive approaches to teach grammar for students are still being used in school but the best approach to teach students remains questionable.

There is no doubt that the ability to construct sentences using Adverbs of Frequency (AoF) is crucial for low achievers. This is because the group of low achievers tends to translate their first language (L1) into target language (L2) when using Adverbs. Thus, direct translation totally changes the meaning of the whole sentence and the students might get confuse. To teach the students about the placement of AoF is another big challenge to the English teachers as it can make the students confuse because adverbs can occur in various preferred position such as initial, middle or end position. The Adverbs placement is different in each sentences based on the context and students tend to misplace the AoF in sentences. Generally, the placement of AoF comes directly before the main verb. However, when there is 'verb to-be' in a sentence, the AoF comes after "verb to-be'.

Based on the researcher's experience in teaching English for low achievers, the placement of Adverbs of Frequency is one of the major problems among the students. A lot of errors occur and students like to simply place Adverbs in sentences. Therefore, it is important to carry out the research focusing on Adverbs using two different type of teaching approaches; Inductive and Deductive for low achievers. Although many teachers agree that deductive approach suits these target students, some teachers believe inductive approach can be applied for low achievers as well.

1.3 Purpose of the Study

The purpose of this study is to explore and compare the effectiveness of applying both approaches (Inductive and Deductive) on the low achievers especially in teaching Adverbs of Frequency. This study is also designed to determine which approach produce better outcomes through the students' performance in pre test (before the lesson) and post test (after the implementation of both deductive and inductive teaching). With the application of both approaches towards selected low achievers of secondary four from a national secondary school in Johor Bahru, the findings can provide benefits to the students and the teacher. The study is also to determine which approach has greater effect on low achievers' ability to accurately use Adverbs of Frequency.

1.4 Objectives of the Study

The objectives of this study are to find out which approach will improve learners' ability to use Adverbs of Frequency accurately and also to discover which approach has greater effect on learner's ability to use the grammar skill taught. The objectives are listed as follows:

- 1. To determine whether inductive teaching of grammar helps to improve low achievers' ability to accurately use the Adverbs of Frequency.
- 2. To determine whether deductive teaching of grammar helps to improve low achievers' ability to accurately use the Adverbs of Frequency.
- 3. To identify the learners' perceptions towards Inductive and Deductive approaches in learning Adverbs of Frequency.

1.5 Research Questions

The research questions to be answered in this study are as follows:

- 1. Does inductive teaching of grammar helps to improve the low achievers' ability to accurately use the Adverbs of Frequency in sentences?
- 2. Does deductive teaching of grammar helps to improve the low achievers' ability to accurately use the Adverbs of Frequency in sentences?
- 3. What are learners' perceptions towards Inductive and Deductive approaches in learning Adverbs of Frequency?

1.6 Significance of the study

The study is important because it expands on previous research, addressing the best approach (Deductive-Inductive) to be implemented for low achievers in teaching grammar generally; Adverbs of Frequency specifically. Previous studies by Herron and Tomasello (1992) suggested the advantage is for Inductive approach. However, other studies by Robinson (1997) and Seliger (1975) claimed that Deductive approach is more effective compared to Inductive teaching. At the same time, Rosa and O'Neill (1999) and Shaffer (1989) failed to find any significant difference between both Deductive and Inductive, but there is the trend in favour of Inductive approach according to Shaffer. Previous studies have used adults or high school students as participant, but the focus on low achievers has been given less attention. Therefore, this study is significant to carry out so as to provide benefits to English teacher as practices in classroom.

This study could benefit the teachers to improve their teaching especially to increase students' understanding on grammar using correct approach (Deductive-Inductive). Teachers might be exposed to deductive approaches in teaching grammar as the approach is known as traditional way (grammar translation methods) of teaching grammar. However, the effectiveness of applying the Inductive approach in teaching grammar for low achievers should be taken into account as well. Instead of applying the same methods, teachers can use the other method as a substitute method of teaching which is more refreshing to develop the creativity of the teachers. Through the study, teacher can inspire themselves to reflect on their teaching practices and make changes where applicable to suit the level of students they are dealing with.

1.7 Scope of the study

This study focused on the teaching of one area of grammar, which is Adverbs of Frequency using two different type of teaching approach namely Inductive and Deductive. The study involved a total number of 60 students of Form four from a national secondary school in Johor Bahru District. These 60 students were selected as a sample because the target participant of the study is low achievers. Therefore, they were chosen because all of them obtained E grade in English subject during their Penilaian Menengah Rendah (PMR) trial examination. Two groups were formed as the treatment of the study. One group of 30 students was selected as experimental group and another 30 students was chosen as the control group. Experimental group received Inductive teaching approach and Control group received Deductive teaching approach. In addition, pre-test, post-test and questionnaires were three instruments used in this study. This study was carried out to determine whether inductive and deductive teaching of grammar helps to improve low achievers' ability to accurately use the Adverbs of Frequency. Apart of that, this study was conducted to identify the learners' perceptions towards both approaches in learning grammar.

1.8 Limitation of the study

In Malaysia, various approaches and methodologies were used in teaching grammar to the students whereby the approaches applied by English teachers have its own focus to suit the level of students. Nowadays, in our Malaysia educational context of teaching grammar, two common approaches which are popularly used are Deductive and Inductive.

This study focuses on both approaches; Deductive and Inductive to be applied in English classroom to determine which one is more effective in teaching Adverbs of Frequency for low achievers. In determining the effectiveness of these approaches and its impact to the low achievers particularly in using Adverbs of Frequency accurately, the limitations of this study are listed as follows:

- a) This study was limited to 60 form four students from two classes of low achievers (weak students) taken from one particular national secondary school in Johor Bahru. Therefore, the result would not represent the school's population and is not intended to be generalized to other national secondary school in general.
- b) The other limitation of the study is the limited time frame allocated to carry out the research. To deal with low achievers is really a big challenge especially to make them understand on how to apply Adverbs of Frequency accurately, plus the rate of understanding among low achievers is different from one to another probably due to previous learning exposure, attitude and motivation. With short time spent on the study plus the interference of unavoidable constrains such as monthly test and administrative requirements, it affects the effectiveness of the study. If the researcher is given more time to carry out the lesson, there are many aspect to focus on such as various type of activities during lesson and more session per week.

c) This study is limited to two main approaches (Deductive-Inductive) in teaching one part of grammar which is Adverbs of Frequency. Therefore, the focus is on the effectiveness of the approaches in teaching this part of grammar only. The other part of speech is not tested. Thus, the findings should be interpreted with these limitations in mind.

1.9 Definition of terms

For better understanding of the terms used in this study, the meanings are listed as follows:

Adverbs of Frequency:

Adverbs of Frequency is a part of grammar to describe how frequently we do an activity for example never, seldom, sometimes, often, always etc.

Deductive:

"Deductive teaching represents a more traditional style of teaching in that the grammatical structures or rules are dictated to the students first."

(Adapted from A Practical Guide to the Teaching of English as a Second or Foreign Language. Oxford University Press, 1978)

Based on my study, Deductive can be defined as a teaching approach where the teachers provide inputs or rules before giving examples to the students for discussion. Students learn the rule and apply it after the rule has been outlined. Then, the application of students' understanding in practices using structure will follow.

Inductive:

"Inductive teaching represents a more modern style of teaching where the new grammatical structures or rules are presented to the students in a real language context."

(Adapted from Teaching Practice Handbook: Structures: Grammar and Function. Heinemann, 1995)

In my study, Inductive can be defined as a teaching approach; where the students interpret the specific challenge or inputs being exposed by the teacher. Then, based on the examples provided by the teacher, students apply their previous knowledge to analyze the examples and formulate rules based on their interpretation of the examples.

References

- Aitken, R. (1992). Teaching Tenses. United Kingdom: Thomas Nelson and Sons Ltd.
- Ausubel, D.P. (1978). School Learning: An introduction to Educational Psychology.

 New York: Holt
- Bay, M., Staver, R., Bryan, T. And Hale, J.B. (1990). Science instruction for the mildly handicapped, Direct instruction versus discovery teaching. Journal of Research in Science teaching, 29 (6):555-70
- Bhanot, T., Martin, H. (2008). Scholar's English Grammar and Composition class 6, Scholar Publishing House (P) Ltd.
- Black, T. R. (1999). Doing quantitative research in the social sciences: An integrated approach to research design, measurement, and statistics. Thousand Oaks, CA: SAGE Publications, Inc. (p. 118)
- Bourke, J. (1996). 'In praise of linguistic problem solving'. RELC Journal 27/2: 12–29.
- Brigham, F., and Martin, J.J. (1999). A synthesis of empirically supported best practices for science students with learning disabilities. 1999 Annual International Conference of the Association for the education of teachers in Science, Austin, TX.
- Brown, H.D. (1994). Teaching by principles: An interview approach to language pedagogy. Englewood Cliffs, NJ: Prentice Hall.
- Bruner, J.S., (1961) "The Act of Discovery," Harvard Educational Review, 58, 420-423.
- Carrol, J.B. (1964). Language and thought. Englewood Cliffs, NJ: Prentice Hall.

- Chan, L.K.S., & Chan, L. (2003). Early childhood education in Hong Kong and its challenges. Early Child Development and Care, 173(1), 7-17.
- Chan, T.P. (2004). The effects of CALL approaches on EFL college students' learning of verb-noun collocations. Unpublished master thesis. National Tsing Hua University, Hsinchu, Taiwan.
- Chomsky, N. (1986). Knowledge of language. Its nature, origin and use. Praeger Publisher.
- DeKeyser, R. (1994). Implicit and Explicit Learning of L2 Grammar: A Pilot Study. TESOL Quarterly, Vol. 28, No. 1 (Spring, 1994), pp. 188-194.
- DeKeyser, R.M. (1995). Learning second language grammar rules: An experiment with a miniature linguistics system. Studies in Second Language Acquisition, 17, 379-410.
- Ellis, L. A. (2005). Balancing approaches: Revisiting the educational psychology research on teaching students with learning difficulties. Australia Council for Educational Research. Camberwell, Victoria. ACER Press.
- Ellis, N. (2002). Frequency effects in language processing: A review with implications for theories of implicit and explicit language acquisition. Studies in Second Language Acquisition, 24, 143 188.
- Farrell, T.S.C. & Particia, L.P.C. (2005). Conceptions of grammar teaching: A case study of teachers' beliefs and classroom practices. TESL-EJ, Vol. 9, No. 2, September 2005.
- Felder, R., & Henriques, E. (1995). Learning and teaching styles in foreign and second language education. Foreign Language Annals 28(1), 21-31.

- Fischer, A.R. (1979). The inductive-deductive controversy revised. Modern Language Journal, 63, 98-105.
- Fraenkel, J.R., and Wallen, N.E. (2010) How to design and evaluate research in education. Seventh edition. McGraw-Hill International Edition.
- Galotti, K.M., Komatsu, L.K., and Voelz, S. (1997). Children's differential performance on deductive and inductive syllogisms. Developmental Psychology, 33, 70-78.
- Gollin, J. (1998). Deductive vs. inductive language learning. ELT Journal, 52, 88-89.
- Goner, Phillips, and Walters. Teaching Practice Handbook: Structures: Grammar and Function. Heinemann, 1995. 129-138.
- Gross, D. (1991). A practical handbook of learning teaching. London:cassell.
- Hammerly, H. (1975). The Deduction/Induction controversy. Modern Language Journal, 59, 15-18.
- Harmer, J. (1987). Teaching and Learning Grammar. London: Longman
- Herron, C., Tomasello, M. (1992). Acquiring grammatical structures by guided induction. French Review, 65, 708-718.
- Jackendoff, R. 1972: Semantic interpretation in generative grammar. Cambridge, MA: MIT Press.
- Krashen, S.D. (1981). Second language acquisition and second language learning.

 Oxford: Oxford University Press.
- Krashen,S. D. (1982). Principles and practice in second language acquisition. Englewood Cliffs, NJ: Prentice Hall.

- Krashen, S. (1985). The Input Hypothesis: Issues and implications, London: Longman.
- Larsen-Freeman, D. (1995). 'On the teaching and learning of grammar: challenging the myths' in Eckman et al. (eds.).
- Lightbown, P., & Spada, N. (2006). How languages are learned. Oxford: Oxford University Press
- Lin, M.H. (2009). Inductive and Deductive Approaches on grammar acquisition: A case study in Taiwan. Vom Verlag Dr Muller.
- Mastropieri, M.A., Scruggs, T.E., and Butcher, K. (1997). How effective is inquiry learning for students with mild disabilities?. Journal of special education 29 (2): 199-211
- Nagata, N. (1997). An experimental comparison of deductive and inductive feedback generated by a simple parser. System, 25, 515-534.
- Nassaji, H., and Fotos, S. (2004). Current Developments In Research On The Teaching Of Grammar. Annual Review of Applied Linguistics. Cambridge University Press
- Norris, J.M., and Ortega, L. (2000). Effectiveness of L2 Instruction: A research synthesis and Quantitative Meta-analysis. Language learning, 50, 417-528.
- Reid, M. J. (1984) Perceptual Learning Style Preference Questionnaire
- Richards, J.C., Gallo, P.B., & Renandya, W.A. (2001). Exploring Teachers' Beliefs and processes of change. PAC Journal, 1, 1, 41-58.

- Rivers, Wilga M., Temperley, Mary S. A Practical Guide to the Teaching of English as a Second or Foreign Language. Oxford University Press, 1978. 110.
- Robinson, P. (1994). Computers, corpora and language. The teacher trainer, 8, 3-8.
- Robinson, P. (1997). Individual differences and the fundamental similarity of implicit and explicit adult second language learning. Language Learning, 47, 45-99.
- Rosa, E., and O'Neill, M.D. (1999). Explicitness, intake, and the issue of awareness. Studies in second language acquisition 21, 511-556.
- Seliger, Herbert W. (1975). Inductive method and deductive method in language teaching. International Review of Applied Linguistics in LanguageTeaching 13:1 (Feb): 1-18.
- Shaffer, C. (1989). A comparison of inductive and deductive approaches to teaching foreign languages. The Modern Language Journal, 73, 395-403.
- Sheen, R. (1992). 'Problem solving brought to task'. RELC Journal 23/2: 44–59.
- Thornbury, S. (1999). How to teach grammar. Harlow, Essex: Pearson Education Limited.
- Tuckman, B.W. (1994). Conducting educational research. USA: Harcourt, Brace and company.
- Wang, C. (2000). A sociolinguistic profile of English in Taiwan: Social context and learner needs. The Pennsylvania State University.
- Westwood, P. (2008). What teachers need to know about learning difficulties. Victoria: ACER Press.

- White, L. (1987). 'Against comprehensible input: the input hypothesis and the development of second language competence'. Applied Linguistics 8/2: 95–110.
- Widodo, H. P. (2006). Approaches and procedures for teaching grammar. English Teaching: Practice and Critique. Vol. 5, No. 1 (pp122-141). Waikato University.