

THE EFFECTS OF DIRECT INSTRUCTION OF  
ACADEMIC FORMULAS (DIAF) FRAMEWORK ON  
ACADEMIC WRITING PERFORMANCE AT THE  
HIGHER EDUCATIONAL INSTITUTION

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**THE EFFECTS OF DIRECT INSTRUCTION OF ACADEMIC  
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PERFORMANCE AT THE HIGHER EDUCATIONAL  
INSTITUTION**

**by**

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## **LIST OF ABBREVIATIONS**

DIAF	Direct Instruction of Academic Formulas
TAF	Target Academic Formula
AEW	Academic Essay Writing
ESL	English as a Second Language
EFL	English as a Foreign Language
EAP	English for Academic Purposes
ESP	English for Specific Purposes
L1	First Language or Mother Tongue
L2	Second Language
BICS	Basic Interpersonal Communication Skills
CALP	Cognitive Academic Language Proficiency
NS	Native Speaker
NNS	Non Native Speaker
MI	Mutual Information
MEU	Morpheme Equivalent Unit
AWL	Academic Word List
AFL	Academic Formula List
SLA	Second Language Acquisition
SLVA	Second Language Vocabulary Acquisition
RPV	Receptive/Productive Vocabulary
LTM	Long Term Memory
STM	Short Term Memory
ES	Effect Size



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**KESAN-KESAN RANGKA KERJA PENGAJARAN LANGSUNG FORMULA  
AKADEMIK ( DIAF ) KE ATAS PRESTASI PENULISAN AKADEMIK DI  
INSTITUSI PENDIDIKAN TINGGI**

**ABSTRAK**

Ramai pelajar yang mengikuti pendidikan peringkat tertiar di institusi-institusi pengajian tinggi di Malaysia masih kekurangan himpunan perbendaharaan kata akademik yang seterusnya membawa kepada prestasi penulisan akademik yang lemah. Kajian ini telah membangunkan satu rangka kerja pengajaran langsung formula akademik yang digabungkan ke dalam kursus penulisan akademik. Objektif utama kajian ini adalah untuk menyiasat sama ada arahan langsung formula akademik (DIAF) akan berkesan dalam meningkatkan pengetahuan reseptif pelajar terhadap formula akademik sasaran (TAF) dan prestasi penulisan akademik mereka. Sampel kajian ini terdiri daripada lapan puluh ( $N = 80$ ) pelajar peringkat diploma dari sebuah universiti awam di Malaysia yang mendaftar untuk kursus penulisan akademik. Kajian ini menggunakan kaedah kuasi eksperimen, dengan satu kumpulan eksperimen dan satu kumpulan kawalan, untuk mengumpul data kuantitatif, dan temu bual kumpulan fokus untuk mengumpul data kualitatif. Pada kesimpulannya, DIAF didapati berkesan dalam meningkatkan pengetahuan reseptif subjek terhadap TAF dan prestasi penulisan akademik mereka. DIAF menggalakkan penggunaan lebih banyak TAF dan menggalakkan penggunaan TAF yang pelbagai dalam ujian pasca penulisan esei akademik (AEW). Saiz kesan (ES) DIAF lebih besar pada komponen 'bahasa' ( $ES = 0.98$ ) dan 'organisasi' ( $ES = 0.86$ ) berbanding dengan komponen 'isi' ( $ES = 0.45$ ) dalam ujian pasca AEW. Terdapat hubungan positif linear yang signifikan tetapi lemah antara bilangan TAF yang digunakan dalam ujian pasca AEW dan skor ujian tersebut ( $r = 0.473$ ), dan bilangan TAF yang digunakan adalah

peramal yang signifikan dalam mengangarkan skor bagi ketiga-tiga komponen ujian pasca AEW. Walaupun pemilihan TAF berdasarkan ‘corpus pedagogi’ akan memastikan contextualization lebih baik, kriteria pemilihan perlu mengambil kira tahap penguasaan pelajar. Kesimpulannya, pemilihan TAF adalah memainkan peranan yang penting dalam memastikan pelajar daripada semua peringkat kemahiran boleh mendapat manfaat daripada DIAF. Kajian ini menyumbangkan pandangan yang berharga tentang bagaimana untuk melaksanakan pengajaran langsung formula akademik dan menyediakan bukti empirikal mengenai kesan-kesan positif pengajaran langsung formula akademik dan fleksibiliti yang ditawarkan oleh DIAF yang membolehkan ia dilaksanakan dalam kelas penulisan akademik dengan silibus yang ditentukan oleh sesuatu institusi pengajian tinggi. Kepelbagaian penggunaan dalam konteks, pelajar sasaran dan pelaksanaan pedagogi, membolehkan guru-guru penulisan akademik Bahasa Inggeris (EAP/ESP) di peringkat tertiar melaksanakan pengajaran langsung formula akademik (DIAF) yang dipadankan dengan keperluan pelajar mereka tanpa mengira sukatan pelajaran atau pendekatan yang diguna pakai oleh institusi-institusi pengajian mereka.

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**ABSTRACT**

Many undergraduates pursuing tertiary level education at institutions of higher learning in Malaysia lack academic vocabulary repertoire which consequently leads to their poor academic writing performance. The study has developed a framework for academic formula instruction to be incorporated into an academic writing course. The main objective of the study was to investigate whether incorporating direct instruction of academic formulas (DIAF) would be effective in enhancing the students' receptive knowledge of the target academic formulas (TAF) and their academic writing performance. The sample of the study consisted of eighty (N=80) diploma level students from a public university in Malaysia enrolled in an academic writing course. The study employed a quasi-experiment with an experimental and a control group, and a focus group interview to collect the quantitative and qualitative data respectively. It was concluded that DIAF is effective in enhancing the subjects' receptive knowledge of TAF and their academic writing performance. DIAF promotes more TAF use and the use of more varied TAF in the post Academic Essay Writing (AEW) test. The effect size of DIAF was greater on 'language' (ES=0.98) and 'organization' (ES=0.86) components of the AEW test compared to the 'content' (ES=0.45) component. There is a significant but weak positive linear relationship between the number of TAF used in the post AEW test and the post AEW test scores ( $r=0.473$ ), and the number of TAF used is a significant predictor in estimating the scores for all the three AEW test components. Although TAF selection based on 'pedagogic' corpus would ensure better contextualization,

the selection criteria should take into consideration the learners' proficiency level. It was concluded that the selection of TAF is instrumental in ensuring that learners from all proficiency levels can capitalize on DIAF. This study offers valuable insights on how formula instruction can be operationalized and provides empirical evidence on the positive effects of DIAF and its flexibility that DIAF could be implemented in an academic writing class with an institutionally imposed syllabus. Diversification of use in context, target students and pedagogical implementation, allow EAP/ESP writing teachers at tertiary level to implement DIAF which is attuned to their students' needs regardless of the syllabus or approach adopted by their institutions.

## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction

Since Malaysia's independence in 1957, Bahasa Malaysia has become the country's official language and the medium of communication in the public services. Bahasa Malaysia has been used as the sole medium of instruction for national schools or '*sekolah kebangsaan*' at the primary and secondary levels since 1983 (Darus, 2009). Nevertheless, English is considered a second language and is taught as a compulsory subject for six and five years in primary and secondary schools respectively. Additionally, English still has its prominence in the areas of cultural developments such as science and technology, international business and diplomacy (Puteh, 2010). It is also used as a medium of instruction for technical areas at tertiary level education (Puteh, 2010) and although public universities in Malaysia officially use Bahasa Malaysia as the medium of instruction for non-technical courses, most of the reading materials pertaining to these fields of studies are written in English. Thus, for undergraduates enrolled in the institutions of higher learning in Malaysia, a good command of English is indispensable.

However, it has been reported that many undergraduates in Malaysia's public and private universities do not have the command of English expected of tertiary level learners (Adzmi, Bidin, Ibrahim & Jusoff, 2009). They are greatly disadvantaged due to this reason and often face difficulty when dealing with academic tasks especially academic writing (Krishnakumari, Paul-Evanson, & Selvanayagam, 2010). There is growing evidence that undergraduates' lack of competence in academic writing affects their overall academic performance (Abu Hasan, 2008; Ismail, 2008; Muhammad, 2007; Nambiar, 2007), since

undergraduates' academic performance is evaluated mostly based on their written work (Kelley, 2008; O'Ferrell, 2005). There is also evidence that this problem has long term consequences since research conducted among Malaysian unemployed graduates has identified poor communication skills in English (oral and written) as one of the contributing factors to these graduates' inability to secure employment (Ismail, 2011; Shakir, 2009).

## **1.2 Background of the Study**

As a second language, English is taught as a subject in Malaysian schools both at the primary and the secondary levels. By the time the students enrol into tertiary level programmes they would have had at least eleven years of formal English language instruction. However, for many of these undergraduates the length of exposure to English is not reflected in their proficiency level. The transition from school to university culture in itself is already very demanding for many of them. The difficulty faced by the students in coping with their content studies is further compounded by their lack of proficiency in English.

The concern over low literacy attainment in English language among Malaysian learners has been investigated quite extensively. A review of research conducted to examine English language learning in Malaysian schools reveals that one of the major obstacles in learning English is the strong influence of the national language or Bahasa Malaysia (Jalaludin, Mat Awal & Abu Bakar, 2008; Maros, Tan & Salehuddin, 2007; Stapa & Abdul Majid, 2006). Others have attributed the limited success among Malaysian learners in acquiring English language proficiency to what they aptly termed as "privileging examination" (Koo, 2008, p.56). Due to high importance placed on national examination, the more popular teaching method in schools is drilling using past-year examination questions, work sheets and exercise

books (Pandian, 2002) which do not encourage effective learning in the English classroom (Pandian, 2006). Thus, the students who emerged from the school system are characterized as those who could pass the examinations and advanced to tertiary level without actually being able to use the English language productively (Che Musa, Koo & Azman, 2012).

Owing to these reasons, the proficiency level of many undergraduates pursuing tertiary level education in Malaysia does not meet the basic requirement for tertiary level studies. Thus, these undergraduates often face difficulty in coping with the academic demand of their content studies as many of them have problems in performing the basic tasks of academic reading (Mohd. Noor, 2006; Nambiar, 2007) and writing (Kaur, Othman & Abdullah, 2008). Some of them required longer time to complete their written assignment such as their final year project report in English (Abdul Halim, Ahmad Ahsan & Abdul Munir, 2012), while others face difficulty in completing their written assignments such as reports and term papers because they lack the conventions of academic writing which are essential to writing well in their academic discipline (Krishnakumari et al., 2010).

**1.2.1 Writing ability of Malaysian undergraduates.** Studies examining undergraduates' academic writing ability were conducted by Ting and Tee (2008) and Osman and Bakar (2009) among TESL and medical undergraduates from different Malaysian public universities respectively. Both studies found that the undergraduates involved were not able to express themselves effectively due to their poor command of the academic vocabulary as well as grammar. These in turn contributed to their poor academic writing performance. According to Ting and Tee (2008), the TESL undergraduates in their study had poor academic writing skill, especially in terms of the development of ideas in various stages. At the same time,



language features such as modality, conditional clauses and connectors were not appropriately used to achieve communicative goals due to their limited knowledge of academic text-type.

A related study was conducted by Teoh (2009), who investigated the lexis used in compositions by undergraduates enrolled at a private college in Malaysia. It was found that most of the students, who came from Mandarin and Malay speaking background, had inadequate vocabulary knowledge to communicate their ideas when writing academic papers. As a result, many resorted to plagiarizing from the internet and other sources. A related study by Adzmi et al. (2009) on the needs of Industrial Design students of a public university in Malaysia, found that the students encountered difficulties when performing academic tasks related to their content area due to their lack of knowledge in the academic language skills relevant to that particular field.

It is evident that many Malaysian undergraduates have limited academic vocabulary knowledge and since vocabulary plays an important role in academic reading and writing, insufficient academic vocabulary knowledge inevitably affects the learners' academic performance in their content areas. Reads (2000) pointed out that ESL learners pursuing tertiary level education should acquire the university word level with a vocabulary of about 5,000 to 10,000 word families. Nation (2006) estimates that 8,000 to 9,000 word families is needed for unassisted comprehension of written text and a vocabulary of 6,000 to 7,000 word families is needed for comprehension of spoken text, if 98% coverage of a text is required. Based on these estimates, it can be inferred that Malaysian undergraduates should at least reach the university word level of 5,000 word families to function effectively in their academic programmes. However, studies conducted among undergraduates from public as well

as private Malaysian universities have revealed that many undergraduates' mastery of both general and academic vocabulary is far below the university word level of 5,000 word families.

Research conducted by Mathai, Jamian and Nair (2004) among 441 Engineering undergraduates from a public university found that the students' level of vocabulary knowledge did not reach the university word level of 5,000 word families. Jamian, Sidhu and Muzafar (2008) conducted a similar study among teacher trainees pursuing a bachelor degree in Teaching English as a Second Language (TESL) from a public Malaysian university. It was found that the students' mastery of productive vocabulary knowledge on average is 80% at 2000 word level, 66% at 3000 word level, 44% at 5000 word level and 33% at 10,000 word level. The findings show that the subjects in the study failed to achieve even 50% at the university word level (academic vocabulary). Additionally, despite the students' high engagement with listening, reading, speaking and writing activities in English, their involvement in the activities did not correlate with the mastery of vocabulary knowledge.

A more comprehensive study was conducted by Mokhtar (2010) among 360 undergraduates from a Malaysian public university. The majority of the subjects in the study failed to achieve the passing level of the 'Passive' and 'Controlled Active Vocabulary Test', which means that they had poor receptive and productive vocabulary knowledge. The findings show that the average size of the students' passive vocabulary was 1,528 word families for semester one, 1,653 word families for semester two and 1,968 word families for semester three. These averages indicate a growth rate of 440 word families per year. On the other hand, the average size of the students' controlled active vocabulary was shown to be 1,691, 2,116 and 2,154

for semester one, two and three respectively with a growth rate of 459 word families per year. At this rate, to achieve the target of 5,000 word families seems like a daunting task.

Likewise, Abdullah (2012) conducted a study to evaluate vocabulary mastery of 407 undergraduates from a public Malaysian university and found that nearly two-third of the students failed to reach the vocabulary threshold level needed to competently comprehend reading materials in English. It was also found that although the majority of subjects in the study recognized the need to improve their vocabulary level, few of them took the necessary steps to enhance their vocabulary knowledge.

Kaur et al. (2008) examined the level of lexical competence of a group of students of various language proficiency levels at an institution of higher learning in Malaysia. It was found that the participants in the study lack word-knowledge necessary to cope with the demand of their academic courses. Higher proficiency learners in the study had vocabulary knowledge of only around 2,000 word-level and could deal with tasks requiring vocabulary knowledge of 3,000 word-level. Average proficiency learners were found to be able to cope only with tasks requiring 1,000 to 2,000 word-level knowledge while weak ability learners' word knowledge did not even reach 1000-word level and could only perform tasks requiring around 1000 word-knowledge. As a consequence, many of these undergraduates were facing problems in coping with their core subjects in their academic programmes.

Based on the findings of research conducted among Malaysian undergraduates, it can be concluded that one of the main contributing factors to their lack of academic language proficiency is lack of academic vocabulary knowledge. Hence, the situation in Malaysian ESP and EAP classrooms calls for a review of

instructional methods and practices to expedite the acquisition of academic vocabulary among Malaysian undergraduates in general and UiTM undergraduates in particular, and to facilitate their induction into their respective academic disciplines.

**1.2.2 Academic writing course in UiTM.** Since low academic English language proficiency among undergraduates especially academic writing is a common problem among Malaysian school leavers, many institutions of higher learning in Malaysia are offering academic writing course as part of their English for Specific Purposes (ESP) and English for Academic Purposes (EAP) packages.

Academic writing course is offered to diploma level students at Universiti Teknologi MARA (UiTM), as part of its English for Academic Purposes (EAP) package. The main objective of the course is to prepare the students to write effectively in their content studies since English is used as the medium of instruction for all technical as well as some non-technical programmes. The course is conducted six hours per week, and is made up of three components; academic reading, academic writing and speaking, with two contact hours allocated for each component. The weightage for evaluation of the speaking and reading components is 20% each while 60% is allocated for the writing component. The evaluation of the writing component is based on: (a) a term paper (30%) and (b) final examination (30%). Throughout the course, the students submit three written assignments: an outline of the term paper (5%), a draft of the term paper (10%) and the term paper (15%). At the end of the semester, they sit for the final examination which covers academic reading comprehension (10%) and academic writing (20%). The course adopts the process writing approach of instruction where the students go through stages in the writing process which are planning, drafting and revising. After each stage, the student's written work is reviewed by their peers and teachers and is

returned to be revised. The revised work is submitted for evaluation only after several drafts.

True to the process writing principle, the issues of grammar and lexis are sidelined and addressed only as needed in the context of writing. Process-oriented writing approach gives more emphasis on linguistic skills such as ‘brainstorming for ideas’, ‘developing an outline’, ‘drafting’, ‘editing’ and ‘revising’ and sidelines linguistic knowledge such as grammar and lexis due to the assumption that university students (being advanced L2 learners), will naturally acquire the L2 grammar and lexis if exposed to texts and discourse to learn from (Hinkel, 2004). Zamel (1982) stated that teaching ESL writing through the writing process and revising multiple drafts allows ESL practitioners to hope that L2 writers would develop themselves and would overcome their weaknesses in grammar and lexis over time. However, like many undergraduates from other institutions of higher learning in Malaysia, UiTM undergraduates’ proficiency level does not meet the criteria of ‘advanced level L2 learners’ to begin with. In fact, there is evidence that it is far below the level expected of tertiary level learners (Adzmi et al., 2009). It is also observed based on research conducted among UiTM undergraduates that they do not have sufficient academic vocabulary repertoire (Mathai et al., 2004; Mokhtar, 2010; Jamian et al., 2008) to function effectively in their content studies. Although the inception of process-oriented writing approach was espoused by sound theoretical foundation (Leki, 1996), ESL writers like many UiTM’s undergraduates lack the necessary language skills to capitalize on the advantages and benefits offered by the process-oriented writing instruction.

**1.2.3 The need for academic vocabulary instruction.** The findings from the research discussed in section 1.2.1 to 1.2.2 have established the need for

academic vocabulary instruction to develop undergraduates' proficiency in academic writing. Hinkel (2004) has proposed that in addition to grammar, academic vocabulary should also be explicitly taught in an academic writing class. However, due to limited time allocated to developing academic writing at tertiary level, the variety of academic vocabulary to be explicitly taught has to be narrowed down in order for the proposal of direct instruction to be practical. Thus, this study has turned to recent development in second language acquisition (SLA) research which has amassed mounting evidence on the highly formulaic nature of language based on research conducted in the fields of corpus linguistics and psycholinguistics (Biber & Barbieri, 2007; Biber, Conrad & Cortes, 2004; Conrad, 2008; Ellis, 1996; Erman & Warren, 2000; Foster, 2001; Howarth, 1998; Rayson, 2008; Sinclair, 1991; Wray, 2002) to address the problem.

Formulaic language or formula, "fulfil the same functions as single words" (Boers & Lindstromberg, 2012, p. 84) and similar to vocabulary knowledge which has been found to be a strong predictor of general proficiency (Lewis, 2002; Schmitt, Jiang & Grabe, 2011; Singleton, 2000), L2 learners' knowledge of multiword lexis is highly correlated with proficiency level. Based on the findings of a study by Zhang (1993), it was concluded that there is a significant correlation between knowledge and use of English collocation and writing proficiency. Al-Zahrani (1998) found a significant correlation between the subjects' collocational knowledge and their overall language proficiency and Keshavarz and Salimi (2007) reported a correlation of  $r = .68$  between the learners' performance on a collocation test and their scores on the cloze test intended to gauge general proficiency, which inferred a strong linear relationship between the learners' collocational competence and proficiency level. In addition, analysis conducted on IELTS writing component by Kennedy and Thorpe

(2007) revealed that highly rated papers made use of higher number of formulas and Hawkey and Barker (2004) who analysed a set of compositions written by candidates of several different examinations had also arrived at the same conclusion.

The findings of these studies have provided some evidence of the positive relationship between ESL learners' knowledge of formulas and their writing as well as general proficiency. Therefore, it can be envisaged that enhancing the undergraduates' knowledge of academic formulas would be beneficial in improving their general proficiency level as well as their academic writing performance.

### **1.3 Statement of the Problem**

Research has shown that academic language proficiency is vital for accessing academic texts as well as academic talks (Bailey & Heritage, 2008), and academic language is also tied to the evaluation of their academic work (Nadarajan, 2011; Snow & Uccelli, 2009) since undergraduates' academic performance and grades are mostly based on their written assignments such as term papers, reports and examinations. As one of the public universities in Malaysia, UiTM is also facing the challenges of lacking in the academic language proficiency which contributes to poor academic writing performance among its undergraduates (Adzmi et al., 2009; Jamian et al., 2008; Mokhtar, 2010). Research conducted among Malaysian undergraduates has come to the conclusion that one of the factors which contribute to their weaknesses in academic writing is their poor knowledge of general as well as academic vocabulary (Adzmi et al., 2009; Kaur et al., 2008; Osman & Bakar, 2009; Teoh, 2009; Ting & Tee, 2008). Many of these undergraduates are reported to have not acquired the minimum level of vocabulary knowledge expected for tertiary level studies (Abdullah, 2012; Mathai et al., 2008; Mokhtar, 2010), thus are facing problems in expressing their thoughts and ideas clearly when it comes to the task of

writing academic papers in English (Jamian et al., 2008; Teoh, 2009). Due to their limited academic vocabulary repertoire many of these undergraduates have also had difficulties in developing their ideas and communicating them in writing.

Without intervention, this problem can be far reaching and can give rise to long term consequences. Its urgency can be seen in the results of various recent studies conducted among local and multi-national companies who have identified poor communication skills (oral and written) especially in English as one of the contributing factors to the inability of graduates to secure employment (Hairi, Ahmad Toe & Razzaly, 2011; Ismail, 2011; Shakir, 2009). This sentiment is also shared by representatives of organizations which participated in a survey among UiTM alumni employed in various local and multi-national companies. Representatives of these organizations had expressed their concern and trepidation over the inability of some UiTM graduates employed by their organizations to perform everyday workplace tasks satisfactorily due to their lack of proficiency in written and spoken English (Ong, Leong & Singh, 2011).

Based on the findings of the studies discussed so far it can be concluded that limited academic vocabulary repertoire has been one of the contributing factors to UiTM undergraduates' poor academic writing performance. It is apparent that there is a pressing need for an intervention programme to address this problem. It has been established that vocabulary knowledge is acquired incrementally (Nagy & Scott, 2000) and receptive knowledge is a requirement for productive vocabulary use (Melka, 1997; Waring, 2002). Research has shown that it takes several focus encounters in context with lexical items before they are receptively and eventually productively acquired (Marzano, 2005; Nation, 2007; Wallace, 2007). Thus, an intervention programme in the form of direct instruction of academic vocabulary



which promotes ‘noticing’ is envisaged to be beneficial in expediting ESL learners’ vocabulary acquisition which in turn will enhance their academic writing performance.

#### **1.4 Objectives of the Study**

The purpose of this study is to develop an instructional framework for academic formulas to be incorporated into an academic writing course employing a process-oriented writing approach. Its main objectives of the study are to investigate whether the students’ receptive knowledge of the target academic formula (TAF) and their academic writing ability can be enhanced by incorporating the proposed intervention in the form of direct instruction of academic formulas (DIAF) into the current academic writing course’s syllabus. The study would compare the performance of the experimental group which received DIAF (treatment) and academic writing instruction and the performance of the control group which received only academic writing instruction without the treatment. The objectives of the study are as follows:

**1.4.1 First objective.** To determine the effects of DIAF on the subjects’ receptive knowledge of the target academic formulas (TAF).

**1.4.2 Second objective.** To determine the effects of DIAF on the subjects’ academic writing performance.

**1.4.3 Third objective.** To determine the effects of DIAF on the use of TAF in the Academic Essay Writing (AEW) test.

**1.4.4 Fourth objective.** To establish whether the use of TAF in the AEW test affects the subjects’ academic writing performance.

**1.4.5 Fifth objective.** To investigate the subjects’ perception on the inclusion of DIAF in the academic writing course.

## **1.5 Research Questions**

Based on its objectives, the study attempts to address the following research questions:

**1.5.1 Research question 1.** What are the effects of DIAF on the subjects' receptive knowledge of TAF?

**1.5.2 Research question 2.** What are the effects of DIAF on the subjects' academic writing performance?

**1.5.3 Research question 3.** What are the effects of DIAF on the use of TAF in the post AEW test?

**1.5.4 Research question 4.** What is the effect of TAF use on the AEW test scores?

**1.5.5 Research question 5.** What is the subjects' perception on the inclusion of DIAF in the academic writing course?

## **1.6 Rationale of the Study**

Many Malaysian undergraduates lack knowledge of academic vocabulary which contributes to their poor academic writing performance. The current Academic Writing course offered in UiTM employs the process writing approach, and true to the process writing principle, it side-lines the importance of linguistic knowledge such as vocabulary. The proposed intervention model (DIAF) is hoped to counter the inadequacy of the process writing pedagogy. Subsequently the study aims to explore the possibility of synthesizing the approaches to writing instruction by taking into consideration the theories of product, process and genre.

## **1.7 Significance of the study**

This study is significant because it addresses one of the important academic issues confronting Malaysian undergraduates' academic performance. Since

undergraduates' academic performance is assessed through their written works, their academic writing ability is one of the determinants of academic success. The study has proven that direct instruction of academic formulas (DIAF) is effective in enhancing undergraduates' academic writing performance and has pedagogical implications.

**Firstly**, it could assist ESP and EAP teachers at tertiary level to improve their academic writing instruction by directly teaching academic formulas to their students. **Secondly**, owing to its practical implications, this study is significant specifically for instructional designers who are developing instructional or training materials for schools and institutions of higher learning. Types of exercises used in the study may be used as teaching materials to be included in their training packages or textbooks. **Thirdly**, the study hopes to highlight the importance of direct academic vocabulary instruction at tertiary level by providing evidence of its benefits. This study has provided some evidence that direct teaching of academic formula can enhance the students' academic vocabulary acquisition which consequently improves their academic writing performance. **Finally**, the researcher also hopes this study would contribute to the pool of knowledge in the field of second language acquisition, to help both teachers and learners of English find out effective approaches as they advance along with their teaching and learning.

### **1.8 Limitations and Scope of the Study**

Not unlike other studies, the present study also has its limitations, and in order to keep the study within a manageable framework the scope of the study was established. The following points are considered the limitations and the scope of the study.

**1.8.1 Limitations.** A limitation of a study is defined as “potential weaknesses or problems with the study identified by the researcher” (Creswell, 2008, p. 207). It is a threat to the internal validity of a study which is beyond the ability of the researcher to control. There are two limitations which have been identified:

Firstly, the study is conducted in the normal classroom setting with the number of subjects in both the experimental and control groups kept intact as their original number. Thus, it cannot claim to be having true experimental conditions in which there is random assignment of subjects for the experimental and control groups (Vellutino & Schatschneider, 2004).

Next, a quasi-experimental design has been chosen for this study due to constraints faced by the researcher. While the design permits the researcher to conduct the study in the natural setting of a normal classroom, it has brought about some limitations to the design and implementation of the study. Consequently, the research design hinders the researcher from generalizing the results to populations other than those being studied.

**1.8.2 The scope of the study.** The scope of the study is assigned to keep the study within a manageable framework and to deal with issues of external validity, or generalizability (Charles, 1998; Creswell, 2003).

Firstly, the two tests employed as research instruments in the study, Target Academic Formula (TAF) test and Academic Essay Writing (AEW) test, are designed to measure the subjects’ receptive knowledge of TAFs and their writing performance respectively. Although essay type test such as AEW has lower reliability compared to objective type test, it has been chosen due to its high validity in testing writing ability. In addition, both instruments have been validated using

self-validation, expert validation and pilot validation to ensure internal and external validity. (Refer to section 3.7.3)

Secondly, the treatment in the study (independent variable) was carried out during 6 lessons (12 hours) taken from an existing fourteen-week course. Thus, to minimise external threats to its validity, lesson plans for all fourteen weeks were prepared for both the experimental and control groups. (Refer to Appendix K)

Thirdly, the instrument utilised in the qualitative data collection was a focus group interview. Due to time constraint and to keep the data within a manageable size, only two groups were interviewed. Thus, its implications are limited to those which can be based on the participants' responses.

Finally, the subjects in this study were diploma level students from a public institution of higher learning in Malaysia, where the majority of the students are Malays. Due to this, the study does not intend to make any generalization other than to institutions which share the same population.

## **1.9 Definition of major terms**

This section provides the reader with a general overview of the major terms employed in this study. The definitions of terms as they were utilised in this study are presented as a guide to the reader. The terms are:

*Direct instruction:* A general approach to instruction which involves explicit explanations, small learning steps, frequent review and frequent teacher-student interactions (Rosenshine & Stevens, 1984).

*Formula:* "...a sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar" (Wray, 2002, p.9).

*Academic Formula:* Formula in corpora of written and spoken language which occur significantly more frequently in academic than non academic discourse and inhabit a wide range of academic genres, helping to shape meanings in specific contexts as well as contributing to the sense of coherence in a text (Hyland, 2012; Simpson-Vlach & Ellis, 2010).

*Academic Formula List (AFL):* A list of over 200 three-, four-, and five-word bundles which are statistically more common in academic texts than in a large corpus of 15 non-academic spoken and written genres (Simpson-Vlach & Ellis, 2010).

*Target Academic Formula (TAF):* In this study thirty formulas were chosen from the Academic Formula List (AFL) on the basis that they are part of the subjects' "pedagogic corpus" (Willis, 2003, p.163), corpus made up of materials used in the classroom to support teaching. The corpus for this study includes a textbook entitled EAP Crossing Borders (Michael et al., 2010) and supplementary teaching material. (Refer to Appendix G)

*Receptive Vocabulary Knowledge:* Recognizing a word when heard or encountered in reading which includes the ability to distinguish between words which have similar forms but different meaning. Having the knowledge of the different parts that make up the word as well as its meaning in context, the concept behind the word as well as words it co-occurs with. (Nation, 2001; Reads, 2000)

*Productive Vocabulary Knowledge:* In addition to its receptive knowledge, knowing a word for productive knowledge would include "knowing how to spell and pronounce the word, how to use the word in grammatically correct patterns and to choose words that it collocates with". (Nation, 1990, p. 31)

*Academic Writing:* The forms of expository and argumentative prose used by university students and researchers to convey a body of information about a

particular subject. It is characterized by a formal style of expression, namely a formal tone, use of the third-person rather than first-person perspective, clear focus on the issue or topic rather than the author's opinion, and precise word choice (Coffin et al., 2003).

*Academic Writing Performance:* Academic writing ability or competence (Brown, 2004). It refers to the ability to write academically by adhering to the academic writing convention.

*A Selected Public University:* Refers to Universiti Teknologi MARA (UiTM), Perak Campus.

## **1.10 Organisation of the Study**

This thesis on “The Effects of Direct Instruction of Academic Formulas (DIAF) on the Receptive Knowledge of the Target Academic Formulas (TAF) and the Academic Writing Performance among Diploma Level Students at a Selected Public University” is organized into five chapters.

**Chapter One** is an orientation chapter in which the introduction, background to the study and the statement of the problem are presented. It discusses the background of the study by highlighting some of the problems faced by Malaysian undergraduates which have brought about the need for this study. The objectives of the study and the research questions are formulated in this chapter. This is followed by the presentation of the significance, limitation and delimitation of the study. The definitions of terms are listed at the end of this chapter.

**Chapter Two** reviews the literature related to the present study. It begins with a discussion on the importance of academic writing skills to tertiary level learners. It is followed by a discussion on the importance of lexis in L2 academic writing and subsequently an overview of formulaic language is presented. The

theories of L2 writing and approaches in L2 writing instruction are examined next, followed by a discussion on direct teaching of the academic formula in the academic writing class and its cognitive basis. All the interconnected theories discussed would develop into a theoretical framework of the study. It then examines some related studies and issues put forward by linguists and highlight some areas where they concur and differ in opinions. Next, the chapter reviews earlier intervention studies and their proposed methods of formula instructions. Finally the chapter concludes with the pedagogical framework of the study.

**Chapter Three** presents the design of the study by providing an extensive description of the methodology employed. It describes the population and the research sample, the treatment, measuring instruments and experimental procedures. The statistical methods that were utilized for analyzing the data were discussed at the end of the chapter.

**Chapter Four** presents the statistical analyses of the results and findings obtained from the collected data.

A discussion of the results, summary of the whole thesis, conclusions, implications of the study, limitations, recommendations for further study, and contribution of the study are presented in **Chapter Five**.

### **1.11 Conceptual Framework of the Study**

The conceptual framework of the study is presented in Figure 1. On the left is the students' 'previous knowledge' which they have acquired before the experimental period. In the middle is the 'input' which includes process writing instruction plus the proposed intervention (DIAF) for the experimental group and process writing instruction without intervention for the control group. On the right is the 'output' which includes receptive and productive knowledge. The receptive



knowledge that becomes the output is the knowledge of TAF while the academic writing performance and TAF use are the productive knowledge. The third output is the experimental group's perception of DIAF.

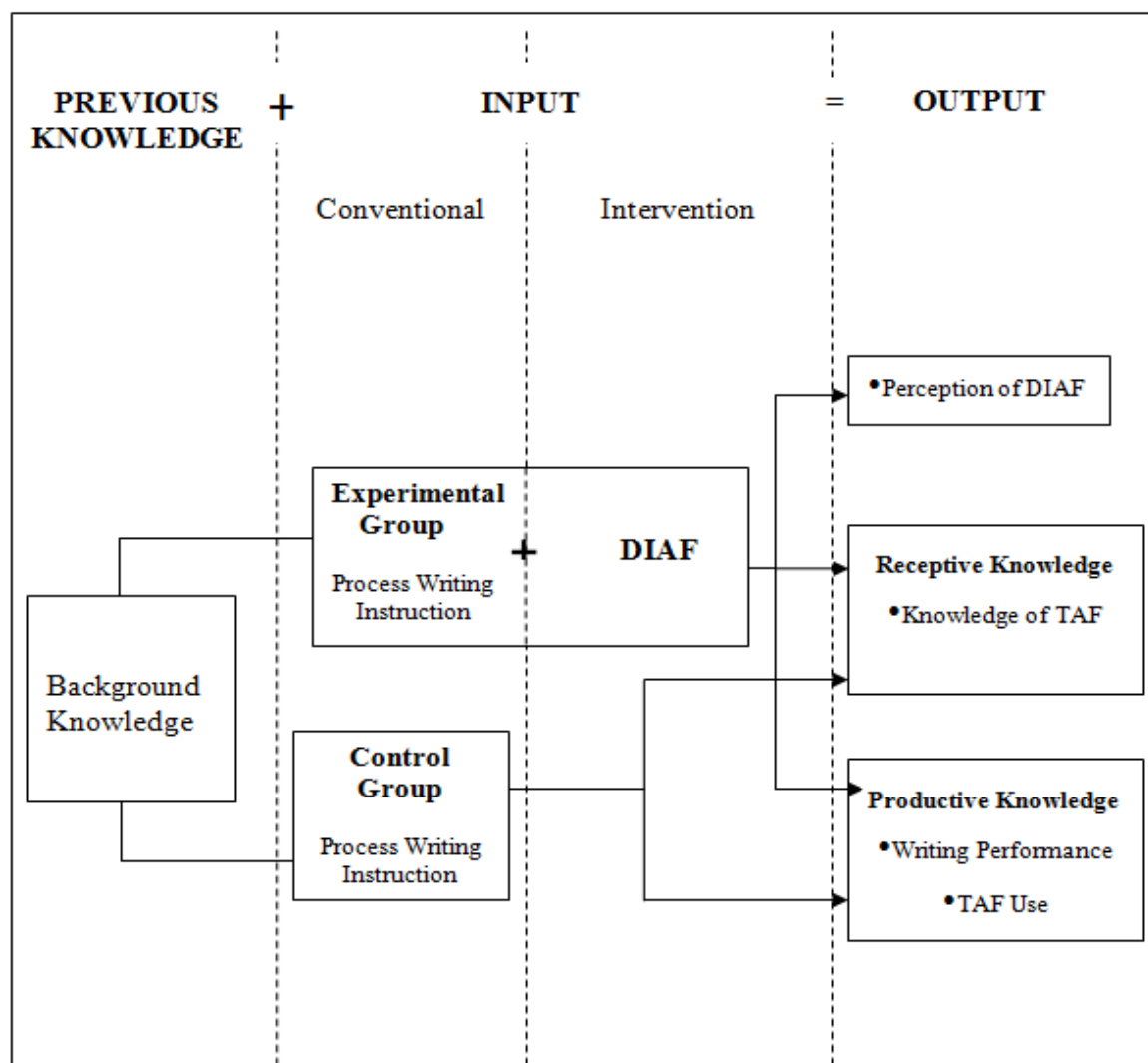


Figure 1. Conceptual Framework of the Study

## 1.12 Chapter Summary

Poor academic writing proficiency among undergraduates has been a major concern among ESP/EAP teachers at tertiary level in Malaysia. Academic writing skill is important for tertiary level learners since students' academic performance is evaluated mostly based on their written work, and academic writing is a literacy practice which connects the students' admission into their disciplinary communities

and the acquisition of the formal conventions associated with them. However, it has been reported that many Malaysian undergraduates in general and UiTM students in particular, lack both receptive and productive vocabulary knowledge expected for tertiary level studies which in turn contributes to their poor academic writing performance. It has been proposed that academic vocabulary should be explicitly taught in an academic writing class for ESL learners. Nevertheless, due to limited time allocated to developing academic writing at tertiary level, instead of teaching individual academic words, the study had focused on teaching academic formulas. In the study, direct instruction of the target academic formula (DIAF) was incorporated into an academic writing course employing a process-oriented writing approach. Since process-oriented writing approach by definition does not include instruction of lexis, the current study has developed a model to counter this problem. The first objective of the study was to determine the effects of direct instruction of the academic formula (DIAF) on the subjects' receptive knowledge of the target academic formulas (TAF). Secondly, the study sought to determine the effects of DIAF on the subjects' academic writing performance. The theoretical and pedagogical framework of the study will be discussed in the following chapter.

## **CHAPTER 2**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

The present chapter reviews the relevant literature related to vocabulary acquisition, formulaic language, major theories on L2 writing and approaches in L2 writing instruction to provide the theoretical background to the investigation carried out in the study. The theoretical framework of the study is presented to show the elements that the present study builds on while highlighting the places in which the theories overlap. The chapter also deals with related research and intervention studies using formulas and examines previous studies that the present study builds on. Drawing on the discussions of past research related to formula instruction, the pedagogical framework of the proposed intervention model is presented at the end of the chapter.

#### **2.2 The Importance of Academic Writing Skills to Tertiary Level Learners**

One of the skills essential for tertiary studies is the ability to write academically since undergraduates have to make a transition from school-based to university-based writing when entering their respective academic programmes (Jones, Turner & Street, 1999). University students are expected to use academic writing as a tool for accessing university culture, understanding disciplinary discourses and negotiating power relations while at the same time constructing their individual identities, new generic and discipline specific knowledge (Jones et al., 1999). Academic writing is a literacy practice which provides “the link between students’ entry into disciplinary communities and their acquisition of the formal conventions associated with the academy...” (Leibowitz, Goodman, Hannon & Parkerson, 1997, p.5). University students are required to learn how to operate

successfully in an academic discourse that implies knowledge of the lexical convention, expectations and formulaic expressions particular to the discourse community (Bhatia, 1993; Flowerdew, 2000). Research has shown that academic language proficiency is important for accessing academic texts as well as academic talks (Bailey & Heritage, 2008; Schleppegrell, 2004). It is vital that tertiary level learners learn to think like a scientist, a historian, or a writer and they can only do this if they are proficient in the academic language (Honig, 2010). In addition, academic language or academic English is tied to the assessment of their academic performance (Nadarajan, 2011; Snow & Uccelli, 2009) since undergraduates' academic performance is evaluated mostly based on their written work (Kelley, 2008; O'Farrell, 2005) such as term papers, progress and final year project reports and other types of written assignments.

**2.2.1 The definition of academic English and its features.** Among the earlier definition of academic English was by Cummins (1979, 1996) who makes a distinction between language used in social and academic settings, and theorizes that there are two types of English proficiency which are basic interpersonal conversational skills (BICS) and cognitive academic language proficiency (CALP). BICS was considered social English while CALP, academic. ESL learners have to acquire cognitive academic language proficiency (CALP) in order to function effectively in academic setting and to write academically.

Since then, many definitions of academic language have emerged. However, the definition which has been adopted by this study is the one which refers to it as a register or style, and is normally used within a specific socio-cultural academic setting (Bailey & Heritage, 2008; Schleppegrell, 2004). Snow (2010) noted that there is no precise boundary that defines academic language. It falls toward one end of the

continuum (defined by formality of tone, complexity of content, and degree of impersonality of stance), with informal, casual, conversational language at the other end. Nagy and Townsend (2012, p.92) define academic language as “... the specialized language, both oral and written, of academic settings that facilitates communication and thinking about disciplinary content.”

Zamel (1998, p.187) states that academic discourse has its distinguishing style and features “...because it appears to require a kind of language with its own vocabulary, norms, sets of conventions, and modes of inquiry, academic discourse has come to characterize a separate culture...”.

Research on identifying these features has focused on the different aspects of academic language such as academic vocabulary (Coxhead, 2000; Nation, 1990; Schmitt & Mc Carthy, 1997) academic registers (Flowerdew, 2002) and expression of stance (Charles, 2003; Hyland, 1994) to name a few. In academic writing, ideas are packed into fewer words, primarily through a greater variety of lexical items or vocabulary (Coffin et al., 2003). Wright, Taylor and Macarthur (2000, p.112) describe academic English as the language used “to communicate outside of and unrelated to” any certain context. According to Wright et al.(2000) the context does not provide much clue about what the communication means, as abstract ideas are described and manipulated, thoughts are analyzed and problems are solved. Another point of view considers academic English as the language of school-based learning and extended, reasoned discourse (Gersten et al., 2007). In acquiring academic English, learners build on their existing language foundation that they have developed since their childhood as well as the language they acquire from a wider cultural community (Schleppegrell, 2004; Zwiers, 2008).