

The Challenges of Getting L2 Learners to Use Academic Words in their Writings

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Abstract

To understand how instruction influences L2 learners to attend to academic words during writing, it is useful to look at evaluation practices, instructional approach and learner ability over time. This paper explores the relationship between academic word use and holistic scores of L2 learners' essays, investigates L2 learners' ability to use vocabulary following instruction, and also compares lexical richness of L1 and L2 academic writings. The multilevel data collection techniques – teacher evaluation of L1 and L2 writings, classroom interactions, excerpts from actual L1 and L2 writings and teacher reflections – provide a holistic view of L2 learners' ability to learn words following instruction and use them like their L1 peers. Using a sample of 387 essays from 129 students, the analysis revealed that while there was no relationship between academic word use and holistic scores, not only teachers award higher grades to essays with a higher percentage of academic words, but L2 learners can also be taught to use academic vocabulary in their writings over time.

1 Introduction

Second Language (L2) learners in the beginning years have difficulties with their writings, despite being exposed to the same lesson, text and level of interaction due to insufficient vocabulary. A number of L2 studies (e.g. Leki & Carson, 1994; Raimes, 1985; Uzawa & Cummings, 1989) have indicated that lack of vocabulary is what makes writing in a foreign language difficult, and that vocabulary proficiency is probably the best indicator of overall text quality (e.g. Astika, 1993; Santos, 1988). Meanwhile, Duin and Graves's (1987) study revealed that explicit vocabulary instruction can result in greater use of contextually appropriate words during writing. On the other hand, language instructors have also tried to help learners expand their vocabulary knowledge quickly and effectively through various means such as books and software but as stated by Liu (2008), "there has been relatively few proposals on how best to systematically approach the teaching and learning of vocabulary for specific L2 learners" (p. 129). Incidentally, Laufer's (1994) and Nadarajan's (2009) studies that looked at vocabulary learning in the classroom context discovered that university students generally show progress in writing ability by increasing the amount of Raimes' academic vocabulary in their academic writings. In terms of analysis, Engber (1995) showed that counting the number of error-free content words in L2 writings often gave a strong correlation (.57) with teachers' ratings. Incidentally, Engber's (1995) study paved the way for subsequent vocabulary studies to employ objective measures to assess overall text quality. The current study will also employ objective measures to: a) determine the relationship between lexical

richness and holistic scores of academic writing, b) investigate how instruction facilitates academic word use in L2 English compositions, and c) compare lexical richness in L1 and L2 students writing to demonstrate language development.

2 Literature review

One way of assessing the written production of learners is by calculating the various statistics that reflect their use of vocabulary (Read, 2000). A number of studies have looked at lexical richness in learners' written text and shown that specific levels of word knowledge relate well to the overall quality of the text (e.g. Jarvis, 2002; Lemmouh, 2008; Read, 2000). The task and topic are also seen as having an effect on the level of vocabulary used (Read, 2000, Arnaud, 1992). In terms of assessment tools, L2 vocabulary testing researchers have often found the *Lexical Frequency Profile* (LFP¹) measure to be capable of discriminating between proficiency levels. Presently, the LFP is also widely accepted as a good predictor of overall text quality and the closest to a standard analysis of lexical richness (Lemmouh, 2008). Li (1997) looked at the extent to which lexical richness in EFL learners' compositions as measured by the LFP is related to teacher raters' holistic ratings and discovered that both teacher ratings and the LFP analysis were able to discriminate between the best and weakest essays adequately but less able to discriminate between average text of similar nature. However, Morris and Cobb's (2003) study which examined LFP as a predictor of academic performance among TESL Trainees with different backgrounds and found the correlation too low to warrant the use of LFP as the only assessment measure. Muncie (2002) who used the LFP to look at lexical richness in three essays (a timed compositions and first and final drafts of at-home essays) of 30 Japanese English learners enrolled in a process based writing course found that the results for the at-home essays differed from timed compositions in terms of grammatical and lexical richness but it was still a valid predictor of good and weak essays.

2.1 Academic vocabulary

Academic vocabulary is a kind of high frequency vocabulary common to a wide range of academic texts and considered useful for learners studying English for academic purposes. In the words of Nation (2001) "any time spent learning it is time well spent" (p. 196). The current assumptions in L2 vocabulary research being that when learners know around 4,000 word families in academic texts, they will know approximately 19 out of every 20 words in the texts (95%). This knowledge will enable L2 readers to adequately comprehend text and infer meanings of unfamiliar words. Given the importance of academic vocabulary in L2 academic reading (Coxhead, 2000; Nation & Coxhead, 2001), it is suggested that L2 learners at the university level be introduced to academic vocabulary as soon as they are familiar with the most frequent 2,000 general service words in English (Kim, 2006; Laufer, 2005; Nation, 2001). It is also expected that when proper nouns and technical vocabulary are added to L2 learners existing vocabulary stock of 2,570 word families, the requisite 95% text coverage will be achieved (Nation, 2001, p. 197). Since academic vocabulary is useful in speaking and writing as well as an important component of academic success (Nation, 2001), learners must also be given ample opportunity to use it in a meaning focused output activities and one suggestion for enabling learners to notice and attend to these words would be through systematic vocabulary instruction.

2.2 Systematic vocabulary instruction

For L1 speakers, knowledge of academic vocabulary is a sign of being involved in academic study of various kinds and an essential part of their language experiences. For L2 learners who lack this experience, direct learning of academic vocabulary is encouraged. Nevertheless, several writers (Cowan, 1974; Higgins, 1966) consider that it may not be the English teacher's job to teach

technical vocabulary and this may have some effect on instructional practices. Strevens (1973) points out that learners who know the scientific field would have little difficulty with technical words, but the teacher who lacks the scientific knowledge may have greater problems explaining the word. This could partly explain language teachers' general reluctance to focus on vocabulary as part of their regular classroom practice. Flowerdew (1992) stated that given that definitions in science lectures occur systematically and lectures are often organized around definition of key terms in the topic area, English teachers may be at a disadvantage when it comes to dealing with academic vocabulary. In other words, teacher apprehension could be a contributing factor when it comes to learners' vocabulary development at the initial level. Nevertheless, Visser (1989) devised a rule based instructional activity which combines both reading and vocabulary study to help learners understand words in pairs or in groups with one person taking responsibility for each column as indicated below

<p>Consistent /ken'sistənt/ adjective</p> <p>Someone who is consistent always behaves in the same way, has the same attitudes towards people or things, or achieves the same level of success in something. Becker has never been the most consistent of players anyway... his consistent support of free trade.</p> <p>Is there anyone you know who has consistent good luck?</p>	<p>Consistent /ken'sistənt/ adjective</p> <p>If one fact or idea is consistent with another, they do not contradict each other. This result is consistent with the findings of another study ... New goals are not always consistent with the old ones.</p> <p>Tom found that studying vocabulary each night for 3 hours increased his vocabulary by over 40%. Is this consistent with your experience?</p>	<p>What is the core meaning of this word?</p>
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Fig. 1: Core meaning sample exercise (Taken from Viser, 1989; taken from Coxhead 2010, p. 9)

It is assumed that by focusing attention on definitions in terms of meanings and rules in academic vocabulary of a wide range, learners and teachers can get the best return in the reading and writing class especially when time happens to be a factor.

2.3 Holistic assessment and lexical quality

L2 researchers (e.g. Engber, 1995; Linnarud, 1986) have found a relationship between lexical richness and overall text quality. Linnarud (1986) analyzed 54 compositions written by 42 Swedish learners of English and L2 native speakers of English of the same age and found a significant moderate correlation (0.47) with composition grades and lexical individuality². Engber (1995) found a moderate correlation of 0.57 between lexical variation and scores of overall text quality. Both findings went on to suggest that lexical richness in learners' writings happens to be a moderately good predictor of overall text quality. Meanwhile, Morris and Cobb (2003) examined LFP as a predictor of academic performance among 151 TESL trainees with different backgrounds and found a significant low correlation between proportion of academic words in informants' texts and course grades. This correlation was seen as too low to warrant the use of LFP for L2 learners and it was necessary to include the instructors' grades. The LFP has also been used to compare two writings of different proficiency levels (Muncie, 2002). Presently, the LFP measure is widely used for tracking the changes in learners academic word use at different stages of the writing process (Laufer & Nation, 1995; Lemmouh, 2008). The present study will also use the LFP to examine word and learner performance.

3 The study

The study combines both internal and external learning features to investigate: a) the relationship between academic word use and instructors' holistic evaluations; b) vocabulary development following systematic vocabulary instruction; and c) word use of L1 and L2 writers and holistic grades.

The research questions investigated in the study are as follows:

1. What is the relationship between the scores in learners' writings and academic vocabulary knowledge as measured by a discrete point vocabulary test?
2. Does the lexical richness of L2 learners' writings increase following vocabulary instruction?
3. How do the compositions of L2 learners compare to those of L1 speakers of a similar age and educational level?

3.1 The method

The study was conducted among 129 L1 and L2 students taking English Composition class at an American university. The instructors were four L1 graduate students employed by the English Department. All the instructors had a degree in teaching languages and had taught English to L2 and L1 students for a minimum of three years. The instructors were told to teach selected academic words through two approaches namely meaning based and rule based instruction. Three classes were identified as the control groups which had the meaning of selected academic words explained to them in context (A2-, B1-, and C12-), where (-) indicates the control groups. Three classes (A1+, B2+, and D12+), where (+) indicates the treatment groups, were categorized as the treatment intervention groups which would have the rules of the words explained to them. The distribution of the instructors' classes and groups are as indicated in Table 1.

Instructor	Group			
	Control		Treatment	
	L1	L2	L1	L2
A	A2-	15	A1+	27
B	B1-	23	B2+	19
C	C12-	7	-	
D	-	15	D12+	8

Instructors= A, B, C, D

Control = -

Treatment = +

L1 students = 1

L2 students = 2

L1 + L2 students = 12

Table 1: Group distribution

Data Collection: A writing assessment methodology was used to retrieve 387 (129x3) online writing assignments at three separate stages. The first essay (E1) was collected in the third week, the second essay (E2) was collected in the sixth week and the final essay (E3) was collected in the tenth week. Each subject contributed three essay scores for the study. E1 was submitted just as the subjects had begun working on the treatment (2-3 weeks) and therefore the instruction was not seen as capable of affecting the subjects' word use. All essays were downloaded from the online course website.

3.2 Instruction

Two types of instructional approaches were adopted for the study. The control groups were taught via meaning based instructional activities and the treatment groups were taught via rule

based instructional activities. Meaning based instruction included: a) writing activities, and b) listening and speaking activities.

3.2.1 *Meaning based instruction*

Continuous Writing: The teacher asks for four random words (not necessarily academic words) from the class and the words are then written on the board. The students use the words and write them continuously for ten minutes as indicated in sample (i) and (ii).

Keywords

Asian

Americans

minority

health

(i) Student A:

I plan to study the area where there are large populations of **Asian Americans** where they are visible and yet underrepresented. They have significant concerns regarding their **health**.

(ii) Student B :

The topic I propose is concerned [sic] with **Asian minorities** in the United States. I will focus on their **health** problems in the American system. I believe that **Asian Americans** should be attended to because they compose [sic] of a group of people who help the country in various areas.

By getting selected learners to write, the instructor was able to integrate consciousness raising activities to determine whether the students knew the meaning of the words and were able to use them well. Then the instructor called on selected students to either write or read out their paragraphs before the class while their peers commented on them.

Elaboration: This approach was based on Hulstijn (2000) views that "... processing new lexical information more elaborately will lead to higher retention" (p. 270). This is also related to Ellis and He's (1999) views that learners who are pushed to produce output achieve higher word levels due to the superior dialogic interaction." Students were made to notice specific words and their various forms through discussions.

tr: In society media has identified the **ideal** image, however...
people should be accepted for who they are as a person
and not how they are viewed. Now what is the **ideal** image?

S1: *The **ideal** image is that people should be who they are **idealistic***

tr: but that is not really true.....?

S2: *No, it is only an image, an illusion that they should be accepted.*

S2: *that's right we live in a world of make believe **idealism***

S1: *S1: the media tells us how we should be viewed and that is as individuals with rights.*

tr: Exactly

Negotiations that center on lexical aspects of the language has been said to be beneficial for L2 vocabulary acquisition (De la Fuente, 2003). L2 learners who did not know the various meanings benefit from listening in on the discussions of the L1 speakers and more fluent peers.

3.2.2 Rule based instruction

The treatment groups were exposed to rule based instructional activities which take root from Long's (1991, 1996) position on form focused form activities which state that while comprehensible input is necessary for acquisition, drawing learners' attention to formal properties of problematic linguistic feature can be important and useful for communication. In this study the instructor discussed the students' drafts in groups as indicated below.

tr: What kind of cultural movement will you focus on?

S1: *Time difference*

S2: *Lost*

tr: What is your topic?
What do you mean by "Lost"?

S2: **Culture** is lost.

tr: What do you think your topic will be?

S2: *Lost as in the TV program.*

S1: *In movies you see people do not Understand. How **cultural** [sic] changes? When we are growing up it changes*

tr: All right... there is a difference **between culture** changes and **cultural** changes

S3: *Yes... like popular **culture** ... hip hop ...to grow something and the **culture***

S4: *changes*

tr: Cultivate. Yes, that too. So what is cultural changes?

*something about the **culture** development of the **culture**... like how we are growing up. Things change.*

tr: I agree. **Cultural is an adjective** and **culture can be both a noun and a verb**. Try to write a couple of statements with these words. We'll put them on the board.

When a student was unsure about a word, the instructor intervened to explain by providing an alternative word meaning or through raising attention to a precise grammatical form. This approach is based on Doughty and William's (1998) criteria for providing form focused instruction: a) the learner engagement with meaning occurs before attention to the linguistic code, b) analysis of the learner needs triggers the instructional treatment (Long & Robinson, 1998), and c) learners' focal attention is drawn to form briefly and overtly.

Feedback and Recast: This approach is based on Long, Inagaki and Ortega's (1998) investigation that the link between oral feedback and recast play a facilitative element in L2 learning and has a positive effect on the learners' acquisition process. The following situation is an example of pushed output in the rule based environment.

tr: Now, there is a difference between **estimate** and **estimation**. You cannot say "... give me an **estimation** of the expenses ... It is give me an **estimate** like ... an approximate cost ... how much would it cost ... an estimate of what it would cost.

S1: *Yah, ... but I want to say **estimation** ... I would like the **estimation**...*

tr: You want an approximate cost which is **estimate**, **estimation** would be like a judgment.

S1: *In my **estimation** Not in my **estimate***

so, do you know the difference

Yes... now, which one is the verb?
S2: Yes, to calculate approximately

Yes ... but **estimate** can be a noun as well like “the final figure was twice the sum of the original **estimate**.”
S3: estimate is the verb and estimation is the noun.

S1 & S2 Oh (smiling)

Verspoor and Lowie (2003) explained that by understanding the core meaning, learners will acquire strategies for in-depth understanding of the word which can be applied to different contexts.

3.3 Instrument

The LFP was used to analyze the essays. When a word was clearly used incorrectly, the word was omitted since it could not be considered as part of the learner’s productive lexicon, but if it was used correctly but misspelled, the error was corrected and kept as suggested by the original researchers (Laufer & Nation, 1995, p. 315). Proper nouns were also deleted from the analysis.

Scores: For the purpose of this question, scores rather than specific criteria or grades were used for the analysis. Nevertheless, the distributions of the holistic scores according to the grades are shown below:

A = 99-90 (Excellent) B = 89-80 (Good) C = 79-70 (Satisfactory)
 D = 69-50 (Poor) E = 50 and below (Failure)

4 Results

In this section, the results of the present study will be outlined. The relationship between holistic scores and academic words will be presented first, followed by vocabulary development over time and comparison of L1 and L2 students’ academic word use. The teachers’ reflection on learners’ vocabulary ability and views about the findings will be presented in the discussion.

4.1 Relationship between academic word use and holistic scores of L2 writings

To determine whether the average grades (scores) had an effect on subjects’ academic word use, the researcher examined two independent variables. The first was the percentage of academic word use as measured by the AWL section for E1, E2 and E3, and second was the average mean scores for the essays. The overall mean and standard deviations for L1 and L2 learners were as presented in Table 2.

Status	Essays	Mean (%) ^a	SD	N	Scores	SD
L1	E 1	5.41	2.38	67	85.8	13.35
	E 2	5.15	2.53	67		
	E 3	5.05	2.76	67		
L2	E 1	5.2	2.41	62	85.2	13.39
	E 2	4.92	2.58	60		
	E 3	4.89	2.25	62		

^aAverage percentage of words from the Academic Word List found on each essay

Table 2: AWL scores on the essays (E1, E2, and E3) and essay scores

There was a difference within the average percentage of AWL word use for all three essays for both L1 and L2 subjects. The academic words contributed to approximately five percent of the overall words found in L1 subjects' essays (E1=5.4%, E2=5.1%, & E3=5%). As for the L2 subjects, the percentage of academic words found in Essay 1 was approximately five percent (E1=5.2%) while the academic words in E2 and E3 were approximately 4.9%. The average scores for overall grades for L1 and L2 subjects were 85.8% and 85.2% respectively. These scores placed most L1 and L2 students in the B category. A Pearson Product Moment correlation was done for both L1 and L2 learners AWL scores on the essays (E1, E2, and E3) and the overall average essay scores assigned by the instructors to determine the relationship. The results indicated that AWL for third essay (E3) was significant for L1 subjects at $r = .307$. With the total variance expressed as a proportion equal to the coefficient of determination, $r^2 = (.31)^2 = 0.094$ and coefficient of non-determination, $K^2 = (1-r^2) = 1-0.094 = 0.906$. This made it possible to suggest that approximately $(0.094 \times 100 = 9.4\%)$ or almost 10% of the scores (grades) in the L1 subjects' E3 were directly related to the academic words used by L1 writers. The 90% of the variance of the scores were related to additional variables that were not analyzed in the study such as lexical density, coherence, cohesion and meaningfulness. As for the L2 essays, there was no relationship between scores and academic words though there was a significant relationship between the various levels of AWL in E2 and E3. It was possible to deduce that the scores the instructors assigned to the essays for the L2 subjects were not influenced by L2 writers' academic word use in this study.

4.2 Vocabulary development following instruction

To determine the differences between instructional approach and academic word use of L1 and L2 writers, a repeated measure analysis of variance was conducted for the AWL of E1, E2 and E3 for all subjects. As the final essay involved a revision of one of the earlier essays, the alpha level for the analyses was set at 0.05 for test of significance. The level of academic word use (AWL) was statistically significant at $F(1,123) = 1,152.238, p < 0.001$. The level of word use between control (meaning based) and treatment (rule based) groups were statistically significant at $F(1,123) = 7.259, p < 0.05$. The two-way interaction between the groups and L1 and L2 subjects was also statistically significant at $F(1,123) = 6.092, p < 0.05$ as in Table 3.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
AWL	9,904.835	1	9,904.835	1,152.238	.000**
Language	1.848	1	1.848	.215	.644
Instructional group	62.404	1	62.404	7.259	.008**
Language + group ^a	52.369	1	52.369	6.092	.015*
Error	1057.329	123	8.596		

* Significant effects are italicized in bold.

^aTwo way interaction between instructional group and language group

Table 3: Tests of between-subjects effects

Since the analysis revealed a significant difference between the means of the language groups and instructional groups, an analysis for the within-subjects effects for both L1 and L2 learners and instructional groups was conducted. There was a significant effect for academic word use when compared with L1 and L2 performance and treatment types at $F(1,123) = 38.084, p < 0.05$. In other words, there was a significant difference within the performance of the L1 and L2 learners when viewed from within the groups themselves.

Interaction Plot: It could be deduced from the interaction plot in Figure 2 that the two control and treatment groups were not very different for essay 1 (+5.25). However, with essays E2 and E3, the treatment (explicit) groups had superseded the control groups in terms of academic word use suggesting that rule based instruction can have an effect on the level of academic word use.

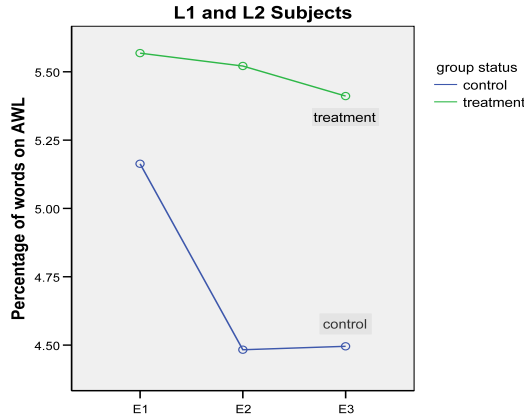


Fig. 2: Interaction plot for groups by word use for E1, E2 and E3

In terms of instructional groups and word use, Figure 1 indicated that the subjects in the treatment groups had decreased their academic word use for the second essay (E2). The control groups had sharply reduced their word academic word use for E2 and E3. Given that the groups comprised both L1 and L2 writers, there was a need to analyze the performance of both L1 and L2 writers. The analysis of L1 and L2 writers (Figures 3a & b) revealed that L2 subjects in the control groups had not increased their academic word use for E2, but increased their AWL for E3. Their word use was different from that of L1 writers in the study.

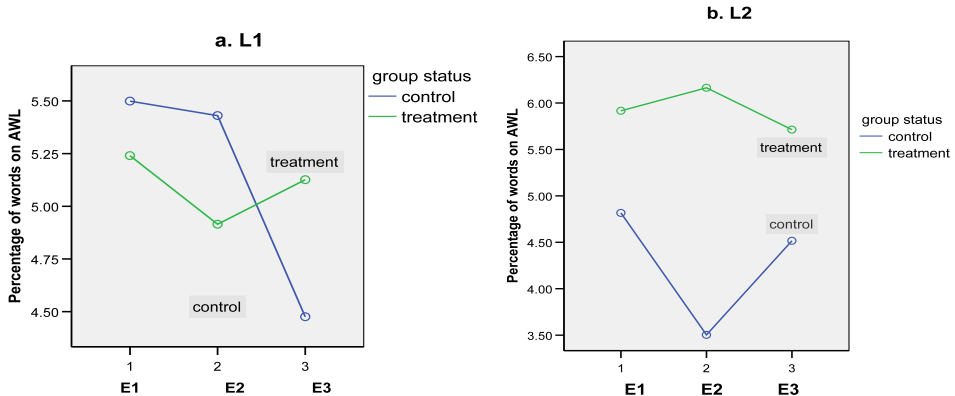


Fig. 3a & 3b: Interaction plots for L1 and L2 subjects by essays

The L2 learners in the treatment groups had increased their academic word use for E2 but reduced for E3. This was different from the performance of the L1 subjects in the treatment groups, who decreased their AWL scores for E2, but increased their scores for E3. The L2 subjects in the treatment groups behaved in a similar manner as the L1 subjects in the control condition in Figure 3a.

Interaction Effect for (Class) Subgroups' Ability: To determine whether the L2 learners' AWL performance was related to chance, the average mean scores for the individual class (subgroups L1 and L2) AWL for the various essays (E1, E2, & E3) were plotted (Refer to Figures 4 and 5).

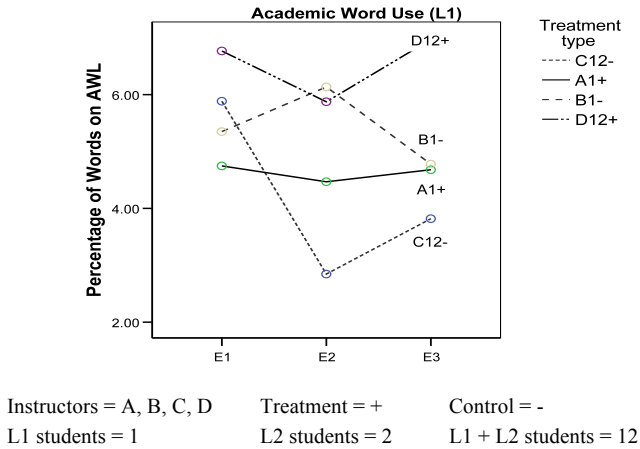


Fig. 4: Academic Word Use for L1 Subjects

Figure 5 showed that the L1 subjects involved in both the treatment and control groups had used more AWL words for the first essay but reduced the words for the second essay except for Group B1- which seemed to have increased the AWL for E2.

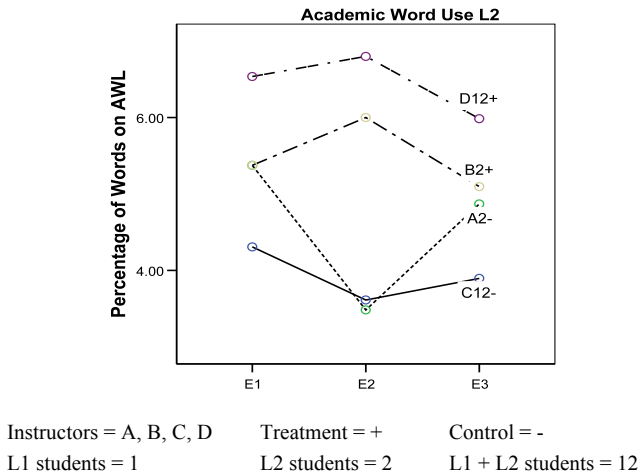


Fig. 5: Academic Word Use for L2 Subjects

Figure 4 indicated an increase in AWL for E2 for the treatment (explicit) groups (D12+, B2+) suggesting that rule based instruction did have an immediate effect on L2 learners word use. In this situation, the performance of the L2 learners in the treatment groups was consistent and predictable. However, the L2 learners appear to have returned to their original level by the third essay. Also, the L2 learners in groups D12+ and B2+ had used the largest number of academic words for the second essay.

4.3 Comparisons between L1 and L2 compositions

To compare lexical richness of L2 and L1 learners, 20 L1 essays and 20 L2 essays were randomly selected and compared with their LFP outputs. For the purpose of analysis, only the second paragraphs of five essays are explained below. The words in bold were deleted during the LFP analysis. The table in Figure 6 provides the number of word tokens, types and families used by L1 and L2 subjects in the study. The function and content words serve as indicators of whether the essays happen to be lexically dense or otherwise. The excerpt in Figure 7 contains 129 words (tokens) which consist of 62 word families and 68 word types.

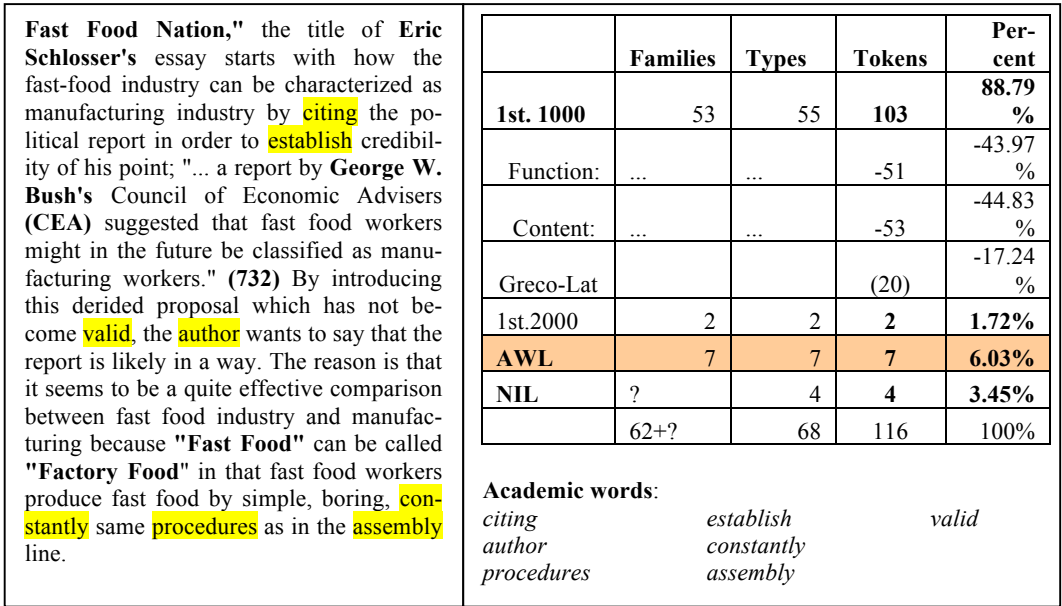


Fig. 6: Excerpt from an L2 learner's essay and the lexical frequency profile

In terms of profile, 88.8% of the words used were from the first 1000 words of the English language, 1.72% were from the 2000 word list and 6 % were academic words.

<p>In order to present a legitimate argument which carries validity, Reiman establishes his credibility throughout the course of the text. Reiman accomplishes this task by presenting multiple statistics from several different credible sources which, when analyzed and considered together, come to create a very credible argument as well as contribute towards establishing his credibility. It may be seen through analyzing the statistics presented in the text that "...studies suggest that some forms of serious crimes—forms usually associated with lower-class youth—show up more frequently among higher-class persons than among lower" (Reiman 771).</p>		Families	Types	Tokens	Percent												
	First 500:	-55	-61.80%												
	1st.1000	46	50	64	71.91%												
	Function:	-34	-38.20%												
	Content:	-29	-32.58%												
	1st.2000	3	3	4	4.49%												
	AWL	9	11	13	14.61%												
	NIL	?	6	8	8.99%												
		58+?	70	89	100%												
	<p><i>Academic words</i></p> <table> <tr> <td>validity</td> <td>establishes</td> <td>establishing</td> </tr> <tr> <td>text (2)</td> <td>task</td> <td>statistics (2)</td> </tr> <tr> <td>sources</td> <td>analyzed</td> <td>analyzing</td> </tr> <tr> <td>create</td> <td>contribute</td> <td></td> </tr> </table>						validity	establishes	establishing	text (2)	task	statistics (2)	sources	analyzed	analyzing	create	contribute
validity	establishes	establishing															
text (2)	task	statistics (2)															
sources	analyzed	analyzing															
create	contribute																

Fig. 7: Excerpt from an L1 learner’s essay and the lexical frequency profile

In contrast, Figure 7 which comprises an L1 student’s writing contains only 89 words but 14.61% of the words used happen to be academic words. The instructor also identified the writing and excerpt in Figure 7 to be better in terms of lexical density and word choice.

Topic and Word Use: Given that the topic happens to be a variable that may affect word use, essays on the same topic but with different grades were compared to investigate lexical richness. Figures 8-10 provide excerpts from three essays. The excerpt in Figure 8 was written by an L1 subject while the excerpts in Figures 9 and 10 were written by L2 subjects.

<p>a. First, allow free, yet fair, trade between the U.S. and Mexico to benefit the citizens and not the corporations. Thus far the effects on NAFTA have been terrible for Mexican farmers. As the Economist put it, “tariff reductions have occasioned the gloomiest predictions about the decline and fall of the entire agriculture sector, the end of the Mexican countryside, even the demise of the tortilla, the staff of Mexican life”. We can help fix this problem by reforming how agricultural subsidies are implemented and by ending the process known as dumping. That way, Mexican farmers will not be out competed by government-subsidized American ones and therefore will not come to America in search of work.</p>		Tokens	Percent
	K1 Words (1 to 1000):	83	70.94%
	Function:	(56)	(47.86%)
	Content:	(27)	(21.37%)
	K2 Words (1001 to 2000):	8	6.84%
	AWL Words (academic):	10	8.55%
	MED Words (technical):	3	2.56%
	Not In List:	13	11.11%
		117	100%
	98 points		

Fig. 8: Writing sample of an L1 subject

The excerpt in Figure 8 contains 117 words out of which 56 words (47.86%) are function words and 61 words (52.13 %) are content words. Though not high in terms of lexical richness, the whole essay was awarded 98 out of 100 points, making it clearly one of the better essays in the subject pool. The writer nevertheless had used a larger number of academic words (8.55%) compared to the words at the 2000 word level (6.84%). The subject had also used a number of technical words (2.56%). The excerpt in Figure 9 contains 107 words with a larger percentage of aca-

demic words (13.08%). The subject had used fewer words from the 2000 word level (10.28%) and technical words (1.87%). The instructor had awarded 95 out of a total of 100 points to this particular essay.

b. One of the solutions that have been proposed by the government to minimize problems is the guest worker program. Basically, the guest worker program allows foreign workers to work in America legally and after certain years of working, the workers have to go back to their countries to renew their visas. The program, even though it is created to solve illegal immigration issues, has been questioned frequently about its effects on American society such as its impact on the economy, and national security. Especially, business experts predict many situations that may be caused by the program, and often these opinions are separated in two categories: negative and positive.		Tokens	Percent
	K1 Words (1 to 1000):	79	73.83%
	Function:	(47)	(43.93%)
	Content:	(32)	(29.91%)
	K2 Words (1001 to 2000):	11	10.28%
	AWL Words (academic):	14	13.08%
	MED Words (technical):	2	1.87%
	Off-List Words:	1	0.93%
		107	100%
		95 points	

Fig. 9: Writing sample of a proficient L2 subject

c. Numerous prisoners currently on Korea's death row have completed the appeals process and face execution on a daily basis. For the government to order their execution simply requires the paper work to be completed and signed (Park, condemned to death). The majority of prisoners sentenced to death in Korea are condemned to a lifetime under conditions that amount to cruel inhuman and degrading treatment and are contrary to the international treaties to which Korea has agreed. Many prisoners suffer from mental disabilities due to the conditions under which they are detained. The Korean government must review the country's use of the death penalty as a matter of urgency.		Tokens	Percent
	K1 Words (1 to 1000):	42	69.44%
	Function:	...	(45.37%)
	Content:	...	(24.07%)
	K2 Words (1001 to 2000):	8	10.19%
	AWL Words (academic):	5	4.63%
	MED Words (technical):	2	1.85%
	Off-List Words:	11	13.89%
		108	100%
		85 points	

Fig. 10: Writing sample of a less proficient L2 subject

In Figure 10, the writer used more words from the 2000 word level (10.19%) and a higher percentage of function words (45%) and the overall score for the essay was only 85 points. Table 4 outlines the word use at the 2000 and AWL level in terms of percentage for the three excerpts.

Excerpts	1 st 1000 words %	1 st 2000 words %	AWL (%)	Technical+ MED (%)	NIL (%)	(scores)
A (L1)	70.94	6.84	8.55	11.11	11.11	98
B (L2)	73.83	10.28	13.08	1.87	0.93	95
C (L2)	69.44	10.19	4.63	1.85	13.89	85

Table 4: Word Use at 2000 and AWL Levels

The L1 subject (A) had used fewer words from the 2000 word level (6.84%) but more from the AWL (8.55%). The L2 subjects (B & C) used more from the 2000 word level but Subject B (L2) seemed to have used a higher percentage of academic words (13.08 %) while Subject C (L2) used fewer from the AWL (4.63%). The academic words could therefore have influenced the instructor during the grading process. To determine whether instructors were influenced, the instructors' perspectives on the three questions were solicited.

4.4 Instructors' response to questions

When asked about the lack of a significant relationship between academic word use and L2 writings scores, the instructors was surprised that the findings to be different for L2 writers but agreed that word use might not be a significant factor given that there were other variables that needed greater attention in the L2 writing classroom. Instructor D had the following comments to make:

I agree that there are some L2 students who need help with their vocabulary in my class. ...but then, this is the L1 environment. I guess they have to communicate and read more like native speakers, and they'll get there. I do not want to make the class sound remedial because word learning is not in the syllabus. ... yah, some students at the back are passive.

They do not like to talk... maybe it's their culture ... I leave it to them... but they are alright when it comes to writing. They get there by the end of the semester. I mark for consistency and hard work.

Most of the instructors agreed that they did not focus on word use when grading L2 essays, since L2 learners worked from a narrow range of words and were unaware of the various meanings of certain words. They agreed that they would award marks for hard work and when grading L2 writings but would be more attentive to word use with L1 writers.

As for instructional approaches, the instructors generally agreed the direct attention to vocabulary was necessary for L2 learners to understand specific word levels because some of the students "might have had problems, especially when words were used in a different context," but instructor C felt that it was necessary for L2 writers to realize that words take on different meanings when used in relation to another word. Instructor A, when asked if a particular approach was more effective for getting L2 learners to notice and use words well, replied that while L1 speakers were generally capable of making such associations, it was not possible to likewise generalize for all L2 learners. The instructor had the following to say in terms of using grammatical terms to explain meanings.

It is easier to explain a word when you use a specific form. It is accurate and it is more convincing. Then, it is not possible to explain all words with a grammatical form. Some words require further elaboration and sometimes, I am not sure if I know how. It is helpful when students come up with their own interpretation, and you can help them along. (Instructor A)

Unfortunately, some instructors felt that explicit instruction of language forms, while seemingly making the instructor's job simple, took away the satisfaction of creative construction and thought provoking elaborations which have become an intrinsic aspect of good language teaching techniques. Most instructors felt that they did address vocabulary from time to time as they worked on individual learners' vocabulary, edited their drafts and made corrections in terms of inappropriate word use through written feedbacks. One instructor did not seem to think that L2 subjects had many problems with word use. As instructor D said, "... the L2 students do not have many problems with their word use in their writings. The words may not be highly specific, but they seem to be able to relate their thoughts well through their writings." Most instructors were of the opinion that their L2 learners will learn to write well over time.

5 Conclusions

The study provided contradictory results regarding the relationship between lexical richness, grades and instructors' beliefs. While on the one hand there is no relationship between academic word use and instructors' holistic scores of L2 essays, the comparison of L1 and L2 writers' writings revealed that the instructors awarded a higher score to L2 writings that contained more academic words. Also, teachers seem to be convinced of the value of specific vocabulary. However, when taken into consideration that vocabulary happens to be just one of the many features valued during grading and given that the essays were take home tests, the assessment was biased towards grammar and structure. This could also explain the drop in academic word use for the final essays. The learners were aware that they would be marked for grammar and cohesive devices for the final paper. Also, given that the final paper was a reflective essay, there would have been a change in the vocabulary level. This is in line with Read's (2000) view that "the validity of any writing measure is in the nature of the task that the learners are given" (p. 198) and the task may have affected word use. Though the LFP measure was not able to discriminate between academic words and holistic scores, it has been known to be an efficient predictor of academic success. This was made evident when the essays were compared. The better essays certainly recorded a higher level of academic words. It is therefore possible to state at this juncture that there is undoubtedly a relationship between academic words and quality of writings and systematic instruction can help L2 learners write well in the academic classroom provided that instructors are ready to integrate them into the classrooms.

Acknowledgements

This research was partially supported by a Grant from the Fulbright Scholar and Research Award and the University of Arizona Graduate Student Award. I would like to thank Professor Douglas Adamson, the instructors who participated in this study, Randall D.R., Autumn Witt, Karla Smith and Tim Murphy, and the anonymous e-FLT reviewers for their useful comments and helpful suggestions on earlier versions of this paper.

Notes

¹ The LFP shows the proportion of word families in a written text based on the following word frequency level: first 1000 most frequent words, second 1000 most frequent words, 570 most frequent academic words.

² Lexical individuality measures the percentage of words in a composition that are unique to that specific composition in the entire text sample.

References

- Arnaud, J. (1992). Objective lexical and grammatical characteristics of L2 written compositions and the validity of separate component tests. In P.J.L. Arnaud & H. Bejoint (Eds.), *Vocabulary and applied linguistics* (pp. 133–145). London: Macmillan.
- Astika, G. (1993). Analytical assessment of foreign students' writing. *RELC Journal*, 24, 61–71.
- Cowan, J.R. (1974). Lexical and syntactic research for the design of EFL reading materials. *TESOL Quarterly*, 8, 389–400.
- Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34(2), 213–238.
- Doughty, C., & Williams, J. (1998). Pedagogical choices in focus on form. In C. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition*. (pp. 197–261). Cambridge: Cambridge University Press.
- Duin, A.H., & Graves, M. F. (1987). Intensive vocabulary instruction as a pre-writing technique. *Reading Research Quarterly*, 22, 311–330.
- Ellis, R., & He, X. (1999). The roles of modified input and output in the incidental acquisition of word meanings. *Studies in Second Language Acquisition*, 2(2), 285–301.

- Engber, C. (1995). The relationship of lexical proficiency to the quality of ESL compositions. *Journals of Second Language Writing*, 4, 213–238.
- Flowerdew, J. (1992). Definitions in science lectures. *Applied Linguistics*, 13, 202–221.
- De la Fuente, M.J. (2003). Is SLA interactionist theory relevant to CALL? A study on the effects of computer-mediated interaction in L2 vocabulary acquisition. *Computer Assisted Language Learning*, 16(1), 47–81.
- Higgins, J.J. (1966). Hard facts. *ELT Journal*, 21, 55–60.
- Hulstijn, J.H. (2000). The use of computer technology in experimental studies of second language acquisition: A survey of some techniques and some ongoing studies. *Language Learning and Technology*, 3, 32–43.
- Jarvis, S. (2002). Short texts, best fitting curves and new measures of lexical diversity. *Language Testing*, 19, 57–84.
- Kim, Y. (2006). Effects of input elaboration on vocabulary acquisition through reading by Korean learners of English as a foreign language. *TESOL Quarterly*, 40(2), 341–371.
- Laufer, B. (1994). The lexical profile of second language writing: Does it change over time? *RELC Journal*, 25(2), 21–33.
- Laufer, B. (2005). Focus on form in second language vocabulary learning. *EUROSLA Yearbook*, 5, 223–250.
- Laufer, B., & Nation, P. (1995). A vocabulary-size test of controlled productive ability. *Language Testing*, 16(1), 33–51.
- Leki, I., & Carson, J. (1994). Students' perception of EAP writing instruction and writing needs across the disciplines. *TESOL Quarterly*, 28, 81–101.
- Lemmouh, Z. (2008). The relationship between grades and the lexical richness of student essays. *Nordic Journal of English Studies*, 7(3), 163–180.
- Li, C. (1997). *Is lexical richness an essential criterion in judging a piece of writing?* (Master's dissertation). The University of Hong Kong, Hong Kong, PR China.
- Linnarud, M. (1986). *Lexis in comprehension: A performance analysis of Swedish learner's written English*. Malmo: CWK Gleerup.
- Long, M.H. (1991). Focus on form: A design feature in language teaching methodology. In K. De Bot, R. Ginsberg & C. Kramsch (Eds.), *Foreign language research in cross cultural perspective* (pp. 39–52). Amsterdam: John Benjamins.
- Long, M.H. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *Handbook of second language acquisition* (pp. 413–468). New York: Academic Press.
- Long, M.H., Inagaki, S., & Ortega, L. (1998). The role of implicit negative feedback in SLA: Models and recasts in Japanese and Spanish. *The Modern Language Journal*, 82(3), 357–371.
- Long, M.H., & Robinson, P. (1998). Focus on form: Theory, research and practice. In C. J. Doughty & J. Williams (Eds.), *Focus on form in classroom second language acquisition* (pp. 15–41). UK: Cambridge University Press.
- Liu, J. (2008). The effect of lengthened writing approach on L2 vocabulary acquisition. *Asian Social Science*, 4(4), 129–134.
- Morris, L., & Cobb, T. (2003). Vocabulary profiles as predictors of the academic performance of teaching English as a second language trainees. *System*, 32, 75–87.
- Muncie, J. (2002). Process writing and vocabulary development: Comparing lexical frequency profiles across drafts. *System*, 30, 225–235.
- Nadarajan, S. (2009). The effect of instruction and context on L2 learners' vocabulary development. *Electronic Journal of Foreign Language Teaching*, 6(2), 177–189.
- Nation, I.S.P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.
- Nation, I.S.P., & Coxhead, A. (2001). The specialised vocabulary of English for academic purposes. In J. Flowerdew & M. Peacock (Eds.), *Research perspectives on English for academic purposes* (pp. 252–267). Cambridge: Cambridge University Press.
- Raimes, A. (1985). What unskilled ESL students do as they write: A classroom study of composing. *TESOL Quarterly*, 19, 229–258.
- Read, J. (2000). *Assessing vocabulary*. Cambridge: Cambridge University Press.
- Santos, T. (1988). Professors' reactions to the academic writing of nonnative speaking students. *TESOL Quarterly*, 22, 69–88.
- Stevens, P. (1973). Technical, technological and scientific English. *ELT Journal*, 27, 223–234.
- Uzawa, K., & Cummings, A. (1989). Writing strategies in Japanese as a foreign language: Lowering or keeping up the standards. *The Canadian Modern Language Review*, 46, 179–191.

- Verspoor , M., & Lowie, W. (2003). Making sense of polysemous words. *Language Learning*, 53(3), 547–586.
- Visser, A. (1989). Learning core meanings. *Guidelines*, 11, 10–17.