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Explicit Discourse Marker Instruction to Improve Coherence and Cohesion in Academic Writing

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Abstract

This quasi- experimental study examined the effects of explicit discourse marker (DM) instruction on ESL learners' academic writing performance. Two intact groups of pre-degree students enrolled in an academic writing class at a public university were involved in the study. One group was assigned as the experimental group and the other was assigned as the control group. Both groups went through similar academic writing instruction employing the process-writing approach. However, the experimental group was also subjected to intensive instruction on the use of DMs. The study hopes to address the following research questions. RQ1: What are the effects of DM instruction on the subjects' use of discourse markers in their Academic Essay Test (AET)? RQ2: What are the effects of DM instruction on the subjects' AET scores for the three writing sections; 'content', 'language' and 'organization'? It can be concluded that explicit teaching of DMs is beneficial in encouraging the use of DMs in the subjects' academic essays. The experimental group was found to perform significantly better than the control group in the post AET. DM instruction does not only improve the 'organization' section of the essay but also the 'language' and 'content' sections as well. The effect size of the treatment on the post AET is medium in relation to 'organization' but large for 'content' and 'language'.

Keywords: Coherence, Cohesion, Discourse Markers, Academic Writing

Introduction

Of the two productive language skills, learning to write is more challenging than learning to speak for L2 learners. This is mainly due to the fact that during the writing process ideas have to be expressed without the help of body language, intonation or eye contact, which are present in oral situation (Afsaneh & Hossein, 2012). In addition to achieving grammatical accuracy, the writer also needs to ensure coherence and cohesion in his written texts. As outlined by Halliday

and Hasan (1976), coherence and cohesion are important key elements that any written product must have in order to be recognized as 'good' writing. One way to achieve coherence and cohesion in writing is through words and context (Kies, 2003), and one effective way to realize this is by using discourse markers. The use of discourse markers (henceforth DMs) is advantageous since it provides guidance to the audience as to how the text is structured. Through the numerous words and phrases of DMs available, the writer can provide structural arrangements particularly in the introductions and conclusions to academic writings (Wei, 2013). DMs allow readers to pause and process linguistic signals due to segmentations that they provide and are essential tools that enhance students' writing abilities (Sharndama & Yakubu, 2014).

Study Background

Academic writing skill is essential for university students since undergraduates' academic performance and grades are mostly based on their written assignments such as term papers, reports and examinations (Nadarajan, 2011; Snow & Uccelli, 2009). Due to these reasons most universities make it compulsory for their first year students to enrol in an academic writing class as part of their English for Academic Purposes (EAP) package.

Coherence and Cohesion in Academic Composition

There are three main sections that are assessed in any academic composition. They are 'content', 'language' and 'organization'. Coherence and cohesion are aspects of an essay which are important but often overlooked (Modhish, 2012). Usually coherence and cohesion are grouped under 'organization' in writing rubrics (refer to table 3). Kies (2003) stresses that coherence is attained through many different methods. In writing, as compared to speaking, writers must ensure the pattern of coherence that they employ is explicit and carefully planned. To achieve coherence is to be able to make every phrase, every sentence, and every paragraph contributes to the meaning of the whole written product, which leads to paragraph unity and sentence cohesion. Relatively, cohesion is achieved with the use of explicit language devices that link sentences. A proper use of cohesive devices such as reference, substitution, ellipsis, conjunction and lexical cohesion, as mentioned by Halliday and Hasan (1976) would contribute to the flow of an academic composition. These cohesive devices are important in providing a structure to the organization of the academic composition.

Problem Statement

Many ESL/EFL learners do not realize the importance of coherence in written discourse which contributes to their poor writing performance. Based on research conducted on EFL learners' writing ability, it was found that they often face problem in relation to structure and organization of ideas due to poor use of DMs (Ayman & Khaled, 2013). DMs are important parts of both formal and informal native speakers' language (Barnabas, Adamu, Delia & Tijani, 2012). In fact, several studies have found that there exists significant relationship between the scores of students' compositions and the number of DMs used (Andayani, 2014; Jaliifar, 2008; Martinez, 2004). These studies suggested that the frequency of DMs found in a composition could be used as an indicator of the quality of the compositions, and therefore of the students' writing skill in English. However, it was found that there was lack of relationship between writing quality and the use of DMs in the writing of Malaysian ESL students (Kalajahi & Abdullah, 2015; Melor & Fatimah, 2014).

It was found that the students did not use DMs effectively and appropriately in their writing. As a consequence, their intended meaning was not conveyed to the audience. Incorrect use of DMs (misuse, underuse and overuse) among Malaysian students can be attributed to their lack of knowledge on the use and functions of DMs (Melor & Fatimah, 2014). This study was conducted to address this problem.

Study Objectives

The main objective of this study is to examine whether explicit teaching of DMs in an academic writing class is advantageous in improving the subjects' knowledge on the use and functions of DMs in their writing. In the study, the Academic Essay Test (AET) scores of the experimental group which received academic writing instruction plus explicit instruction on the use of DMs (treatment) and the scores of the control group which received only the academic writing instruction were compared.

The following research questions (RQs) were addressed in the study. RQ1: What are the effects of DM instruction on the subjects' use of discourse markers in their Academic Essay Test (AET)? RQ2: What are the effects of DM instruction on the subjects' AET scores for the three writing sections; 'content', 'language' and 'organization'?

Literature Review

Pieces of language that are larger than a sentence and function together to convey particular information or ideas are called discourse. According to Cook (1992), there are two types of language as possible objects for investigation: the first type is language which is abstracted in order to teach a language or literacy, or to study how rules of language work, while the second is used to communicate something that is coherent. The later consists of parts or arrangements of language and how they cohere to communicate objectives.

Discourse Markers

DMs have been widely analyzed and discussed by linguists such as Levinson (1983), Schiffrin (1987) and Fraser (1993). There is a general consensus among researchers in relation to the underlying concept of discourse markers but the concept has been referred to using different labels. Among labels that have been accorded to discourse markers include: cue phrases (Knott & Dale, 1994), discourse connectives (Redeker, 1990), discourse signaling devices (Polanyi & Scha, 1983) and pragmatic connectives (Stubs, 1983).

There are also many definitions of DMs in the literature. This study has adopted the definition provided by Swan (2005) who states that DMs are words and expressions that we use to portray the structure of our discourse. They serve the purpose of connecting what we are saying, what we have said and what will be said.

There is a wide range of words that could be interpreted as DMs. These are mostly words with little lexical meaning that appear on the periphery of clause structure (Masaitiene, 2003). DMs are linguistic items such as 'so', 'because' and 'however' to name a few. They are a set of indications which create cohesiveness, coherence and meaning in discourse (Martinez, 2004).

DMs guide the reader and provide the clue of the direction of the flow of discourse as well as linking the various text elements.

Classification of Discourse Markers

Discourse markers have been classified into different categories. In this study, Fraser's (2004) classification based on semantic points of view was adopted.

	Category	Example
1	Contrastive Markers (CDMs):	but, alternatively, although, conversely, despite (this/that), in spite of (this/that), in contrast to...
2	Elaborative Markers (EDMs):	and, above all, also, besides, by the same token, equally, for example, in particular....
3	Implicative Markers (IDMs):	so, after all, all things considered, as a conclusion, as a consequence, hence, accordingly, then, therefore...
4	Temporal Markers (TDMs):	after, as soon as, before, eventually, finally, first, meantime, meanwhile.....

Table 1: Categories of Discourse Marker based on Semantic (Fraser, 2004)

Functions of Discourse Markers

Research has established that there is a link between coherence and cohesion of a text and the use of DMs (Andayani, 2014; Rahayu & Cahyono, 2015). The two-fold functions of DMs, which are the textual and the interpersonal function, are particularly significant in the process of teaching and learning. The use of DMs will lead to better communication, more structured writing, better interpretation of texts and speech, and on the whole, help improve learners' skills not only in speaking, writing, but also listening and reading (Swan, 2005; Wei, 2013). Academic and technical writing can be greatly improved through the use of DMs (Swan, 2005; Wei, 2013) as it can lead to efficient understanding of concepts and structure in written discourse.

Research on the Use of Discourse Markers Among ESL and EFL Learners

In a research carried out on the use of contrastive markers (CDMs) among the Japanese and Koreans ESL learners (Ying, 2009), it was found that the subjects used only CDMs they are familiar with. The CDM 'but' was most popularly used and it was only due to their habit of directly translating from their mother tongue into English. Ying (2009) attributed the limited and restricted use of CDMs to their fear or making mistakes.

Jaliifar (2008) studied the use of DMs of Iranian EFL learners in descriptive writing. He concluded that the use of discourse markers was effective in enhancing the subjects' composition writing quality. Although DMs were not the only cohesive devices in writing, the study concluded that compositions with more DMs were more cohesive and better organized. In a similar study conducted by Martinez (2002), Spanish undergraduates who used DMs aptly and effectively produced a better quality of writing.

Aidinlou and Shahrokhi mehr (2012) conducted a study on the effect of DM instruction on EFL learners' writing among Iranian students. They concluded that the effectiveness of

teaching text markers to students improves their awareness and sensitivity of discourse and subsequently increases their writing levels.

Ayman and Khaled (2013) conducted a study to identify the DMs used by Saudi Preparatory Year Program (PYP) EFL learners in essay writing and to determine the reasons for the underuse of DMs among them. They concluded that the PYP students overused the additive DMs followed by the causative, the contrastive and illustrative DMs. They concluded that PYP learners used a very limited range of DMs. They frequently used high frequency DMs such as 'and', 'in addition' and 'for example'.

Another related study was conducted by Melor and Siti Nor Fatimah (2014) to investigate the use of DMs by Malaysian Form Four intermediate level ESL learners in essay writing. They found that the misused and overused of discourse markers affected the flow of the students' essays and make them less coherent. Therefore, they concluded that DMs are important in writing and writing teachers should pay more attention in teaching DMs in their writing classrooms.

Explicit Teaching of Discourse Markers

The contentions for and against explicit teaching of language structure have been one of the most controversial in the past decades. Many researchers are in agreement that input is essential for successful second language acquisition (SLA) however, some scholars question the necessity of explicit instruction especially at tertiary level. According to DeKeyser (2003), explicit instruction which is defined as giving learners specific information or rule formulation about a target form has been found to play a significant role in adult second language (L2) learning. There have been numerous empirical studies which provide evidence that explicit instruction has a positive effect on acquisition such as those conducted by (Bagheri & Mahmoudi, 2015; Ellis, 1993; Hernández, 2011; Nazari, 2013; Norris & Ortega, 2000; Zyzik & Pascual, 2012) to name a few.

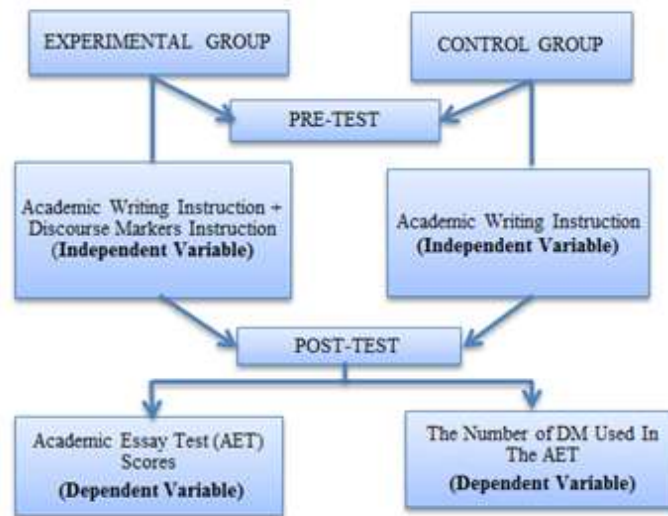
In contrast, some researchers found that the experimental groups which received explicit instruction in their studies performed no differently than the control groups which did not receive explicit instruction (Hernández, 2011; VanPatten & Oikennon, 1996; Wong, 2004). However, in these studies, the experimental groups were not provided with sufficient practice on the use of DMs. Thus, instead of providing evidence against explicit instruction, the studies had confirmed the importance of 'practice' or 'rehearsal' (to promote noticing) that should be part of teaching explicit knowledge.

According to the 'power law of learning' which is used to define the nonlinear relationships between practice and performance in a variety of cognitive skills, practice has the greatest effect at the early stages of learning but will soon reach a plateau (Anderson, 2001). Based on this law, the effects of exposure as in explicit instruction are very clear for learners who are at beginner level and lack experience with certain structures compared to those who are at more advance level (Ellis & Schmidt, 1998; Spelman & Kirsner, 2005). This suggests that non-native speakers will benefit more from practice compared to native speakers.

Research Methodology

This study employed a quasi-experimental method with an experimental and a control group. The method is chosen because the subjects in the study are available in readily formed classes (intact groups). The study period was twelve weeks during a fourteen-week semester. The first and the last weeks of the semester were used to conduct the pre and post-tests respectively. The study design is presented diagrammatically in Figure 1.

Figure 1: The Study Design



The Dependent and Independent Variables

There is one independent and two dependent variables for both the experimental and the control groups. The independent variable for the experimental group was the explicit teaching of discourse markers (DMs) plus the academic writing instruction which adopts the process-writing methodology while the independent variable for the control group was also the academic writing instruction which adopts the process-writing methodology but without explicit DM teaching. The scores of the pre and post AET and the number of target DMs used in the post AET were the dependent variables for the study.

Research Samples

The samples of the study were 44 students from two intact groups of Diploma in Town Planning programme from a public university who enrolled in the Writing for Academic Purposes course during the study period. The subjects came from the same age group (between 18-20 years old) and they had gone through the same formal ESL instruction in schools. The two groups (22 students in each group) were assigned as the experimental and control group respectively. The course is one of the university's requirements.

The Treatment

The experimental group underwent DMs instruction which was incorporated into the Writing for Academic Purposes course conducted two hours per week. Twenty-five DMs had been chosen as the target DMs and were explicitly taught to the experimental subjects. The subjects were taught how to use these target DMs appropriately in their writing and were exposed to academic texts at sentence and paragraph levels. The target DMs and their categories are shown in table 2.

CDM	EDM	IDM	TDM
although	besides	as a conclusion	Firstly/ secondly.....
but	in addition	in conclusion	Next
despite (this/that)	moreover	consequently	Finally
inspite of(this/that)	for example	hence	Lastly
on the other hand	furthermore	therefore	
in contrast		as a result	
however		thus	
whereas		so	

Table 2: Target Discourse Markers

The explicit DM instruction was carried out only during week 5, 6 and 7 (3x 2 hours). However, throughout the study period, the use and functions of DMs were highlighted and the students from the experimental group were encouraged to use the target DMs in all their in and out of class writing assignments.

On the other hand, the control group went through the normal Writing for Academic Purposes course. Incidentally, the topics of DMs and linkers were included in the course's prescribed textbook. Thus, although the subjects from the control group did not go through explicit DM instruction, they were incidentally exposed to the use of DMs.

Research Instrument

The researcher had developed the Academic Essay Test (research instrument) by adapting the question from the writing section of the Writing for Academic Purposes course's final examination paper. Academic Essay Test (AET) was utilized as the instrument to measure academic writing performance of the experimental and control groups in the pre and post tests.

AET consists of two articles of the same theme and one question for writing task. Based on the articles given, the students have to write an essay of between 300-350 words. The essay question was: **"Posting personal details on social networking websites brings more harm than good."** They were required to include in-text citation based on the two articles provided.

The allocation of marks for the AET for the different writing sections are: (a) eight marks for *content*, (b) six marks for *language*, and (c) six marks for *organization*. The total scores were then divided by twenty and converted to 100%. The test scripts were scored by an independent scorer. The scorer was given a marking scheme which includes three separate sections. The first section consists of general division of marks for the three writing sections. The second and third sections consist of analytic scales for rating the ‘content’ and ‘language’ respectively.

CONTENT:	8 MARKS
Development of Essay	Arguments need to support the thesis statement. Must include THREE main ideas with supporting details. NOTE: Please use attached document entitled “Analytic Scale for Rating Academic Essay (Content component)” when awarding marks for Content.
LANGUAGE:	6 MARKS
Grammar:	(3 marks)
Paraphrasing & Synthesizing	(3 marks) NOTE: Please use attached document entitled “Analytic Scale for Rating Academic Essay (Language component)” when awarding marks for Language.
ORGANIZATION	6 MARKS
Paragraph	Paragraphing (1/2 mark)
Introduction	Thesis Statement (1/2 mark)
Body	Topic sentences should be provided for each body paragraph (1 ½ marks).
Conclusion	
Coherence & Cohesion	Restatement of main points in conclusion (1/2 mark) Proper use of discourse markers and linkers in each paragraph (3 marks).

Table 3: The general marking scheme

The general marking scheme provides information on mark allocation for the different sections and detailed distribution of marks for ‘organization’ section as depicted in table 3. It provides general overview of how marks should be allocated for the whole test. Since coherence and cohesion fall under ‘organization’, improvement in the use of DMs should contribute to the scores for organization. The students would be awarded the maximum of 3 marks out of 20 marks for the whole essay (15%) for appropriately using DMs and other linkers.

The analytic scales for rating the ‘content’ and ‘language’ sections as shown in table 4 and table 5, were adapted from the Writing for Academic Purposes course’s final examination marking scheme for the writing section and Brown and Baily’s analytic scale for rating composition tasks (Brown, 2004: 244-245). Finally, the use of discourse markers in the post AET for both groups was manually counted and recorded.

SCALE	8	7	6	5	3-4	1-2
CONTENT	Fulfils task most competently.	Fulfils task competently.	Fulfils task satisfactorily.	Fulfils task modestly.	Fulfils task in a limited way.	Does not fulfil task.
Logical Development of Ideas	Essay addresses the assigned topic; the ideas are concrete and thoroughly developed; no extraneous material; essay reflects thought.	Essay addresses the issues but misses some points; ideas could be more fully developed; some extraneous material is present.	Development of ideas not complete or essay is somewhat off the topic.	Ideas incomplete; essay does not reflect careful thinking or was hurriedly written; inadequate in area of content.	Essay is inadequate for college level work; no apparent effort to consider topic carefully	Essay is completely inadequate and does not reflect college-level work; no apparent effort to consider topic at all
Main Ideas and Supporting Points	Distinguishes between main ideas and supporting details more effectively.	Distinguishes between main ideas and supporting details fairly effectively with hardly any inaccuracies.	Distinguishes between main ideas and supporting details reasonably well with minor inaccuracies.	Inconsistent ability to distinguish between main ideas and supporting details.	Hardly distinguishes between main ideas and supporting details.	Unable to distinguish between main ideas and supporting details.
Synthesis of Information	Synthesizes information completely.	Synthesizes information fairly effectively.	Synthesizes information satisfactorily.	Synthesizes information modestly.	Hardly synthesizes information.	No synthesis of information; a mere listing of points.

Table 4: The analytic scales for rating the 'content' section

	Excellent	Good	Average	Poor	
SCALE	6	5	3-4	2	1
Language	Display very confident control of language.	Display confident control of language.	Display satisfactory control of language.	Display modest control of language.	Display poor control of language.
Grammar	Almost flawless with hardly any grammatical errors.	Few grammatical errors.	Some grammatical errors.	Many grammatical errors.	Excessive grammatical errors.
Paraphrasing Skill	Ideas are well paraphrased with no problems in original structure and expressions.	Ideas are well paraphrased with hardly any problems in original structure and expressions.	Ideas are satisfactorily paraphrased with hardly any problems in original structure and expressions.	Attempts to paraphrase but with some problems in original structure and expressions.	Hardly any attempt to paraphrase with frequent problems in original structure and expressions.
Writing Convention	Correct use of English academic writing convention.	Some problems with English academic writing convention.	Uses general writing conventions but has errors, distract readers and interfere with ideas.	Serious problem with writing conventions; parts of essay not legible; unacceptable to educated readers	Complete disregard for English writing conventions; illegible; severe problems in spelling, punctuations
Style and Quality of Expressions	Precise vocabulary; parallel structures; concise; register good.	Attempts variety; good vocabulary; not wordy; fairly concise; register okay.	Some vocabulary misused; lacks awareness of register; too wordy.	Poor expression of ideas; problems in vocabulary; lacks variety of structure	Inappropriate use of vocabulary; no concept of register or sentence variety

Table 5: The analytic scales for rating the 'language' section

Data Analysis and Findings

Research Question 1

In order to answer RQ1, the number of target DMs utilized in the post AET for the experimental and control groups was analyzed. Figure 2 shows the frequency of use of each target DM by the experimental and control groups. As shown in figure 2, the target DMs which were used most frequently by the experimental group are temporal marking (TDM) 'firstly, secondly...' and elaborative marker (EDM) 'besides'. Two target DMs were not used by any of the subjects. They are 'in contrast' and 'in spite of'.

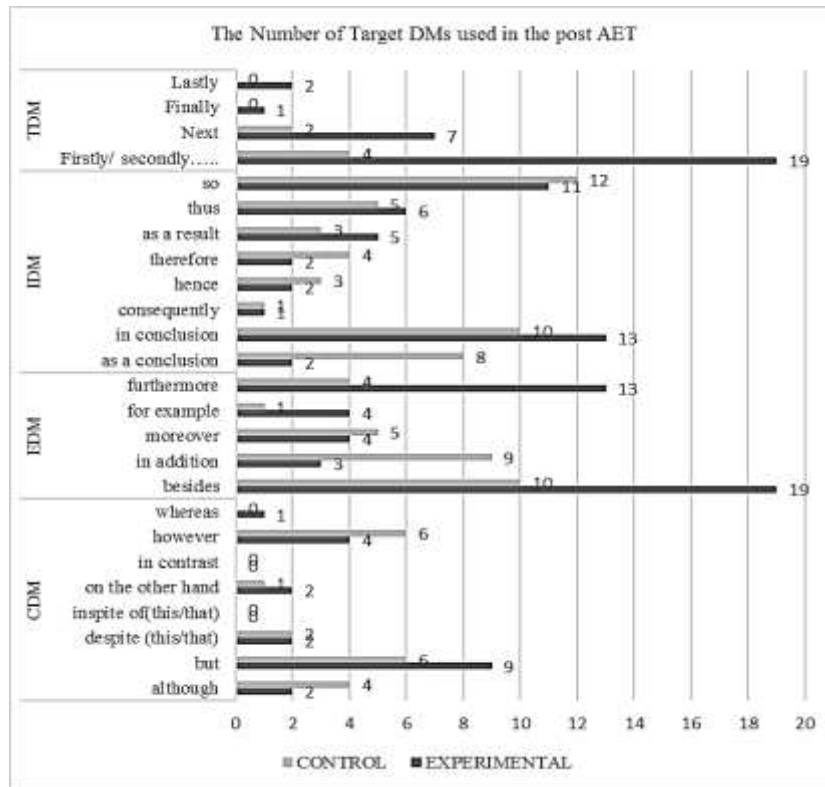
Seven target DMs were used more frequently by the control group. The target markers were the contrastive markers (CDM) 'however', 'although' the implicative markers (IDM) 'as a conclusion' and 'so', 'hence', 'therefore' and the elaborative marker (EDM) 'in addition'. The rest of the target DMs (18 markers) were used more frequently by the experimental groups.

Groups	CDM	EDM	IDM	TDM
Experimental	20	43	42	29
Control	19	29	46	6

Table 6: Total number of DMs used according to Categories

Table 6 shows the number of target DM used by the experimental and control groups according to categories. The experimental group was found to use more CDM, EDM and TDM while the control group had used more IDM than the experimental group. However, the DMs frequently used by the control group are high frequency common DMs such as 'as a conclusion', 'so', 'hence', 'therefore', 'however' and 'although'. It can be concluded that DM instruction has affected the use of DM by the experimental subjects. The experimental subjects used more DMs in the post AET compared to the control subjects and the experimental subjects had utilized a wider range of DMs in their writing.

Figure 2: The Frequency of Use for Each Target DM



Research Question 2

Group	N	Mean		SD	
		Pre	Post	Pre	Post
Experimental	22	48.73	66.25	13.54	12.07
Control	22	48.64	53.29	13.29	12.16

Table 7: Descriptive Statistics for Pre and Post AET Scores

Table 7 and 8 show the descriptive statistics and the independent sample t-test result respectively. It can be seen from table 7 that both groups performed better in the post-AET. However, the experimental group recorded higher gains. The average scores of the experimental group improved from 48.73 to 66.25, the difference of 17.52 marks while the control group improved from 48.64 to 53.29, the difference of merely 4.65 marks. In order to prove that the gain is statistically significant an analysis of covariance (ANCOVA) was conducted. However, before the data was analysed an independent sample t-test was conducted on the pre-test scores for both groups to establish that they are comparable.

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.	95% Confidence Interval of the Difference	
									Lower	Upper
Pre-Test	Equal variances assumed	.019	.892	.478	42	.635	1.93	4.04	-6.231	10.094
	Equal variances not assumed			.478	41.98	.635	1.93	4.04	-6.231	10.094

Table 8: Independent Sample t-Test for Pre-AET Scores

Based on table 8, the probability value (p) for Levene’s Test for Equality of Variances is bigger than alpha value ($\alpha = 0.05$) at 0.892 while the probability (2-tailed) value for the equality of means is 0.635. This value is also bigger than the alpha value of 0.025 ($\alpha/2 = 0.025$). These values indicate that there are no significant differences between the means of the experimental and the control groups and it can be concluded that both groups are comparable.

To address RQ2, an analysis of covariance (ANCOVA) was conducted. ANCOVA was chosen to equalize the groups and control for possible influence that might affect the dependent variable (Creswell, 2008) as this type of influence is common for intact groups. ANCOVA was carried out on the overall mean score of the post AET. The overall mean score of pre AET was consigned as covariates to decide whether the difference between the mean scores of both groups in the post AET was significant if their prior knowledge is statistically controlled.

The confidence level was set to 95% ($\alpha = 0.05$). According to table 9, the probability value for ‘Pre_AET’ and ‘Instruction’ is 0.000 which is less than the alpha value. The value indicates that there is significant difference in the mean scores between the experimental and control groups when the subjects’ prior knowledge is statistically controlled and there is significant difference in the mean scores between the experimental and control groups in relation to methods of instruction. Table 9 reports the value of adjusted R^2 as 0.604 which implies that the independent variable (Instruction) can justify 60.4 % of the variance in the dependent variable (post AET scores).

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4984.862 ^a	2	2492.431	33.778	.000
Intercept	2220.425	1	2220.425	30.091	.000
Pre-AET	3138.839	1	3138.839	42.538	.000
Instruction	1500.122	1	1500.122	20.330	.000
Total	165212.500	44			
Corrected Total	8010.227	43			

a. R Squared = .622 (Adjusted R Squared = .604)

Computed using alpha = .05

Dependent Variable: Post AET

Table 9: Results of One-Way ANCOVA for the Overall Scores

One way ANCOVA was also performed on the scores of the 'Content', 'Language' and 'Organization' sections of the AET. Similarly, the mean scores of each section in the pre AET were consigned as their covariates.

Based on Table 10, the probability values obtained for 'Pre-Content' and its 'Instruction' are 0.000 and 0.001 respectively; the probability values for 'Pre-Language' and its 'Instruction' are both 0.000; and the values for 'Pre-Organization' and its 'Instruction' are 0.003 and 0.011 respectively. Since all the values are smaller than the pre-set alpha value, it can be concluded that there is significant difference in the mean score between the experimental and control groups when students' prior knowledge of each section is statistically controlled and there is significant difference in the mean score between the experimental and control groups in relation to instructional methods.

Source	Type III Sum of Square	df	F	Sig	R ²	Adjusted R ²
Pre-Content	136.962	1	20.255	0.000	0.457	0.430
Instruction	93.132	1	13.773	0.001		
Pre-Language	368.436	1	19.548	0.000	0.498	0.474
Instruction	352.334	1	18.694	0.000		
Pre-Organization	212.591	1	10.280	0.003	0.281	0.246
Instruction	148.021	1	7.157	0.011		

Table 10: Results of One-Way ANCOVA for the AET Sections

According to table 10, it can be concluded that the experimental group had done significantly better than the control group in the overall scores as well as the scores for all the

three writing sections. The treatment can account for more of the variances in 'language' and 'content' compared to 'organization' section.

Determining the Effect Size of the Treatment

The strength of the difference between the means of the experimental and the control groups can be quantified by calculating the Effect Size (henceforth ES) of DM instruction (treatment) on the subjects' overall academic writing performance. According to (Coe, 2002) ES can be calculated as the mean of the overall post AET scores of the experimental group minus the mean of the overall post AET scores of the control group divided by the pooled standard deviations.

Pooled standard deviation can be obtained by finding the average of the two standard deviations (the experimental and control group), taking into consideration the groups' sizes (Coe, 2002).

Cohen (1992) has recommended the following scale to interpret ES. ES of less than 0.20 is considered 'small', ES of between 0.5 to 0.79 is considered 'medium' while ES of 0.8 and above is considered 'large'.

Test Sections	Effect Size	Interpretation
Content	0.86	large
Language	1.12	large
Organization	0.6	medium
Overall	1.04	large

Table 11: Effect Size of Explicit DM Instruction on the AET scores

Table 11 shows that the ES of DM instruction on the students' overall scores is 1.04. This can be interpreted as a large ES according to Cohen (1992). Similarly, the ES for 'content' and 'language' is also large at 0.86 and 1.12 respectively. However, the ES for organization is medium at 0.6.

The conclusions that can be made from the results are DM instruction is beneficial in improving the subjects' academic writing performance since the experimental group performed better than the control group in the post AET for all the three writing sections and secondly the effect size of explicit teaching of DMs on the overall writing performance is large.

The main function of DM is to link ideas to improve coherence and cohesion in writing. Interestingly, it was found that DM instruction seem to improve the 'content' and 'language' sections more than the 'organization' section. This may be due to the fact that ideas that are better linked provide clearer meaning which consequently affect the scores for language and content as well.

Conclusion

As mentioned by Melor & Siti Nor Fatimah (2014) ESL learners do not fully utilize DMs in their writing due to lack of understanding of what DMs are. Explicit instruction, or giving learners

specific information on rule formulation of a target form has been found to play a significant role in adult second language (L2) learning as attest by DeKeyser (2003). The findings of this study provide evidence to support DeKeyser's (2003) notion and prove that explicit instruction of DMs promote the use of DMs in their writing which subsequently contribute to the superior performance of the experimental group.

In most writing classes especially at tertiary level, DMs are not explicitly taught due to time constraint. However, this study has proven that explicit teaching of DMs does not require much time. Although explicit DM instruction was carried out over a short period of time, the effect size was large for 'content' and 'language' sections, and medium for 'organization'. It can be concluded that a short period of explicit instruction of DMs is sufficient in improving overall writing performance.

The study also confirms the findings of research conducted by Ying (2009); Ayman and Khaled (2013) and Rahayu and Cahyono (2015) that L2 learners tend to fall back on common high frequency DMs they are familiar with. The control group in the study used mostly DMs that are common such as 'so', 'besides', 'in addition' and 'as conclusion'.

Explicit instruction of the target DMs had familiarized the experimental subjects with more DMs which contribute to the use of more varied DMs in their writing. The findings of this study provide evidence that explicit teaching which includes practice on forms and meaning can be effective in improving ESL learners' writing skills. Intensive teaching of DMs over a short period of time has been shown to be worthwhile.

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