

The Asian EFL Journal

November 2019

Volume 23 Issue 6.1



Senior Editors:
Paul Robertson and John Adamson



Published by the English Language Education Publishing

Asian EFL Journal
A Division of TESOL Asia Group
Part of SITE Ltd Australia

<http://www.asian-efl-journal.com>

©Asian EFL Journal 2019

This book is in copyright. Subject to statutory exception no reproduction of any part may take place without the written permission of the Asian EFL Journal Press.

No unauthorized photocopying

All rights reserved. No part of this book may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of the Asian EFL Journal.

editor@asian-efl-journal.com

Publisher: Dr. Paul Robertson
Chief Editor: Dr. John Adamson
Guest and Production Editor: Dr. Aradhna Malik

ISSN1738-1460

Table of Contents

Foreword by Aradhna Malik.....	5-6
1. Winfred Wenhui Xuan.....	7-33
<i>- Understanding logical meaning-making in Chinese high school students' EFL writing: A systemic perspective</i>	
2. Mike Tiittanen.....	34-52
<i>- Effect of Lexical aspect and grounding on the use of the progressive</i>	
3. Masanobu Sato.....	53-71
<i>- Exploring EFL learners' attitudes towards topic-based lexical network and form-based grammatical network activities</i>	
4. Etsuko Shimo, Joseph Falout, Glen Hill & Matthew Apple.....	72-95
<i>- Balanced and non-balanced possible L2 selves: An attributional study</i>	
5. Graham Howlett	96-114
<i>- How Thai students use mobile devices when learning EFL and the effect of urban/ rural school location</i>	
6. Raksangob Wijitsopon.....	115-141
<i>- Key multi-word expressions in Thai learner English argumentative essays</i>	

Book Reviews

1. *Expand Your English: A Guide to Improving Your Academic Vocabulary*

Steve Hart

Reviewed by **Hongyan Liang**.....142-143

2. *Mixed Methods Research in Language Teaching and Learning*

A. Mehdi Riazi.

Reviewed by **Carl Vollmer**.....144-146

September 2019 Foreword
by Aradhna Malik

The current issue of the AEFL Journal contains six articles that reflect a diversity of issues in the teaching and learning of English as a Second Language in a variety of settings. The issue also contains reviews of two books on very distinct issues in the teaching and learning of languages.

Xuan explores the different aspects of logical meaning-making in writing of English as a foreign language by Chinese high school students. He observes registerial differences in deploying clause complexing in the writing of these students. The study reveals dominance of 'simple and congruent type of logico-semantic relations' in the writing of English as a Foreign Language by the students under study.

Tiittanen explores the differences in the use of the progressive through a comparative analysis of the responses of English as a Second Language learners who are native speakers of Mandarin Chinese and Tamil respectively. The study reveals the significance of contextual referencing of activities for the use of the past progressive where the past progressive forms primarily draw out background information of these contexts. Tiittanen uses the results of this study to highlight the importance of inputs containing 'prototypical uses of the past progressive for ESL learners learning the past progressive'.

Sato analyzes the differences in the roles of rote learning and networked learning opportunities in second language learning of English in students in Japanese Universities. His study highlights the importance of 'linguistic networking in the learning of L2 vocabulary and grammar.

Shimo and associates study the role of social comparisons with other 'capable' English learners in their milieu, and the social pressures to learn English, on the motivation and eventually self-efficacy of students of science, technology, engineering and mathematics, who are learning English as a second language in Japan. This study aims to help motivate L2 learners of English through positive framing of challenging social situations associated with their learning process.

Howlett discusses the impact of policy issues on the usage of mobile devices when learning English as a Foreign Language in Thailand. Results of his study indicate insignificant differences in the access to mobile devices but significant differences in the

manner these mobile devices are used to learn EFL in urban and rural areas in Thailand. Howlett's study provides valuable suggestions for teachers and policy makers regarding policies for usage of mobile devices based on the efficacy of mobile devices in EFL learning.

Wijitsopon analyzes overused phrasal units in the argumentative English essays of Thai learners. Results of her study 'reveal the ways in which Thai learner English writing tends to feature references to a large quantity and sources of information as well as a forceful tone in their argumentation.' This is a typical feature of oral argumentation in most community oriented cultures, and it poses a challenge to most teachers of English as a Second Language, especially if they come from typically individualistic goal oriented cultures in English speaking Western countries. Wijitsopon's study provides valuable suggestions for teaching writing to ESL students.

Liang reviews the book, *Expand Your English: A Guide to Improving Your Academic Vocabulary* by Steve Hart. The review summarizes the essential contributions of the book for learners of the English language while highlighting its use in different contexts.

Vollmer reviews the book, *Mixed Methods Research in Language Teaching and Learning*, by A. Mehdi Riazi. The review describes the contributions of each chapter in detail with special reference to language teaching and learning, and highlights the significance of such a manuscript in this field.

This issue showcases a wide spectrum of issues in the teaching and learning of English as a Second/ Foreign language and touches upon a variety of aspects ranging from written English to motivation of students of English as a Second Language, to research methods applicable to ESL/ EFL teaching and learning. In accordance with the mission of this journal, the voices and writing styles of the authors have been preserved as far as possible.

Understanding Logical Meaning-making in Chinese High School Students' EFL Writing: A Systemic Functional Perspective

Winfred Wenhui Xuan

Hong Kong Community College, The Hong Kong Polytechnic University

Bioprofile

Winfred Xuan is a lecturer of Hong Kong Community College, The Hong Kong Polytechnic University. He obtained his PhD degree in Systemic Functional Linguistics from the Department of English, The Hong Kong Polytechnic University. His research interests include systemic functional linguistics, second language writing, English for academic purpose, bilingual communication and teaching Chinese as a second language. His works appear in *Journal of Functional Linguistics*, *Applied Linguistics Review*, *The Asia-Pacific Education Researcher* and *Asia-Pacific Journal of Second and Foreign Language Education*. Dr. Xuan may be contacted at winfredhuen@gmail.com or wxuan@hkcc-polyu.edu.hk.

Abstract

Drawing on the framework of systemic functional text analysis, mainly clause complexing, the present study aims to explore Chinese high school students' EFL writing. A class of 50 junior secondary students was recruited as the participants for this study. Ten writing tasks written by the participants in one academic year were collected as the data. Different combinations of taxis and logico-semantic relations in students' writing were analyzed. Findings reveal that registerial difference in deploying clause complexing in students' writing is observed. In addition, simple and congruent type of logico-semantic relations is dominant. Relevant pedagogical and curriculum suggestions are provided for EFL writing teaching and researching in similar contexts.

Address for Correspondence

9 Hoi Ting Road,
Yau Ma Tei West Kowloon
Hong Kong Community College
The Hong Kong Polytechnic
University HK SAR
China

Key Words: clause complexing, adolescent EFL writing, systemic functional linguistics

Introduction

This is a longitudinal study of Chinese high school students' EFL writing. Unlike previous studies, the present study adopted a systemic functional text analysis (Halliday & Matthiessen, 2014) and longitudinal perspectives (Byrnes & Ortega, 2008) to investigate high school students' EFL writing. In particular, the present study attempts to investigate the use of clause complex in Chinese high school students' L2 writing. In order to achieve the goals of the present study, systemic functional text analysis was adopted for the analysis of participants' writing, which encompasses lexicogrammatical analysis: clause complex (Halliday & Matthiessen, 2014).

The following is a discussion of the theoretical framework for the present study, stating the philosophies of the functional approach to L2 writing and operationalizing clause complex in systemic functional linguistics. This study will then contextualize and localize the literature to describe the research questions, background, and methodology. Findings and implications will be outlined in the conclusions.

Systemic functional linguistics and L2 writing

Systemic functional linguistics (here after SFL) conceptualizes writing as meaning making (Halliday & Matthiessen, 2014), which has been applied to the studies of L2 writing tremendously in recent years. Different parts of the theories have been adopted to investigate L2 writing with the approach of text analysis, such as genre (Harman, 2013), grammatical metaphor (Ryshina-Pankova & Byrnes, 2013), theme (Ryshina-Pankova, 2011) and modality (Gibbons & Markwick Smith, 1992). From the perspective of writing as meaning making, these studies have provided lots of insightful findings to L2 writing researchers. For example, findings from studies of genre-based pedagogy approach in L2 writing show that the use of genre is beneficial to L2 new immigrant children in US context (Gebhard & Harman, 2011). It helped the students understand the writing task better and improved their L2 writing performance. In addition, the study of grammatical metaphor in L2 writing at college level provided us with new understanding to L2 writing complexity. For example, after investigating the advanced L2 learners' writing, Ryshina-Pankova and Byrnes (2013) argued that grammatical metaphor is an important indicator of L2 writing complexity. That said, the more advanced the learners, the more use of grammatical metaphor in their writing. This study has enriched the traditional ways of investigating complexity in L2 writing studies methodologically. In the study of argumentative writing,

the use of theme is crucial in stance building (Ryshina-Pankova & Byrnes, 2010). Ryshina-Pankova (2011) found that the strategic use of theme in L2 German learners' book review writing actually help learners to enhance the pervasiveness of their argument and the stance building in their book reviews. In terms of modality, Gibbons and Markwick-Smith (1992) found that the partial mastery of modality in L2 English high school learners' writing due to the unsystematic teaching of the system of modality in the Australian context. Gibbons and Markwick-Smith (1992) recommended that teaching the system of modality to L2 learners is essential if we want them to become successful.

Logical meaning-making and academic writing

Logical meaning-making could be realized by logico-semantic relations through clause complexes in systemic functional linguistics (Halliday & Matthiessen, 2014). Having a good command of clause complexes allows the speaker or writer to combine information together in a tighter and more logical way, which helps them to achieve their communicative purpose in a more tactful way (Halliday & Matthiessen, 2004).

Most previous studies focus on the studies from academic writing in tertiary level, such as learning Japanese as a foreign language (Teruya, 2009), research article (Srinivass, 2008, 2017) and ESP (Baklouti, 2011; Srinivass, 2006; Stuart-Smith, 2007). Having some knowledge of clause complexing will be a bonus to students' language learning, especially in terms of meaning-making (Teruya, 2009). Srinivass (2006, 2017) shows that clause complex is essential in chemistry knowledge building. It is necessary to make these linguistic resources explicit to students in the discipline. Similarly, Baklouti (2011) built up a corpus of academic articles from six disciplines comprising 120 abstracts, in order to map out the deployment of clause simplexes and complexes in academic article abstracts. She found that the natural sciences have a higher proportion of clause simplexes than the humanities do. Furthermore, her study also discovered that hypotaxis is more favored by the humanities than the natural sciences.

However, there have been relatively few studies that have focused on secondary writing (Leong & Geok, 2005). Leong and Geok (2005) analyzed Singapore secondary school students' English writing skills in terms of good vs. poor writers' texts. Their findings showed that there was a significant difference in the employment of clause simplexes and clause complexes, with weak writers employing many more instances of clause simplexes than the good writers. They proposed that due to the poor understanding

of conjunction and clausal relations by lower level writers, purposeful inclusion and explicit instruction in the clause complex in secondary writing classes is indispensable to the success of EFL learners' L2 writing skill.

Methodologically, however, these studies only covered the simplexes, complexes and the deployment of conjunctions in realizing the logico-semantic relations. The present study attempts to include the depth of nexuses of clause complexes to have more details from the perspective of intricacy of clause complexes, aiming to unveil more findings to fill these knowledge gaps.

However, to date, studies like these have enriched our understanding of the clause complex as theorized in SFL substantially. Provided with the methodological, theoretical gaps presented in this review, this study takes the investigation of the clause complex a step further with the purpose of looking at how Chinese high school EFL students deploy the clause complex system to do logical meaning-making. The following research questions guide this chapter:

- (1) Over a one-year longitudinal study, how do students deploy the clause complex system in realizing their L2 logical meaning potential?
- (2) What taxis and logico-semantic relations are deployed in these EFL texts?
- (3) Does the deployment of different combinations of taxis and logico-semantic relations reflect registerial differences? How do deployments differ?

Operationalizing clause complex in systemic functional linguistics

This study adopts the system of clause complex as theorized in SFL (Halliday & Matthiessen, 2004), shown in Figure 1, to investigate the students' system of clause complex in their English learning.

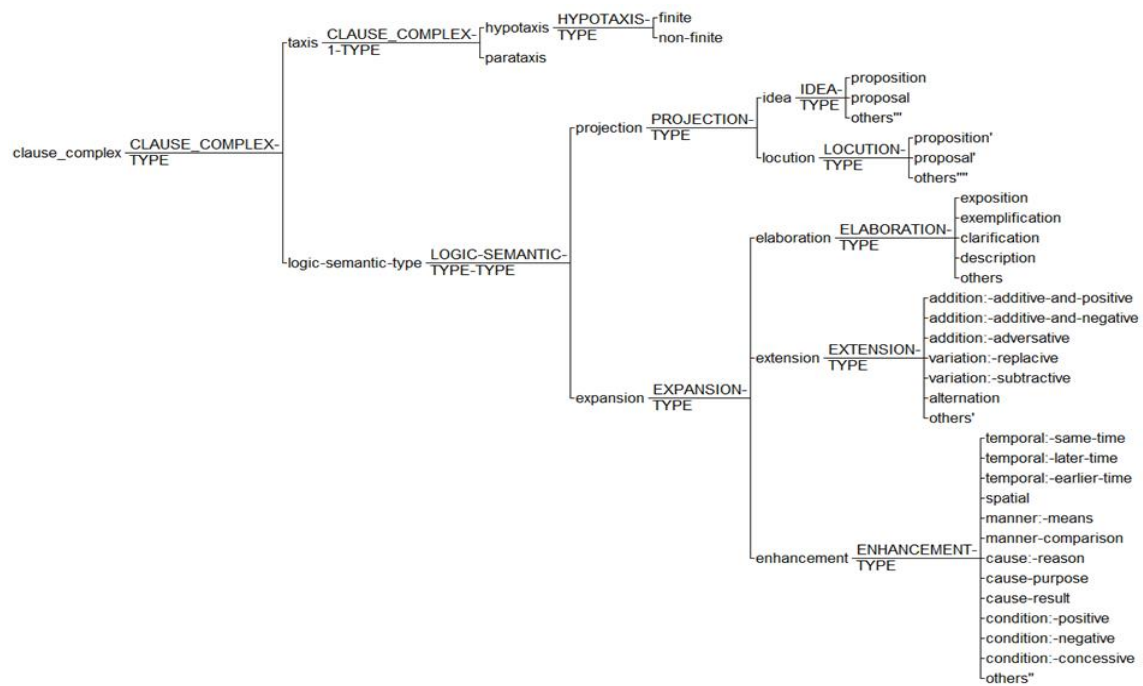


Figure 1. System of clause complex in SFL (Halliday & Matthiessen, 2004)

In functional grammar, the system of clause complex is realized through different taxis and logico-semantic relations. As shown in Figure 1, the system of clause complex runs into two major dimensions: the system of taxis, which consists of two types of realizations of clauses relations, i.e. parataxis and hypotaxis, and the system of logico-semantic relations between clauses that are instantiated by projection and expansion. The two types of taxis are similar to the clause relations coordination and subordination in traditional grammar. Parataxis concerns the relation between two clauses that are in a relationship of equals, whereas hypotaxis concerns the relation between two clauses that are not equal, and where one is dependent on the other.

As mentioned above, the two major types of logico-semantic relations, i.e. projection and expansion are at the first degree of delicacy. If we take one further step in delicacy, five types of logico-semantic relations are posited as sub-systems. Projection consists of locution and idea. For locution, it is the verbal process with verbiage, while idea concerns the mental event that is projected by the mental process. The system of expansion in the next delicacy is comprised of extension, elaboration and enhancement. Extension consists of clauses that adding new elements or giving an alternative to it. Elaboration is realized by restatement, specification or exemplification. Enhancement is comprised by circumstantial like clause expressing time, place, cause, reason, condition or concession (Halliday & Matthiessen, 2014, pp. 383).

Table 1: Realization of taxis and logico-semantic type

		Parataxis [1 2 3...]	Hypotaxis [α β γ ...]
projection	idea [‘]	1 Jimmy knew ‘2 his mother would come.	α Jimmy knew ‘ β that his mother would come.
	locution [“]	1 Jimmy said “2:” My mother will come.”	α Jimmy said “ β that his mother would come.
expansion	elaboration [=]	1 It was nothing bad; =2 it was just a cold.	α Jimmy knew this case, = β which made it become more complicated.
	extension [+]	1 Jimmy knew +2 and his mother knew.	α Jimmy played the game + β as well as his brother did.
	enhancement [×]	1 Jimmy knew, × 2 so her mother knew.	α Jimmy knew this news × β by listening to radio.

Methods

Participants

The participants of the present study were from a local high school in Guangzhou, China. A class of 50 students at secondary 3 was recruited, which consisted of 24 boys and 26 girls. The participants were in the final year of their junior secondary, which is the end of the 9th year of compulsory education in China. Their age was around 15. They received 45 minutes of English tuition every day at school. Most of the instruction focussed on grammar and vocabulary acquisition. They had been learning English for more than 6 years. However, their proficiency was still at beginner level with a vocabulary of around 1200-1500 words.

English education is still very exam-driven in this context, where most of the efforts are paid to the drilling of English exams that students are required to take. Therefore, the teaching of English in such context is very goal-oriented. That said, teaching and learning will inevitably concentrate on exams. To be more specific, the teaching of English will not really focus on the development of students’ English proficiency. Instead, the teachers will mainly help students to get high scores in the exam. For this reason, students are not really learning English but cramming for English exams.

Data collection

Ten English compositions from the participants for a whole academic year were collected, yielding longitudinal data for a more in-depth and elaborate understanding of the participants’ L2 meaning repertoires (Ortega & Byrnes, 2008). For exhaustive and manual

analysis, the ten best pieces of student writing were chosen, focusing on their writing from the beginning of the year (the 1st writing task), the middle (the 5th task) and the end (the 10th task). The selection of these ten best students based on teachers' classroom observation, marking of the students' writing. The first writing task in the data was an assignment while the other two were finished in class within a limited time of 30 minutes.

Table 2: Writing tasks that students accomplished

Time	Topic	Details
1 st	Learn to smile	Advise others to smile
2 nd	A letter to Mike	Write a letter to a friend, who was recently sick.
3 rd	Trip to Hangzhou	Sharing your travelling experiences to Hangzhou with your friends.
4 th	Steve Jobs	Describe Steve Jobs and his life.
5 th	Lifelong learning	Discuss lifelong learning and how to practice it.
6 th	An activity	Share an interesting activity.
7 th	A letter to Alice	Write a letter to Alice and explain how to improve her relationship with her Mum.
8 th	How to be a good learner?	State your views on how to be a good learner.
9 th	Blogging	Explore the advantages and disadvantages of blogging. State your views on it.
10 th	Charity sale	Share information about a charity sale that took place in your school.

Table 2 shows the writing journey that the participants undertook during the two semesters at junior three level. As indicated by the table, there were altogether ten writing tasks. Most of the writing tasks were done under exam conditions, i.e. individually, at school and within a set time limit. However, the first and sixth were take-home assignments.

Coding of the data

First, clause boundaries were identified in this study. Clauses were coded numerically. Then, all the clause complexes were extracted in the corpus manually. After that, taxis and logico-semantic relations between clauses were identified. Before this large data analysis task, pilot data coding for accuracy and consistency of data analysis were performed between the author and his colleague. This colleague was known to have professional training in systemic functional text analysis. This was followed by a meeting between the author and a colleague to assess coding methods and reach an agreement on the conflicting issues arising from the data analysis. A rating consistency of 92% was recorded.

Results

Overall development of taxis and logico-semantic relations in the students' writing

Simplexes vs. Complexes

Figure 2 shows the different configurations of simplexes and complexes in texts that come from different studies conducted in different language learning contexts.

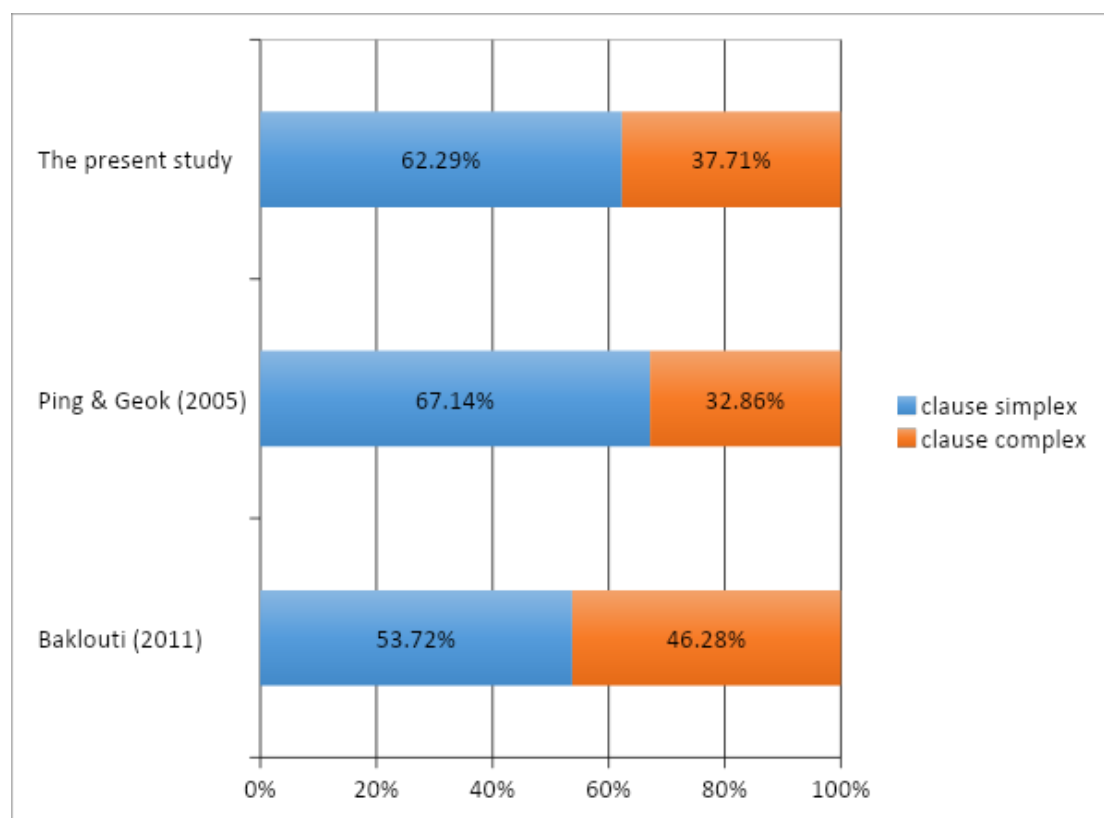


Figure 2. The ratio of simplexes and complexes in different contexts

As we can observe from Figure 2, the ratio of simplexes to complexes in the present study falls in between the findings of the two previous studies. In Leong and Geok's (2005) study, the ratio of clause simplex to clause complex is around 62% to 38%, while for Baklouti's (2011) study the ratio is about 54% to 46%. The present study bears some similarities to Ping and Geok's study. The reason for this similarity is that the data that both of the two studies examined consisted of secondary school EFL learners' written texts, while Baklouti's study focused on investigation of academic writing in a more technical and special register at college level. That said, secondary L2 learners relatively deploy more clause simplex in their writing than college students do.

Logico-semantic relations

Figure 3 demonstrates the different combinations of logico-semantic relations in the students' writing.

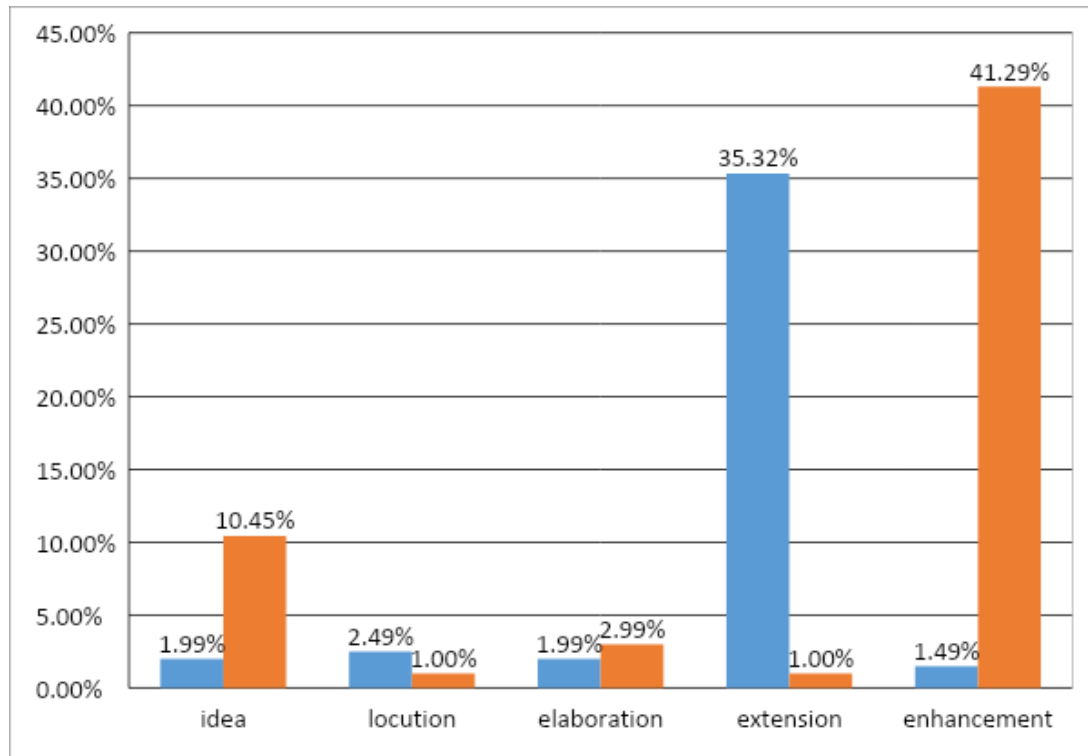


Figure 3: Logico-semantic relations in students' writing

Figure 3 delineates the landscape of the choices of different logico-semantic relations in the students' writing. The most favored type of logico-semantic relations in the students' writing is hypotactic: enhancement, which accounts for around 40% of the total. Paratactic: extending is the second favored combination, which accounts for about 35% of all the instances. Hypotactic here means the two clauses' relation in a clause complex is unequal. One clause is dependent on the other, which is similar to subordination in traditional grammar. Paratactic means the opposite. The two clauses are in equal relation, which is similar to coordination in traditional grammar (Halliday & Matthiessen, 2014).

Besides the two most favored types, the third type is hypotactic: locution, which accounts for around 10% of all instances. For the rest of the other combinations, they have a relatively small number compared with the aforementioned types. Therefore, these will be regarded as minor combinations that can be ignored in this discussion. The finding of this part complements the previous studies of clause complex in the following two aspects: first, it shows the general deployment of different logico-semantic relations used in the

students writing. Secondly, it categorizes the deployment of different types of logico-semantic relations statistically as well. Therefore, such a detailed description can directly provide feedbacks to language teachers or educators in designing L2 writing curriculum at the secondary level.

Taxis choice

Figure 4 presents the different combinations of taxis at different levels of the students' clause complexes.

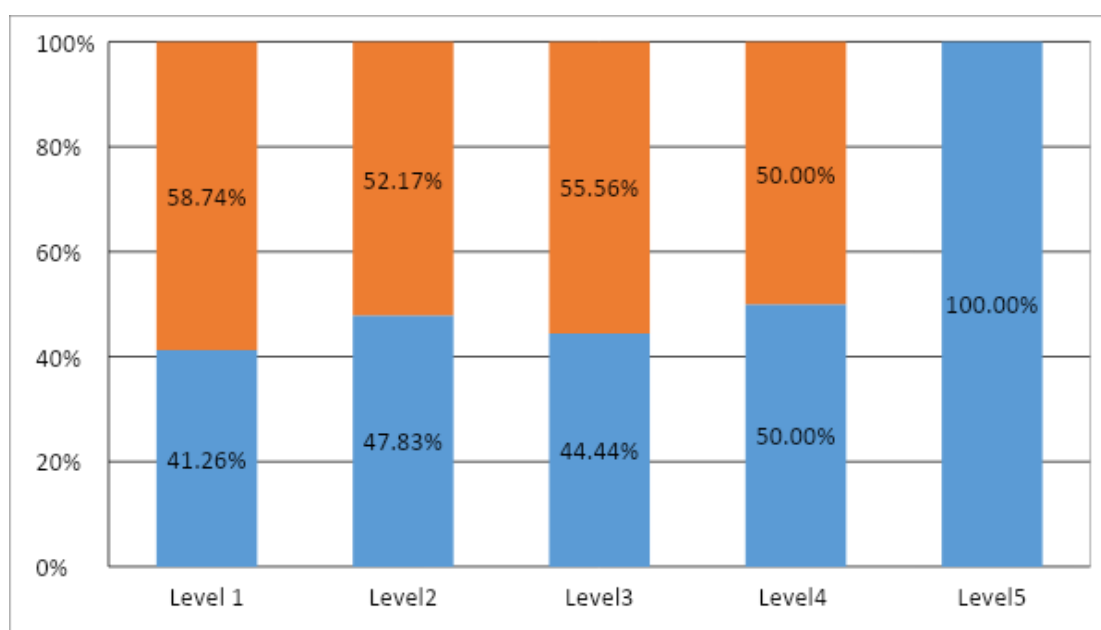


Figure 4: Taxis choice in the students' writing at different levels

Figure 4 shows the different ratios of hypotaxis and parataxis at five levels. It is shown on Figure 4 that the different combinations of hypotaxis and parataxis are quite similar at the first four levels, while at the final level, where there is just one instance, parataxis takes up all the instances. If we look at the findings level by level, it is obvious that hypotaxis is dominant at all levels. Let's take level one in figure 4, as an example; the ratio between hypotactic and paratactic is around 60% to 40%. The second third and fourth levels have the same patterns of percentages. In a word, it seems that hypotaxis is always favored over parataxis in the students' writing.

Delicacy in enhancement

As shown in Figure 5, hypotactic: enhancement is the most favored type of logico-semantic combination in the students' writing, which takes up more than 41% of all the instances. In order to have a more thorough and comprehensive understanding of the deployment of enhancement in the students' writing, Figure 4 shows more details on the delicacy of enhancement, which provides us with insights on how the students deploy these resources to realize their meaning potential.

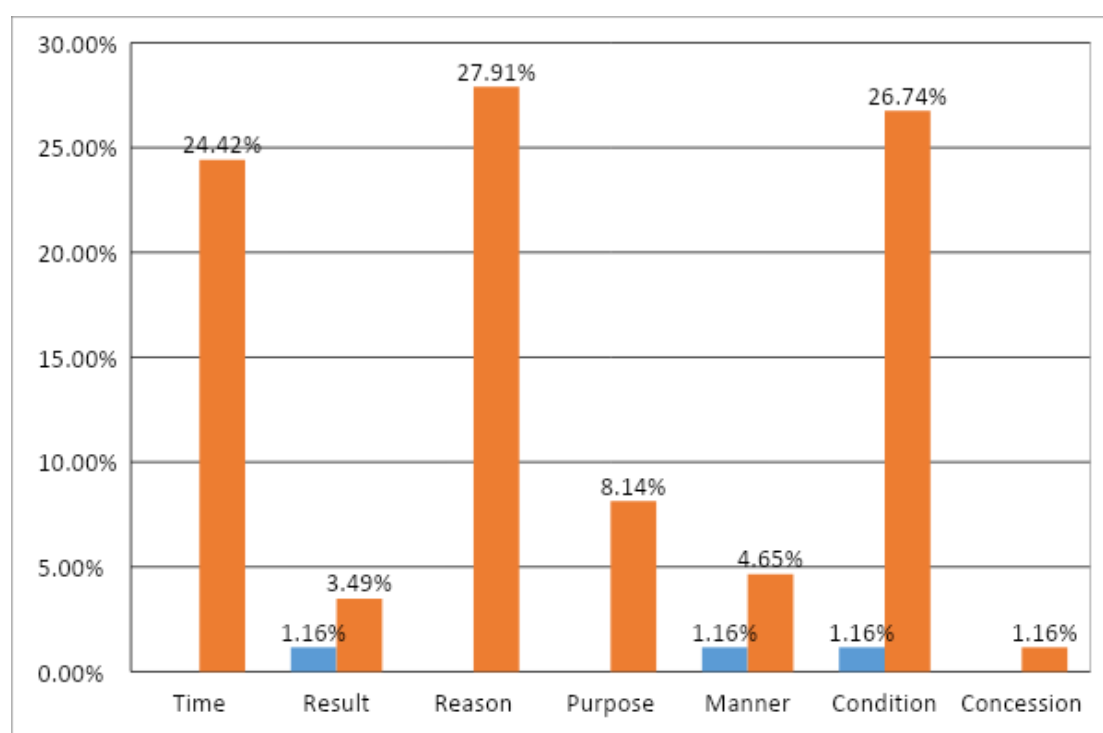


Figure 5. Enhancement in detail

As indicated in Figure 5, most of the enhancement is hypotactic: enhancement, while there are just a few cases of parataxis. Among all these sub-types of enhancement, the most favored combination is hypotactic: reason, which takes up nearly 28% of all the enhancement instances. The second favored combination is hypotactic: condition, which covers almost 27% of all the instances, while the third favored type is: hypotactic: time, with a percentage of 24%. The fourth is hypotactic: purpose with a percentage of 8%. For the rest of the other combinations, the instances are so few that they can be ignored here for the present study.

According to Figure 5, the landscape of enhancement in numbers and percentage has been delineated. The following section will take a further step to investigate the

realization of different types of enhancement in the students' writing. In particular, four most frequently deployed sub-types of enhancement will be illustrated as they account for most of the realization of enhancement in the students' writing, which are condition, reason, time and purpose. (Notes: These instances are from the students writing in the data. For example, *No.7, 1st writing* means this is participant No.7 and the example is from his/her 1st writing task.

Condition

There are three types of realizations of condition in the students' writing. The students employ the conjunctions "if" and "when". In addition, some instances are realized without a conjunction. Here are some instances from the participants' writing:

(1) Conjunction "if"

This is the most favored type of condition in the students' writing, which takes up more than 60% of all instances identified.

[6.0] Only will we learn those

[6.1] if we have much enough practice in the real society. (No.9. 5th writing)

(2) Conjunction "when"

[5.0] Thomas Jefferson once said

[5.1]: "When you are angry,

[5.2] count 10 before you speak,

[5.3] If very,

[5.4] count a 100." (No.6, 1st writing)

(3) Without conjunction

There are few cases of this type.

[15.0] The older we grow,

[15.1] the more we should learn. (No.1, 1st writing)

Reason

As can be seen from the previous figure 5, reason takes up almost 28% of all the instances of enhancement. According to what has been identified, there are 5 types of

conjunctions that realize the logico-semantic relation of reason. Here are some instances:

(1) Conjunction “because”

This is the most favored type of conjunction that realizes the logico-semantic relation of reason in the students’ writing. Examples are as follows:

[5.0] It can also help you be confident again,

[5.1] because you should know

[5.2] that sometimes the one who knock you down is just yourself. (No.1, 1st writing)

[5.0] We should also learn to smile to others.

[5.1] Because it can let people become more and more closer. (No.3, 1st writing)

(2) Conjunction “as”

The students also deploy “as” in their writing to realize the relation of reason.

[15.0] As the whole world busy changing into a global village,

[15.1] communication is becoming more and more important. (No.7, 1st writing)

(3) Conjunction “since”

“Since” is as frequent as “because”. Here are some examples:

[6.0] Since we are living in a fast-developing time,

[6.1] it’s important to learn something new and keep our minds fresh. (No.1, 5th writing)

[7.0] What’s more,

[7.1] since there are lots of museums and libraries in the city

[7.2] and Internet becomes so convenient and popular for us to surf on,

[7.3] we can easily do our lifelong learning. (No.9, 5th writing)

(4) Conjunction “so”

“So” is also deployed in the students’ writing to realize the relation of reason in their

writing, such as the following example:

[19.0] *Life is too short to have regrets,*
[19.1] *so you'd better make the best of it. (No.6, 1st writing)*

(5) Conjunction “for”

This is not frequently seen in students' writing. But there are some cases, like the following example:

[6.0] *Even doing physical exercise can help,*
[6.1] *for it teaches us how to keep healthy*
[6.2] *and became strong. (No.2, 5th writing)*

Time

Enhancement of time is also frequently deployed in the students' writing, which covers almost 25% of all the instances. I will illustrate some typical examples with different conjunctions.

(1) Conjunction “when”

This is the most favored type of realization.

[15.0] *For example, when we have troubles,*
[15.1] *we can use the things we have learnt to solve the problems. (No.5, 5th writing)*

[4.0] *Smile's important for people*
[4.1] *since it's the sound of strength*
[4.2] *when you face difficulties. (No.9, 1st writing)*

(2) Conjunction “as”

The students also employ conjunction “as” to realize time. Examples are as followed:

[16.0] So we should keep learning

[16.1] as time goes by. (No.1, 5th)

(3) Conjunction “until”

It is not frequently used in the students’ writing.

[4.0] Learn

[4.1] until you die. (No.7. 5th writing)

(4) “whenever”

There are two instances in the students’ writing. Examples are as followed:

[13.0] On the other hand, learning gives us some support

[13.1] and makes us feel some relief

[13.2] whenever we meet difficulties. (No.1, 5th writing)

These are the detailed realizations of enhancement in the students’ writing. I will continue to discuss the registerial difference of deployment of clause complexes in the students’ writing in the next section.

Comparison of different text types

Comparison of taxis

Figure 6 shows the differences in the frequency of deployment of taxis in two different registers in the present study, which are recommending and sharing. The major difference is the combination of parataxis and hypotaxis as we can see from Figure.6.

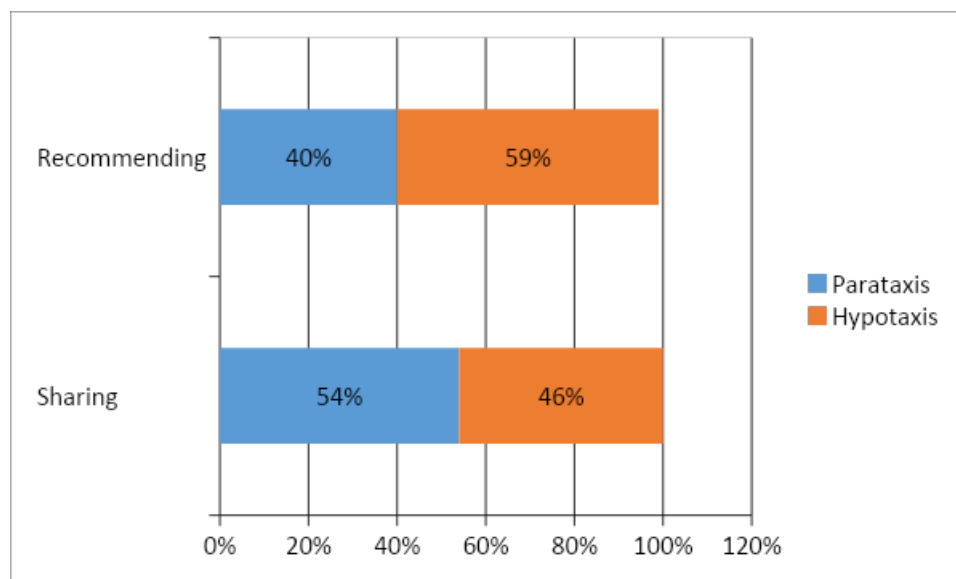


Figure 6. Proportions of hypotaxis and parataxis in different registers

As discussed in the previous section, there are two different registers in the present study, “sharing” and “recommending”. There are more paratactic combinations (54%) than hypotactic combinations (46%) within the sharing register. However, it is just the opposite for “recommending”, where there are more instances of hypotaxis (59%). Thus we can see the registerial differences in the different deployment of taxis.

Comparison of logico-semantic relations

As Figure 3 shows, hypotactic: enhancing, and paratactic: extending are the two major types of logico-semantic relations in the data, which together takes up almost 80% of all the combinations deployed. In order to have a more insightful look at these two combinations, I will present the results of the comparison of the two different registers.

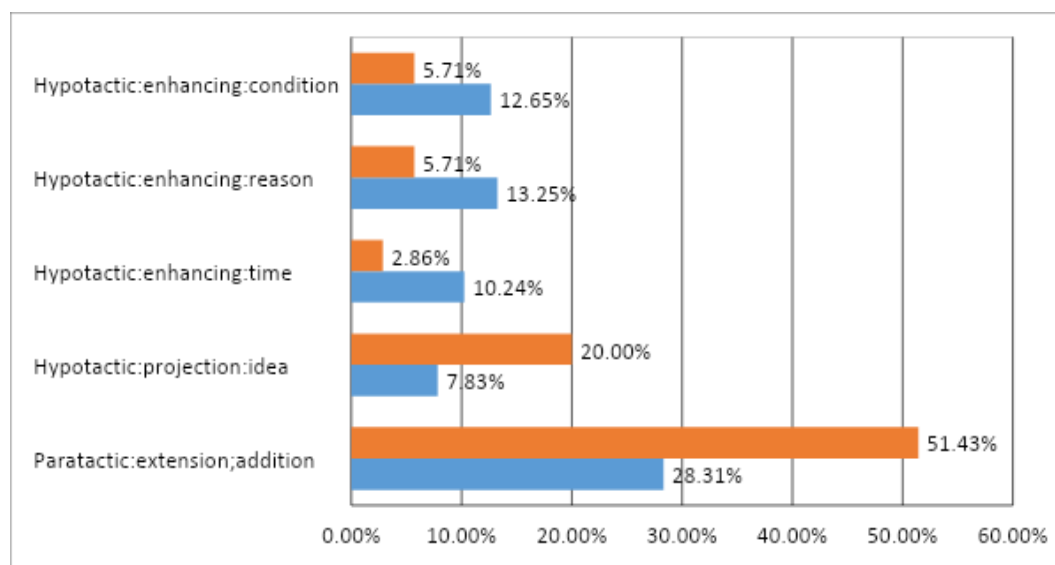


Figure 7. Comparison of different logico relations between two registers

As Figure 7 shows, five major logico-semantic relations present obvious registerial differences, for the clarity and convenience of the data presentation, I will be selective in choosing the combinations that are salient statistically in the data. For paratactic: extending, the percentage is fairly high in the “sharing” register, which accounts for as high as 51%, while there is just 28% in the “recommending” register. Hypotactic: projection: idea accounts for 20% in sharing, while it accounts for 7.83% in “recommending”. Except for these two combinations that appear more in the text of “sharing”, for the rest of the combinations, there are more instances deployed in “recommending” texts, like “condition”, “reason” and “time”.

Case study

Table 3 shows the text type differences between two typical texts in terms of text types, namely recommending and sharing from the students’ compositions. I will present the comparisons by utilizing a table.

Table 3: Two sample cases of deployment of clause complexes in the students’ writing

Text one: Recommending	Logico-semantic relations	Text two: Sharing	Logico-semantic relations
[1] Lifelong learning means that one should never stop learning until death takes him away.		[1] This morning, our school had a charity sale on the playground.	
[2.0] Nowadays, people regard knowledge as power	(1) paratactic: extension: addition	[2] Students brought some pens,	

[2.1] and many think [2.2] that learning in school is essential.	(2) hypotactic: projection: idea	notebooks, toys, books and magazines to sell.	
[3.0] However, learning lies everywhere, [3.1] for example we may widen our sight by TV programmes or newspaper.	(1) paratactic: elaboration: exemplification	[3] Many students and teachers joined in it.	
[4] Graduation is not the end of learning, too.		[4.0] We were all active [4.1] and it's a really exciting activity.	Paratactic: extension: addition
[5.0] Instead, we the learn more outside school, [5.1] like how to be tolerant, [5.2] how to be faithful, [5.3] how to be friendly, etc.	(1) paratactic: elaboration: exemplification	[5] All the things we brought were sold.	
[6.0] Only will we learn those [6.1] if we have much enough practice in the real society.	(1) hypotactic: enhancement: condition	[6.0] We got a great amount of money [6.1] and all of it would be given to Project Hope.	Paratactic: extension: addition
[7.0] What's more, [7.1] since there are lots of museums and libraries in the city [7.2] and Internet becomes so convenient and popular for us to surf on, [7.3] we can easily do our lifelong learning.	(1) hypotactic: enhancement: reason (2) paratactic: extension: addition	[7] The aim of the charity sale is to help the students who live poor lives.	
[8.0] Or we can also do some sports, [8.1] go out for traveling, [8.2] which are all efficient ways.	(1) hypotactic: elaboration (2) Paratactic: extension: addition	[8.0] We can help them live and study better [8.1] by selling something useless for us.	Hypotactic: enhancement: means
[9] We need to make the best use of these valuable resources.		[9] It's a very valuable experience for me.	
[10.0] Lifelong learning isn't always so easy, [10.1] but if we do persist on learning the whole of our life, [10.2] and never settle down to get stronger of ourselves. [11.0] We may discover [11.1] that we not only know more about everything, [11.2] but also get the ability to hurdle any difficulty with no fear. [11.3] Then our dreams will be so close to us.	(1) paratactic: extension: adversative (2) hypotactic: enhancement: condition (3.0) paratactic: extension: addition (3.1) paratactic: extension: addition (4) hypotactic: projection: idea (5) paratactic: extension: addition	[10.0] I found [10.1] that it was such a pleasure to help others through this activity.	Hypotactic: projection: idea
		[11] It made my life more meaningful and valuable.	
[12.0] Start learning right now, [12.1] the more people are influenced by us [12.2] the better the world gets.	(1) paratactic: elaboration: exposition (2) hypotactic: enhancement: condition	[12] What you give is much more important than what you get.	

[13.0] Let a voice fulfills our minds [13.1] “Never too old to learn.”	Paratactic: projection: locution	[13.0] We should start out small to offer our help to others [13.1] and make our lives enjoyable and meaningful.	Paratactic: extension: addition
---	--	---	------------------------------------

The prompt for text one was 'lifelong learning'. Students were required to discuss what their conception of lifelong learning is and how to practice it. The text type is recommending. In the sample text I have extracted from the corpus, five generic stages have been identified, which includes (i). definition of lifelong learning, (ii). further elaboration of this concept, (iii). ways to practice lifelong learning, (iv). benefits of lifelong learning, and (v). recommendation of lifelong learning. I will now elaborate how the writer deploys different types of configurations of taxis and logico-semantic relations to realize the meaning potential of a recommending text.

The first part is the brief introduction of the topic, which discusses the definition of lifelong learning. The writer here doesn't deploy any clause complex to illustrate his conception of lifelong learning; instead he deploys an embedded clause to state his perception of this definition.

At the second stage, the writer further illustrates what is lifelong learning. First, the writer deploys paratactic: extension: addition to illuminate what is the concept of lifelong learning. Then, he continues to employ hypotactic: projection: idea to discuss what people think of lifelong learning. In order to express the point that learning is everywhere, the writer employs two examples to illustrate how we could learn outside school. After that, the writer ends the paragraph by employing hypotactic: enhancement: condition to state the importance of learning outside school.

In the third part of the writing, the writer begins to provide ways to the readers on how to practice lifelong learning. The writer first starts with hypotactic: enhancement: reason to state that lifelong learning is not difficult for us, as we could find numerous ways to practice it. In addition, he deploys paratactic: extension: addition and hypotactic: elaboration to further elaborate the various ways that are feasible to students.

After elaborating on the ways of practicing lifelong learning, the writer further demonstrates the benefits of lifelong learning in their fourth paragraph. The student employs paratactic: extension: addition: adversative to state the difficulty in maintaining their lifelong learning. Then, he employs hypotactic: enhancement: condition to further claims that if we could keep doing it, we could overcome all the difficulties in our life.

Three paratactic: extension: addition clauses are employed here. Besides, he also deploys hypotactic: projection: idea here to state the benefit of practicing lifelong learning.

After discussing all these definitions, solutions and benefits, the writing comes to an end with a recommendation, where the author advocates the audience to practice lifelong learning. He deploys paratactic: elaboration: exposition to elaborate the benefit of practicing lifelong learning again. Furthermore, he further illuminates his point by deploying hypotactic: enhancement: condition. In concluding, in order to emphasize to the argument of practicing lifelong learning, the writer uses paratactic: projection: locution to restate the importance of doing lifelong learning.

As the above analysis shows, the writer employs different combinations of taxis, logico-semantic relations in instantiating different types of logical relations in his writing, which fulfill different functions in making the text coherent and fluent. If we look at the different configurations of taxis and logico-semantic relations in different stages, we can see how and why the writer deploys these combinations.

The second piece of writing (Writing Task Ten) is about sharing experiences of an activity with the prompt ‘Charity Sale’ where students are required to talk about a charity sale that took place in their school the previous week. As we can see from the writing topic, the text type is sharing here. Three stages have been identified in this writing, including: background, recount of the event and evaluation of the event. In this text, there are only five clause complexes. The writer deploys three instances of paratactic: extension: addition to describe the activity. He also employs hypotactic: enhancement: means to elaborate the way the students accumulated the donation money from the charity sale, while in the evaluation stage, he deploys one instance of hypotactic: projection: idea to state his own opinion of the charity sale. The participant then ends the writing with a paratactic: extension: the addition to elaborate the benefits from the charity sale.

Compared with the previous text that focuses on recommending, this piece of sharing text has fewer instances of clause complexes. In a narrative text, there are fewer opportunities to express reason, condition and other logical relations, as the text is mainly about what happens chronologically. However, in the context of recommending the writer has to rely on enhancement: condition or enhancement: reason in order to persuade the readers to take action. Thus this detailed case analysis shows how the students deploy different combinations of taxis and logico-semantic relations in realizing the meaning potentials of different registers.

Table 4: Overall employment of clause complex in students' writing

Taxis and logico-semantic relations	Conjunction	Instances
(1) Hypotactic: projection: idea	know	We all know that learning provide us with knowledge.
	be sure	I am sure we will become wise.
	wish	We will devote the money that we collect in the charity sale to project hope and I wish it will help the people in need have brighter future.
	think	I think lifelong learning can make us wise.
	hope	I hope I will be the seller again next time.
	found	I found that it was such a pleasure to help others through this activity.
	discover	We may discover that we not only know more about everything, but also get the ability to hurdle any difficulty with no fear.
(2) Hypotactic: projection: locution	remember	However, remember that you should find out your best learning ways and keep them on all the time.
	say	It is said that knowledge is power.
(3) Hypotactic: elaboration	which	The second is, generally speaking, a man of wisdom is far more popular among people, which may do much good to his appearance in others.
(4) Hypotactic: elaboration: exemplification	such as	Learning to smile to yourself can help you solve the unpleasant things in your life, such as failing in exams.
	like	I was sure that offering kindness would make all of us feel warm, like the sun shining on our hearts.
(5) Hypotactic: enhancement: purpose	in order to	I think the idea of lifelong learning should be widespread in order to live a more well-being life.
(6) Hypotactic: enhancement: manner: means	by	Visiting museums of variety and picking worthwhile books to read are the first two ways of lifelong learning by being knowledgeable in something.
(7) Hypotactic: enhancement: cause: result	so	It can increase your knowledge so that you will become more thoughtful.
(8) Hypotactic: extension: addition: adversative	while	Some of them brought their pens, notebooks, toys to sell, while others brought some books, magazines and so on.
(9) Hypotactic: enhancement: concession	though	I enjoyed the activity very much, though I was very tired.
(10) Hypotactic: enhancement: time	when	For example, when we have troubles, we can use the things we have learnt to solve problems.
	as	So, we should keep learning as we grow.
	whenever	On the other hand, learning gives us some support and makes us feel some relief whenever we meet difficulties.
	until	Learn until you die.
(11) Hypotactic: enhancement: reason	after	After you leave school, you can still learn in society.
	because	We are able to have more friends as well, because we are wiser and more admirable by lifelong learning.
	since	Since we are living in a fast-developing time, it's important to learn something new and keep our minds fresh.
(12) Hypotactic: enhancement:	as	As the world busy changing into a global village, communication is becoming more and more important.
	if	If we learn to smile to ourselves, we can easily solve the unhappy problems in our life.

condition	as	As you smile to life, life will smile on you.
(13) Paratactic: projection: idea	remember	So remember ; keep smiling.
(14) Paratactic: projection: locution	say	Thomas Jefferson once said : “when you are hungry, count 10 before you speak. If very, count 100.”
	voice	Let a voice fulfills our minds: “never too old to learn”.
(15) Paratactic: elaboration: exemplification	for example,	Smiling to yourself can help you solve the unhappy things in your life, for example , failing an exam.
(16) Paratactic: extension: addition: adversative	but	The first aspect is that school is a place to get knowledge from, but it’s not the only one.
(17) Paratactic: extension: variation: replacive	but	Don’t be selfish of giving out your smile, because it never decreases, but accumulates each time.
(18) Paratactic: extension: addition: additive	and	It’s helpful for picking up confidence again and leads you to success.
(19) Paratactic: enhancement: condition	and	At last, it’s necessary for you to have passion and be friendly, and only will you discover the wonder of life and friendship.
(20) Paratactic: enhancement: reason	so	Finally, lifelong learning is important for us to become a clever, thoughtful, imaginative person, so start lifelong learning now.
	for	Even doing physical exercise can help, for it teaches us how to keep healthy and became strong.

(Note: Student writings here have not been altered for authenticity.)

Discussion

Simple, congruent deployment

As we see from the summary of the clause complexes employed in the students’ writing, the most favored types of logico-semantic relation are paratactic: extension: addition, hypotactic: enhancement: reason and hypotactic: enhancement: condition. All of the realizations of these clause complexes are through the deployment of simple and frequently used conjunctions like, “and”, “because” and “if”. We seldom observe the types of logico-semantic relationships that are realized incongruently, which is very likely to be because of the students’ limited linguistic resources. This finding is very similar to what Leong and Geok (2005) found in Singapore EFL learners. Given such similarities among Asian EFL learners, the explicit teaching of different combinations of logico-semantic relations in L2 writing is recommended (Xuan, 2017, 2018, and Xuan & Huang, 2017). Pedagogically, teachers or educators can purposefully arrange various logico-semantic relations in the writing curriculum in order to provide more learning opportunities for students.

High- frequency of paratactic: extension: addition

Among all the 201 instances of the clause complexes deployed in the students' writing, I have identified 65 instances of paratactic: extension: addition, which covers 35% of all cases. Compared with the other types of logico-semantic relation, this is quite a high frequency. Furthermore, as seen from the analysis above, the more preferred text type for this logico-semantic relation is "sharing" text. In this context, the students prefer to deploy "and" to continue their recounting of the events, especially with the actions that happen chronologically. In addition, the overuse of addition also indicates the learners' English proficiency. Students in this study frequently used the conjunction "and" to link the clauses which is also an indicator of a low English proficiency, which is similar to the overuse of "can" in these students' writing (Xuan, 2017).

Text type differences

From the comparison of the two registers I have identified in the present study, text type differences exist in the deployment of clause complex. As we have seen, there are more paratactic: extension: addition complexes in the charity sale texts, while there are more hypotactic: enhancement: reason, and hypotactic: enhancement: condition complexes in the lifelong learning texts, where more employment of logic of reasoning and conditioning are required to accomplish the construal of the recommending text. These findings have shed some light on the teaching of writing from the perspective of deployment of clause complexes. Therefore, different combinations of clause complexes under different registers should be included in the writing curriculum in similar contexts.

Skewing of enhancement clauses

Matthiessen (1999) found that the more frequently deployed or instantiated the items in a system network were, the more elaborated the system will be. Paratactic: extension: addition is dominant in the present study. Hypotactic: enhancement is also favored in the students' writing, which accounts for more than 60% of all the instances in the overall deployment of clause complexes. This is another reason that we need to put more emphasis on the instruction of this part of the complexing system. As I have already mapped out the network of the whole system that students' deployment of clause complexes, we could go one more step further to compare the students' system of clause complex to the whole system of the clause complex, in order to map out the hierarchy of

difficulties in the clause complex system of EFL learners'. Then, applied linguists and educationalists can use these findings to provide feedback to the pedagogical grammar of the system of clause complex.

Conclusion

This paper presents the findings of a study that demonstrates how the system of clause complexes, as described by M.A.K. Halliday in systemic functional terms as a meaning-making resource, can be used to investigate adolescent Chinese EFL learners' writing. Partial mastery of the system was discovered. Based on the findings and discussion, we have delineated the linguistics features in these students' written text in the clause complex system, in order to provide the whole landscape of the students' deployment of clause complexes in their writing. This may be useful in the design of curriculum and writing teaching at secondary level English education on the Chinese mainland and in similar contexts around the world

Pedagogical implications

In the clause complex system, the students deploy numerous paratactic: extension: addition complexes in their writing, which are realized mostly by the conjunction "and". The three successive writing tasks are registerially different — the first two being located in 'recommending' contexts and the last in a 'sharing' context. These findings can provide feedback to the writing curriculum design and writing teaching in actual practice. First, through this, as writing instructors and researchers, we can better ensure that the students gain control over the whole system of clause complexing (Gibbons & Markwick-Smith, 1992), so that they have the resources to express themselves clearly and logically in different contexts. Secondly, arrangement of different text types with different logico-semantic relations is strongly recommended in such a context, which could help learners to master different combinations of taxis in their writing explicitly (Xuan, 2017, 2018). Thirdly, providing more contexts for students to practice writing with the different logico-semantic relations is suggested, since context is fairly essential for EFL learners to master the writing of different texts with different taxis and logico-semantic relations. Fourthly, highlighting the importance of logical meaning-making at the beginning is sensible for L2 writing teaching. If we can cultivate students' awareness in doing this, their writing will become more logical and the relations between clauses will be tighter too (Leong & Geok,

2005).

Limitations

Though the findings of the study are teaching-oriented, the generalization of the findings in the present study should be cautious. First, the study is exploratory in nature, which is still at the nascent stage. More studies are needed to support the practicality of the findings. Second, the length of the study was only one year. A longer time frame would be preferred before more insightful findings could be drawn. Third, only written texts are explored at the present study. More contextual information, such as, teachers perceptions, students interview and the writing curriculum are needed to be explored before we can disclose more interesting findings.

Project Funding Information: Innovative School Project in Higher Education of Guangdong (2017WQNCX043). *Alignment effects of the continuation task on L2 Chinese writing.*

Acknowledgement: This research was supported by Innovative School Project in Higher Education of Guangdong, China (2017WQNCX043).

References

- Baklouti, A. S. (2011). The impact of genre and disciplinary differences on structural choice: Taxis in research article abstracts. *Text and Talk-an Interdisciplinary Journal of Language, Discourse and Communication Studies*, 31(5), 503-523.
- Gebhard, M., & Harman, R. (2011). Reconsidering genre theory in K-12 schools: A response to school reforms in the United States. *Journal of second language writing*, 20(1), 45-55.
- Gibbons, J., and Markwick Smith, V. (1992). Exploring the use of a systemic semantic description. *International Journal of Applied Linguistics*, 2(1), 36-49.
- Halliday, M. A. K., and Matthiessen, C. M. I. M. (2004). *An introduction to functional grammar* (3rd ed.). London: Arnold.
- Halliday, M. A. K., and Matthiessen, C. M. I. M. (2014). *Halliday's introduction to functional grammar*. London: Routledge.
- Harman, R. (2013). Literary intertextuality in genre-based pedagogies: Building lexical cohesion in fifth-grade L2 writing. *Journal of Second Language Writing*, 22(2),

125-140.

- Leong, P. A., and Wee, B. G. (2005). Investigating the clause complex: An analysis of exposition type essays written by secondary school students in Singapore. *ITL, Review of Applied Linguistics*, 149-150, 47-76.
- Matthiessen, C. M. I. M. (1999). The system of TRANSITIVITY: An exploratory study of text-based profiles. *Functions of Language*, 6(1), 1-51.
- Matthiessen, C. M. I. M. (2002). Combining clauses into clause complexes: A multifaceted view. In J. Bybee, and M. Noonan (Eds.), *Complex sentences in grammar and discourse: Essays in honour of Sandra A. Thompson* (pp. 237-322). Amsterdam: Benjamins.
- Matthiessen, C. M. I. M., and Thompson, S. A. (1988). The structure of discourse and 'subordination'. *Clause Combining in Grammar and Discourse*, (pp. 275-329). Amsterdam: John Benjamins Publishing Company.
- Ortega, L., and Byrnes, H. (2008). The longitudinal study of advanced L2 capacities: An introduction. *The longitudinal study of advanced L2 capacities*, 3-20.
- Leong, P. A., & Wee, B. G. (2005). Investigating the clause complex: An analysis of exposition-type essays written by secondary school students in Singapore. *ITL, International Journal of Applied Linguistics*, (149-50), 47-76.
- Ryshina-Pankova, M. (2011). Developmental changes in the use of interactional resources: Persuading the reader in FL book reviews. *Journal of Second Language Writing*, 20(4), 243-256.
- Ryshina-Pankova, M., and Byrnes, H. (2013). Writing as learning to know: Tracing knowledge construction in L2 German compositions. *Journal of Second Language Writing*, 22(2), 179-197.
- Sriniwass, S. (2017). Methods and procedures for a Systemic Functional Linguistic Analysis: An investigation into clause complexing relations. *Journal of Modern Languages*, 19(1), 131-156.
- Sriniwass, S. (2008). Tactic augmentation and circumstantial augmentation in the creation of field meanings. In *From language to multimodality: new developments in the study of ideational meaning*, pp. 131-15, London: Equinox.
- Sriniwass, S. (2006). Systemic perspectives on the clause complex in English: Logico-Semantic relations in chemistry. In *English in a globalised environment: investigating an emerging variety of English*, (pp. 55-66). Kuala Lumpur:

University of Malaya Press.

- Stuart-Smith, V. (2007). The hierarchical organization of text as conceptualized by rhetorical structure theory: A systemic functional perspective. *Australian Journal of Linguistics*, 27(1), 41-61.
- Teruya, K. (2009). Grammar as a gateway into discourse: A systemic functional approach to SUBJECT, THEME, and logic. *Linguistics and Education*, 20(1), 67-79.
- Xuan, W. W. (2017). An exploratory study of EFL writing by junior secondary students in China: text type, register and textual features. *Functional Linguistics*, 4(1), 3.
- Xuan, W. W. (2018). Understanding experiential meaning-making in Chinese adolescent L2 writing: a systemic functional perspective. *Asian-Pacific Journal of Second and Foreign Language Education*, 3(1), 5.
- Xuan, W., & Huang, X. E. (2017). Understanding interpersonal meaning-making in Chinese high school students' ESL writing: A systemic functional perspective. *The Asia-Pacific Education Researcher*, 26(5), 227-238.

Effect of lexical aspect and grounding on the use of the progressive

Mike Tiittanen

Toronto District School Board

Bioprofile

Mike Tiittanen has a PhD in Applied Linguistics. He has both academic and practical interests in Second Language Acquisition and Second Language Education. He works as an adult ESL instructor, and he is the author of *Brain Waves*, an ESL activity book intended for classroom use. He may be contacted at Mike_Tiittanen@hotmail.com.

Abstract

This study sought to determine if lexical aspect and grounding would influence the oral use of verbs in obligatory or possible contexts for the use of the past progressive amongst Tamil and Mandarin ESL learners in a film retell task and interview questions task. The results revealed that the learners used mostly activities in contexts for the use of the past progressive. The progressive forms were used primarily for background information. These results are consistent with the Prototype Hypothesis which postulates that learners will initially use a verb form with its prototypical function. ESL learners learning the past progressive may benefit from being exposed to input which contains prototypical uses of the past progressive.

Key words: discourse structure, lexical aspect, past continuous, past progressive

Introduction

There is a fair amount of empirical evidence showing that in the L2 (second language) acquisition of tense and aspect, lexical aspect plays an important role in the use of the progressive (Bardovi-Harlig, 2012; Qian, 2015; Vraicu, 2013; Willie, 2011). There is also

Address for Correspondence

2550 Lawrence Avenue East, #906
Toronto, Ontario
M1P 4Z3
Canada

research evidence that the grounding of a clause plays a role in the use of the progressive by ESL (English as a Second Language) learners (Bardovi-Harlig, 1998). However, few studies exist which investigate the role of

both lexical aspect and grounding on the oral use of the English progressive by L2 learners.

In this study, two L1 (first language) groups, Tamil and Mandarin, which both have the progressive in their respective languages, were chosen for this study. Like English, Tamil always uses its progressive-type marker as a suffix (Schiffman, 1999; Pillai, 1992), and Mandarin, has a progressive-type suffix (Xiao & McEnery, 2004) as well. This study sought to add evidence about the degree to which lexical aspect and grounding influence the use of the English verb form, regardless of the L1 of the learner, and thus help add evidence about the degree to which lexical aspect and grounding are universal factors in learner interlanguage use of verb tense-aspect forms.

Literature Review

Role of lexical aspect and foreground/background

Lexical aspect deals with the semantics of predicates. The most commonly cited classification of lexical aspectual classes was devised by Vendler in 1967. Vendler (1967) proposed the following lexical aspects:

- a) states – “...no change is involved; they are unbounded, in that they have no inherent beginning or end; and they are durative, in that persistence through time is of the essence” (Cruse, 2004, pp. 286 – 287). An example of a state is “Brad is tall.”
- b) activities – Similar to states, activities are unbounded and durative, but are different in the sense that activities are heterogeneous; namely, the action is construed as changing (Cruse, 2004) and requiring energy to persist if performed by a human. An example of an activity is “Brad is swimming”.
- c) accomplishments – These types of actions are durative and heterogeneous but are also telic in the sense that they can be completed (Cruse, 2004). An example of an accomplishment is “Brad swam the English Channel”. This example illustrates that an argument can play a crucial role in the determination of the lexical aspect of a verb.
- d) achievements – These types of actions are similar to accomplishments, but differ in that they are construed as occurring instantaneously (Cruse, 2004) as in the example, “Brad arrived last week”.

Lexical aspect plays a role in learner choice of progressive verb forms. The Aspect hypothesis asserts that L2 learners first mark actions which correspond to the lexical aspect

of activities with progressive forms before they use these forms with other lexical aspects such as accomplishments, achievements and states. A common formulation of this Aspect Hypothesis is that the progressive grammatical marker “spreads” as the proficiency of the learner improves, that is appearing first in activities, second in accomplishments and so forth. This “spreading” is said to be evident in the distributional frequency of progressive markers, these forms being usually most frequent in activities, second-most frequent in accomplishments etcetera (Housen, 2002).

In another related study on the same group of learners as the current one, Tiittanen (2015) found that both the L1 Tamil group and the L1 Mandarin group used non-target like uses of the progressive in obligatory contexts for the simple past tense primarily with activities and accomplishments. Tiittanen hypothesized that the learners were influenced by the durative and dynamic semantic properties of these predicates in their oversuppliance of progressive forms. However, in their oversuppliance of the progressive on one of the tasks, only the Tamil learners were used more accomplishments than achievements and more activities than states. For the Mandarin L1 group, there was no difference in their use of the progressive on this task between the above-mentioned lexical aspects.

The discourse structure of a narrative or conversation, in terms of backgrounded events and foregrounded events, has also been seen to be relevant to the use of certain verb forms such as the progressive. The most important points of discourse which contribute to the speaker’s goals are part of the foreground. In contrast, those elements of discourse which serve to only help the listener to understand the situation by, for example, the use of scene-setting devices are part of the background (Hopper & Thompson, 1980). For instance, in the sentence, “I *was bending* over to put something in the dryer when I sprained my back”, the foregrounded event is “I sprained my back”. This clause is the most important point that the speaker wishes to get across to the listener, while “I was bending over to put something over in the dryer” gives background information to set the scene for the listener.

Bardovi-Harlig (1998) has found support for the notion that L2 learners are also influenced by grounding in their oral use of the progressive. The progressive is more likely to appear in the background than perfective forms. Bardovi-Harlig (1998) administered an oral film task to 37 ESL learners of different degrees of proficiency. In all groups of proficiency, except for the very lowest level, the participants used progressive forms primarily for background action than foreground action. Her results are consistent with the

Discourse Hypothesis, according to which “learners use emerging verbal morphology to distinguish foreground from background in narratives” (Bardovi-Harlig, 1994).

There is also research indicating that adult L2 learners are influenced by both grounding and lexical aspect in their use of imperfective markers. Comajoan and Saldanya (2005) found that adult L2 university students, who were beginning students of Catalan, were more likely to use imperfective verb forms with activities in the background.

Past progressive in English

In English, the basic meaning of the past progressive, or the past continuous, is to indicate ongoing action in the past as in the following sentence:

- (1) He was studying for his exam when I saw him this afternoon (Cowan, 2008, p. 364).

The English past progressive is frequently used to highlight the duration of the activity, as in the above example. This tense-aspect combination is also frequently used for the background of a foregrounded, completed action as in the examples below:

- (2) The accident occurred as she was cleaning the windows.
(3) I was doing some work in the garden when the police arrived.
(Huddleston & Pullum, 2002, p. 166)

As the above examples indicate, the English past progressive consists of both a past tense marker (i.e. – the inflected form of “be”) as well as progressive aspect maker (i.e. – the “-ing” suffix).

Research Questions

The study investigated the following research questions:

1. Amongst both L1 groups, will there be a difference in the frequency of different types of lexical aspect in the progressive forms produced by the learners?
2. Amongst both L1 groups, will there be a difference in the frequency of the use of progressive forms in background contexts versus foreground contexts?

Methodology

Participants

There were 21 native speakers of Tamil and 21 native speakers of Mandarin who participated in the study. The Tamil and Mandarin groups were very similar in the gender

make-up of their respective groups, their mean age at the time of the study, their mean age of arrival in an English-speaking country and their mean length of residence in an English-speaking country. In terms of gender, the Tamil group consisted of 16 females and 5 males, while the Mandarin group consisted of 15 females and 6 males. The mean age of the Tamil group at the time of the study was 33.3 years, and the mean age of the Mandarin group was 35.7 years. The mean length of residence of the Tamil group was 2.08 years, and the mean LOR (length of residence) of the Mandarin group was 1.61 years. The Tamil group may have had a slight advantage, because of their greater LOR. However, it is unlikely that this had more than a slight impact on the study, because an independent samples t-test revealed that the difference in LOR was statistically non-significant, $t(1, 40) = .799, p = .483$.

In contrast to the variables mentioned above, there were some differences between the two groups. Five members of the Tamil group stated that they spoke English at home with some family members while only two members of the Mandarin group reported speaking English with family members. In terms of how they stated that they learned English beyond their formal learning in school, there was a small difference in the number of Tamil and Mandarin participants who used English professionally, socially or at college/university. Twelve Tamil speakers reported such use of English, while eight Mandarin speakers indicated such use. In addition, four Tamil participants reported watching English language TV/movies, listening to English language radio or reading books in English. In contrast, none of the Mandarin participants reported exposure to English language movies, TV, radio or books.

Data collection

The following data elicitation techniques were utilized: a) the grammar section of the Oxford Placement Test; b) an oral film retell task; and c) interview questions

1. student language background form

This questionnaire required the participants to answer questions about their age at the time of the test, age-of-arrival, length of residence and exposure to English outside the classroom.

2. grammar section of the Oxford Placement Test

The OPT grammar test is a timed 50-minute multiple choice exam, which consists of a variety of different grammatical structures. On the exam, there are 100 multiple choice

items, each of which have three different choices (Water is to boil / is boiling / boils at 100°C.).

3. Film retell task

For this task, the researcher showed the participants an ESL video, which is approximately 7 minutes in length long. Before showing the 7 minute ESL video about a man who joins a health club, the researcher pre-taught some of the vocabulary to all of the participants individually. The video was shown twice, and the researcher left the room both times that the participant watched the video. The researcher then asked the participant to recount the events of the video (see Appendix A).

4. Interview questions

The researcher asked all of the questions on the interview questions schedule (see Appendix A). However, when deemed appropriate, further questions were asked. The vast majority of the questions asked were about past events. None of the questions contained a progressive form.

Data analysis

The data from the data elicitation techniques was analyzed in the following manner:

1. OPT grammar test

Each test item was marked as being either correct or incorrect.

2. Film retell task

The present study conducted a token analysis, rather than a type analysis of the verbs used in the film retell task. The lexical aspect of all the progressive forms was categorized, using the tests listed in Appendix B. As well, the progressive forms were analysed to determine whether they were background or foreground action, using the tests shown in Appendix C.

3. Interview questions

The same analysis for the data generated from the interview questions was undertaken, as for the film retell task.

Results

OPT Grammar Test Results

As shown below in Figure 1 and Table 1, the OPT grammar test results of the Mandarin group and the Tamil group were very similar. The Mandarin learners had a mean score of 53.1 % on the OPT grammar test, and the Tamil learners had a mean score of 49.8 %. A t-test of independent samples revealed that this difference was statistically non-significant, $t(1, 40) = .708$, $p = .483$.

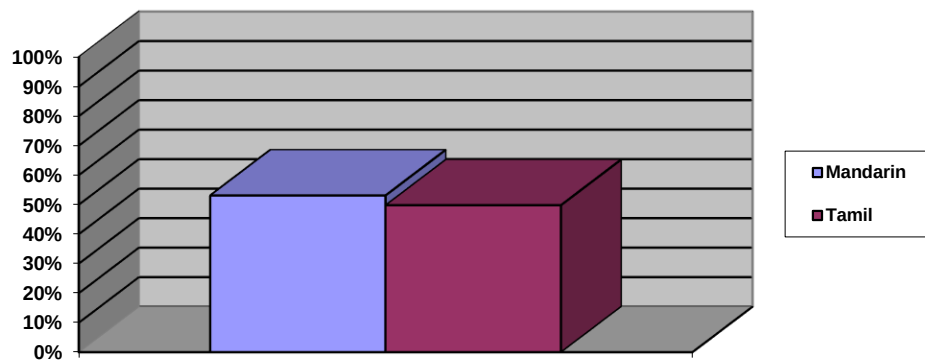


Figure 1: OPT Grammar Results by L1

Table 1: OPT grammar test results by L1

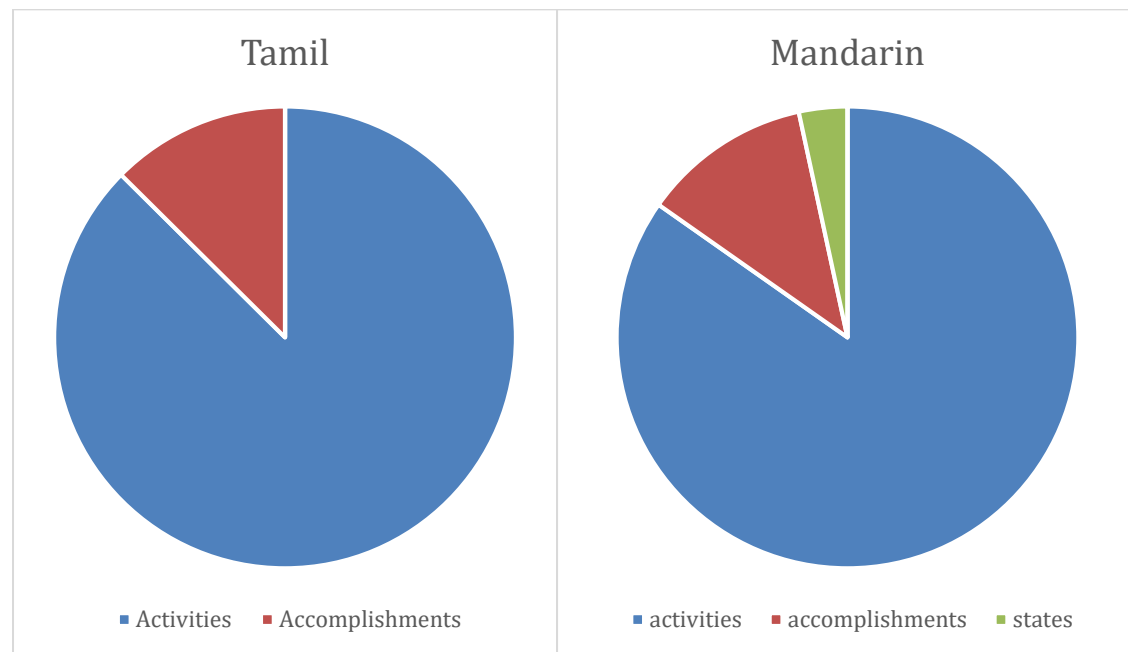
<u>L1</u>	<u>N</u>	<u>Mean score</u>	<u>Standard deviation</u>	<u>t value</u>	<u>p value</u>
Mandarin	21	53.1 %	15.3	.708	.483
Tamil	21	49.8%	15.3		

RQ 1. Amongst both L1 groups, will there be a difference in the frequency of different types of lexical aspect in the progressive forms produced by the learners?

As shown below in Table 2, activities were the predominant lexical aspect of the progressive forms used by both L1 groups (in obligatory or possible contexts for the past progressive). Thirty-four out of all the 41 verb forms (82.9 %) used by the Tamil learners in obligatory/possible contexts for the past progressive were activities. Twenty-one out of the 25 verb forms (84%) used by the Mandarin learners in obligatory/possible contexts for the past progressive were activities. The L1 groups were also similar in that the second-

most frequently used predicates by both groups were accomplishments. Five out of the 42 Tamil predicates were accomplishments (11.9%) while 3 out of 25 Mandarin predicates (12.0%) were accomplishments. Few other types of lexical aspects were used by either L1 group. The Mandarin L1 group had one state while the Tamil L1 group had two predicates indeterminate for lexical group.

As shown below, the mean average of activities per Tamil participants was 1.67 compared to a mean of 0.24 accomplishments. This difference was statistically significant at the $p \leq 0.01$ level. The Mandarin-speaking learners produced a mean average of 1.00 activities and a mean of 0.14 for accomplishments. This was also statistically significant at the $p \leq 0.01$ level.



Pie Graph 1: Mean individual production of lexical aspects with progressive forms by L1 group

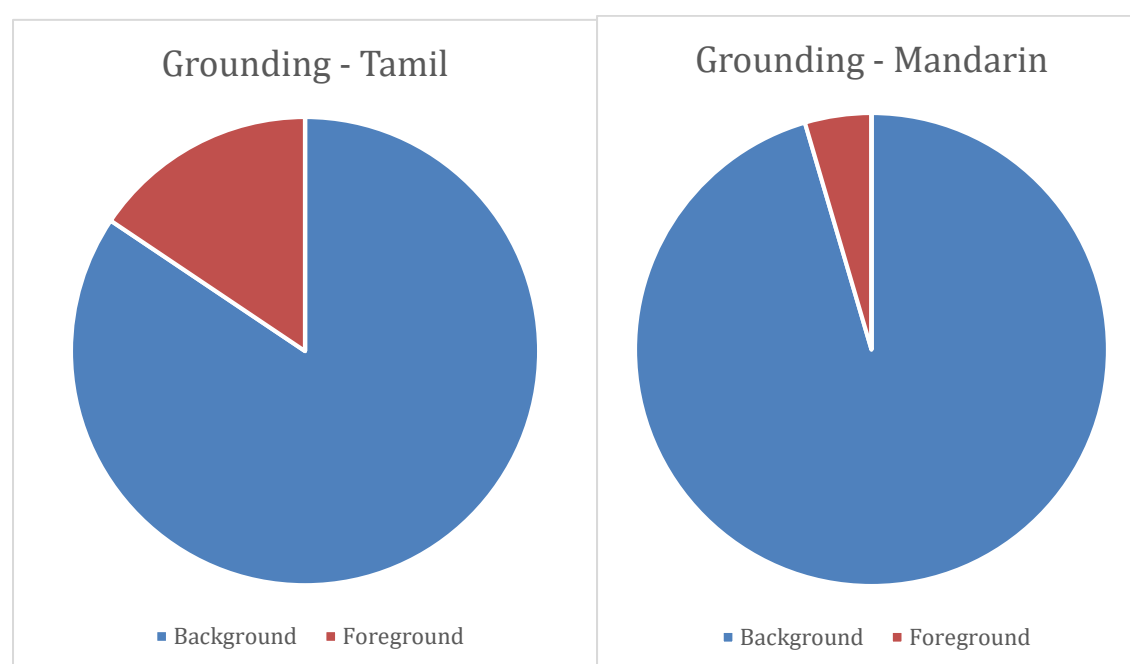
Table 2: Lexical aspect of all progressive forms in all obligatory/ possible contexts for past progressive on both tasks

L1	Activities	Accomplishments	Statistical Significance of Intra-L1 Difference
Tamil N = 21	mean = 1.67 s.d. = 2.40 sum = 34	mean = 0.24 s.d. = 0.53 sum = 5	p = 0.002 sig $p \leq 0.01$ Z = -3.06 (Wilcoxon)

Mandarin	mean = 1.00	mean = 0.14	p = 0.007
N = 21	s.d. = 1.31	s.d. = 0.47	sig p ≤ 0.01
	sum = 21	sum = 3	Z = -2.71
			(Wilcoxon)

RQ 2. Amongst both L1 groups, will there be a difference in the frequency of the use of progressive forms in background contexts versus foreground contexts?

As seen below in Pie Graph 2 and Table 3, the vast majority of the research participants used primarily backgrounded contexts for their use of the progressive verb forms. The Tamil participants used background contexts 1.57, on average, for the production of the progressive, while foreground contexts were used only 0.29 times by the individual learners, on average. This was statistically significant ($p \leq 0.01$). The Mandarin group also preferred background contexts over foreground contexts – on average, these participants’ progressive forms produced 1.05 background progressive forms versus 0.05 foreground progressive forms. This was also statistically significant ($p \leq 0.01$).



Pie Graph 2: Mean individual production of background and foreground action with progressive forms by L1 group

Table 3: Grounding of all progressive forms in all obligatory/possible contexts for past progressive on both tasks

L1	Background	Foreground	Statistical Significance of Intra- L1 Difference
Tamil N = 21	mean = 1.57 s.d. = 2.22 sum = 33	mean = 0.29 s.d. = 0.88 sum = 6	p = 0.0034 sig $p \leq 0.01$ Z = -2.93 (Wilcoxon)
Mandarin N = 21	mean = 1.05 s.d. = 1.25 sum = 22	mean = 0.05 s.d. = 0.21 sum = 1	p = 0.0041 sig $p \leq 0.01$ Z = -2.87 (Wilcoxon)

Discussion

Both L1 groups were much more likely to use the progressive for activities and background action. This may possibly be due to the fact that both L1 groups were equally influenced by whether the progressive verb forms were activities and backgrounded actions. If so, it adds further evidence to the possible universality of the role of lexical aspect and grounding on the use of the English progressive by L2 learners. However, it is also possible that there were more subtle L1 influences dependent on the task. It was not, however, the aim of this study to investigate the specific role of task in these results.

These results are consistent with the Prototype Hypothesis. This hypothesis proposes that learners first form an association between the most basic, or prototypical, members of a grammatical category. The prototypical progressive which is first used by learners is “action-in-progress”. This dynamic meaning of the progressive results from the use of activity and accomplishment predicates with -ing suffixes. However, accomplishments are dispreferred by English learners as accomplishments, although dynamic, are telic, and are thus associated more readily with past tense morphology (Shirai, 2002). As such these results are completely consistent with the Aspect Hypothesis.

These results are also consistent with that part of the Aspect Hypothesis which asserts that accomplishments will be the second most commonly used lexical aspect of verbs with a progressive marking (Chan, Finberg, Costello, & Shirai, 2012). There were six participants in all who used progressive marking with accomplishments. The mean average score of these six participants on the Oxford Grammar Placement test was 62%, which is about 10 points higher than the mean average for all participants on this grammar test (51.5%). This fact makes it plausible to speculate that activities were spreading to

accomplishments due to these participants' higher level of proficiency. This spreading may possibly be partially caused by a kind of chaining effect, proposed as a cognitive linguistic principle by Lakoff (1987), in which "central members are linked to other members" (p. 95). More proficient language learners may be influenced by linguistic input from English speakers in which accomplishments are used with progressive forms, and at some level of noticing, become aware of the family resemblance between the most central member of the category, activities, and the next most-central member, accomplishments. Both activities and accomplishments are durative and dynamic in terms of their lexical meaning.

The tendency on the part of most of the learners to use the progressive marker exclusively with activities may be due, at least in part, to a cognitive learning principle proposed by Andersen (1984), the One-to-One Principle. This principle holds that each verb morpheme which the learners come to notice, will have only one function and meaning. In the case of progressive morphemes, this will be ongoing activity (Andersen & Shirai, 1994). Activities will be the lexical aspect chosen for this morpheme as they are durative and without an endpoint (i.e. – atelic). SLA research on this topic supports such an interpretation of learner interlanguage. Kim's 2014 study revealed that the ESL learners in her study utilized the progressive *-ing* marker when an ongoing, unfinished viewpoint was needed in a verb cloze-passage task. The learners in this study may have overgeneralized the use of the progressive to this lexical aspect as they may have taken the distributional bias in the input they have received in favour of activities, as a categorical generalization of the form, "mark only activities with the progressive morpheme".

These results are also consistent with the Discourse Hypothesis, which predicts that learners will use verbal morphology emerging within their interlanguage to distinguish between background and foreground information in a narrative (Salaberry, 2011). The distinction between background and foreground information as been asserted to be a universal element of language (Hopper & Thompson, 1980). Hopper and Thompson (1980) assert that this distinction may have its roots in a central communicative function. The film retell task, in particular, required the participants to recount the events of a short video. It is plausible to argue that by the use of the progressive the participants were marking off the less crucial, scene-supporting events (i.e. – the background) from the more important events of the video (i.e. – the foreground).

The fact that there was no apparent difference between the effect of grounding and lexical aspect on the learners' use of the progressive may be due in part to the fact that these

two constructs are not entirely independent of one another. As formulated, grounding relies partially on lexical aspect. As discovered by Hopper and Thompson (1980), differences between background events and foreground events depend probabilistically on many factors, including lexical aspect. In their study, Hopper and Thompson found that foregrounded actions tended to be overwhelmingly telic (i.e. – accomplishments or achievements) while background actions were rarely telic. Thus, the partial dependence of grounding on lexical aspect potentially calls into question of validity of comparing the effect of lexical aspect with grounding on verb forms.

The methodological weaknesses of this study must be acknowledged. The learners had different levels of oral language proficiency, which were not measured by the Oxford Placement Test. These differences in oral proficiency may have played a role in the results. Dehqan and Amiri (2017) point out that learners' oral proficiency may have an impact in the grammatical production of ESL learners. This premonition is consistent with a study of second language users of Korean by Lee, Moon and Long (2009). This study revealed that there was a strong correlation between the participants' L2 oral proficiency and their knowledge of certain L2 grammatical structures, at some levels of oral proficiency.

Conclusion

This study revealed that both verb lexical aspect and the grounding of the verb influenced both groups of learners in their oral use of the progressive. The results are consistent with the notion that learners first learn the most central members of the progressive verb form, namely activities used for background action.

The results of this study have a number of classroom implications. Firstly, ESL/EFL teachers who wish to induce the oral production of progressives, such as the past progressive, may wish to consider the use of judiciously-chosen tasks, such as film retell tasks. Film retell tasks may create contexts for the use of the past progressive if they involve background events for foregrounded events. Such tasks, which clearly require the past progressive, may then be chosen for classroom use by the teacher, who may wish to give recasts of incorrect forms in contexts for the obligatory use of the past progressives. Picture description tasks have also been found to elicit progressive forms more frequently than set topics and free discussion questions (Dose-Heidelmayer & Gotz, 2016). Teachers may choose to set up the picture description task by asking questions such as “what were the people doing when (something happened) ...” in order to try to elicit the use of the past

progressive for background situations.

The study also appears to indicate that learners at this level of grammatical proficiency are sensitive to prototypical uses of the past progressive. Therefore, teachers may wish to give past progressive examples which are backgrounded activities such as the example above when teaching them, and also use classroom materials with such prototypical examples in order to create a more input-rich environment for the learners.

References

- Andersen, R. (1984). The one to one principle of interlanguage construction. *Language Learning* 34(4), 77 – 95.
- Andersen, R. & Shirai, Y. (1994). Discourse motivations for some cognitive acquisition principles. *Studies in Second Language Acquisition* 16(2), 133-156.
- Bardovi-Harlig, K. (2012). After process, then what? A longitudinal investigation of the progressive prototype in L2 English. In E. Lebeau & I. Saddour (Eds.), *Tense, aspect and mood in first and second language acquisition* (pp. 131-151). Amsterdam: Editions Rodopi.
- Bardovi-Harlig, K. (1994). Anecdote or evidence? Evaluating support for hypotheses concerning the development of tense and aspect. In E. Tarone, S. Gass & A. Cohen (eds.), *Research methodology in second language acquisition*, pp. 41-60. Hillsdale, NJ: Lawrence Erlbaum.
- Bardovi-Harlig, K. (1998). Narrative structure and lexical aspect: Conspiring factors in second language acquisition of tense-aspect morphology. *Studies in Second Language Acquisition*, 20, 471 – 508.
- Chan, H.L., Finberg, J. Costello, W., & Shirai, Y. (2012). L2 acquisition of tense-aspect Morphology: Lexical aspect, morphological regularity and transfer. In L. Filipovi & K.K. Jaszczolt (Eds.), *Space and time in languages and cultures: Linguistic diversity* (pp. 181-204). Amsterdam/Philadelphia: John Benjamins Publishing.
- Comajoan, L. & Saldanya, M. (2005). Grammaticalization and language acquisition: Interaction of lexical aspect and discourse. In D. Eddington (Ed.) *Selected Proceedings of the 6th Conference on the Acquisition of Spanish and Portuguese as First and Second Languages*, pp. 44-55. Somerville, MA: Cascadilla Proceedings Project.
- Cowan, R. (2008). *The teacher's grammar of English: a course book and reference guide*.

- Cambridge: Cambridge University Press.
- Cruse, A. (2004). *Meaning in language: An introduction to semantics and pragmatics* (2nd Ed.). Oxford: Oxford University Press.
- Dehqan, M. & Amiri, M. (2017). Collaborative output tasks and their effects on learning English comparative adjectives. *Journal of Teaching Language Skills*, 36(1), 1-26.
- Dose-Heidelmayer, S. & Gotz, S. (2016). The progressive in spoken learner language: A corpus-based analysis of use and misuse. *IRAL*, 54(3), 229 – 256.
- Hopper, P. & Thompson, S. (1980). Transitivity in grammar and discourse. *Language*, 56(2), 251 – 299.
- Housen, A. (2002). A corpus-based study of the L2-acquisition of the English verb system. In S. Grange, J. Hung & S. Petch-Tyson (Eds.), *Computer learner corpora, second language acquisition and foreign language teaching*, pp. 77-116. Amsterdam/Philadelphia: John Benjamins.
- Huddleston, R. & Pullum, G. (2002). *The Cambridge grammar of the English language*. Cambridge: Cambridge University Press.
- Kim, H-J. (2014). The online processing of progressive aspect morphology in L2 English. Presentation at 2012 Second Language Research Forum, Somerville, MA.
- Lakoff, G. (1987). *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago: University of Chicago Press.
- Lee, S-Y, Moon, J. & Long, M. (2009). Linguistic correlates of proficiency in Korean as a second language. *Language Research*, 45(2), 319 – 348.
- Pillai, N. (1992). *A syntactic study of Tamil verbs*. Mysore, India: Central Institute of Indian Languages.
- Qian, C. (2015). A cross-sectional study on the roles of lexical aspect and L1 transfer in tense-aspect acquisition. *English Language Teaching*, 8(7), 114-132.
- Salaberry, R. (2011). Assessing the effect of lexical aspect and grounding on the acquisition of L2 Spanish past tense morphology among L1 English speakers. *Bilingualism: Language and Cognition* 14(2), 184-202.
- Schiffmann, H. (1999). *A reference grammar of spoken Tamil*. Cambridge: Cambridge University Press.
- Shirai, Y. (2002). The prototype hypothesis of tense-aspect acquisition in second language. In R. Salaberry & Y. Shirai (Eds.), *The L2 acquisition of tense-aspect morphology*, pp. 455-478. Amsterdam/Philadelphia: John Benjamins.

- Tiittanen, M. (2015). The influence of lexical aspect on non-target like uses of L2 English progressive verb forms. *The Asian Journal of Applied Linguistics*, 47(2), 115-128.
- Vraciu, A. (2013). Exploring the upper limits of the aspect hypothesis: Tense-aspect morphology in the advanced English L2 variety. *Language, Interaction and Acquisition*, 4(2), 256-290.
- Vendler, Z. (1967). Verbs and times. In Z. Vendler (Ed.), *Linguistics in Philosophy* (pp. 97-121). Ithaca: Cornell University Press.
- Xiao, R. & McEnery, T. (2004). *Aspect in Mandarin Chinese*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Willie, W. (2011). *Lexical aspect and lexical saliency in acquisition of past tense-aspect morphology among Ibibio learners*. (Unpublished PhD thesis), University of Georgia, Athens, Georgia.

Appendix A – Tasks in Study

Film retell task

Please tell me everything that you remember that happened in the video from the beginning.

Interview Questions

1. What's your (full) name?

2. a) What do you normally like to do on the weekend?

- b) What did you do you last weekend?

- c) What sort of hobbies do you have?

3. a) Let's talk about school now. What was your favourite subject in high school? (Why?)

- b) i. Did you study English in your first country?
- ii. (If 'yes' to above question) Did you like studying English in (country)? Why/why

not?

(If 'no' to above question) When you first started studying English in Canada, did you like studying English? Why/why not?

4. a) Where were you born?

b) When did you immigrate to Canada?

c) Do you remember your trip to Canada? Can you tell me about it?

d) Do you remember your first day in Canada? What happened?

e) If you don't mind my asking, why did you immigrate here?

5. Can you tell me about a trip you took to another country or city?

6. Are you married?

i. (If "yes") Can you tell me about your wedding day?

ii. (If "no") Can you tell me about another person's wedding celebration you attended?

Appendix B - Details on Lexical Aspect Tests

Tests for states and activities from:

Robison. R. (1995). The aspect hypothesis revisited: A cross-sectional study of tense and aspect marking in interlanguage. *Applied Linguistics*, 16 (3), 369 – 370.

A. *Tests for Stative/Dynamic*

B. *Tests for Telic / Atelic*

“A Tests for Stative/Dynamic

1 Non-states are regularly used in the present progressive, states normally are not.

a * Carla is knowing the answer.

b Carla is working.

- 2 Non-states can insert in *do*-clefts, states cannot. Equivalently, only non-stative predicates can answer the question *What did he do?*
 - a * What Carla did was know the answer.
 - b What Carla did was work.

- 3 With the verb in the simple present form and in a non-narrative context, the predicate is stative if it can be assigned a clearly non-habitual meaning.
 - a Carla knows the answer. (non-habitual implies state)
 - b Carla works (habitual implies non-state)
 - c Carla builds a house (? implies non-state)

B Tests for Telic/Atelic

1. Imperfective paradox. Assume that SUBJECT is (in the process of) PREDICATE [verb in present progressive form]. If SUBJECT stops in the middle, is it true that SUBJECT PREDICATE [verb in present perfect form]? If the answer is ‘yes’, the predicate is atelic, otherwise it is telic.

a Assume that Ana is (in the process of) studying. If she stops in the middle, is it true that she has studied? [yes]

b Assume that Victor is (in the process of) walking home. If he stops in the middle, is it true that he has walked home? [no]

2. Which of the following frames is more natural, assuming the interpretation that The entire situation occurs throughout the duration of the time period?

Atelic He/she can _____ FOR two minutes (hours, days, etc.)

Telic He/she can _____ IN two minutes (hours, days, etc.)

a ? Victor can walk home for ten minutes (or 2 hours, etc.)

Victor can walk home in ten minutes (or 2 hours etc.)

b Ana can study for ten minutes (or 2 hours etc.)

? Ana can study in ten minutes (or 2 hours etc.)

3. Which of the following frames is more natural, assuming the interpretation that the entire situation occurs within the time period?

Atelic He/she spent two minutes (hours, days, etc.) _____

(Verb in present participle form)

Telic It took (him/it/me) two minutes (hours, etc.) to _____

a ?Victor spent ten minutes (or 2 hours etc.) walking home.

It took Victor ten minutes (or 2 hours etc.) to walk home.

b Ana spent ten minutes (or 2 hours etc.) studying.

? It took Ana ten minutes (or 2 hours) to study.” (Robison 1995: 369 – 370)

I used the following ordered tests for accomplishments and achievements reported in:

Bardovi-Harlig, K. (2000). *Tense and aspect in second language acquisition: Form, meaning, and use*. Oxford: Blackwell 220 – 221.

“Step 1: State or nonstate

Does it have a habitual interpretation in simple present?

If no – state (e.g. – *I love you.*)

If yes – Nonstate (e.g. – *I eat bread.*) → Go to step 2.

Step 2: Activity or nonactivity

Does ‘X is V-ing’ entail ‘X has V-ed’ without an interactive/habitual meaning? In other words, if you stop in the middle of V-ing, have you done the act of V?

If yes – Activity (e.g. – *run*)

If no – Nonactivity (e.g. – *run a mile*) -> Go to step 3.

Step 3: Accomplishment or achievement

If test (a) does not work, apply test (b) and possibly (c)

a) If “X V-ed in Y time (e.g. – 10 minutes),” then “X was V-ing during that time.”

If yes -> Accomplishment (e.g. – *He painted a picture*)

If no -> Achievement (e.g. – *He noticed a picture*)

b) If there ambiguity with *almost*?

If yes -> Accomplishment (e.g. – *He almost painted a picture* has two readings: he almost started to paint a picture/he almost finished painting a picture)

If no -> Achievement (e.g. – *He almost noticed a picture* has only one reading)”

(Bardovi-Harlig 2000: 220 – 221)

Appendix C – Details on Background versus Foreground Tests

“The tests to determine grounding were based on the identification of the foregrounded elements of a sentence.

The foreground was defined by

1. chronological order: clauses that are part of the main plot line of the story and that are chronologically ordered (as opposed to flashbacks, simultaneous actions),
 2. punctuality: clauses that are punctual (as opposed to habitual events), and
 3. completeness: clauses that are completed (as opposed to ongoing events).”
- (Salaberry, 2011, p. 200).

Exploring EFL Learners' Attitudes towards Topic-based Lexical Network and Form-based Grammatical Network Activities

Masanobu Sato
Shobi University

Bioprofile

Masanobu Sato has been teaching English for more than 10 years, and currently teaches at universities. He earned his Master's Degree, TESOL in the U.S. He completed his Ph.D. degree at Keio University. His main research interests are the application of cognitive linguistics to SLA. Dr. Sato may be contacted at kizuna238@yahoo.co.jp.

Abstract

Memorization is an integral part of second language learning, especially in input-poor contexts. In many cases, learners are encouraged to mechanically memorize what is given by the teacher. However, mechanical learning makes for only a limited contribution to the growth of lexical and grammatical competencies. The pertinent question is *what* to memorize and *how* to memorize it. In this paper, I argue that linguistic networking or network building can enhance meaningful learning and, hence, improve vocabulary and grammar learning in a second language. This paper reports pedagogical practice using network-building activities with 48 Japanese university students, who had already learned a number of words and grammatical items over the course of education. In order to confirm the assumed problems relating to mechanical memorization, I first asked how they had learned English vocabulary and grammar in the past. Rote learning was a dominant strategy, and many of the students reported not being satisfied with the way they had learned English. I then spent 2 teaching sessions in an attempt to show that network building activities in the two linguistic domains can contribute to meaningful learning, by making language learners engage in the activities of co-constructing their learning (Mayer, 2004), with the teacher serving as a facilitator. After each session, I obtained comments from the students, many

Address for Correspondence

238-2 Tajima Matsubushi
Saitama Japan 343-0105

of which supported my claim that linguistic networking can contribute to L2 vocabulary and grammar learning.

Keywords: meaningful learning, lexical networking, grammatical networking, collaborative learning

Introduction

Foreign language learners spend a great deal of time and energy learning vocabulary and grammar. For example, according to the new Course of Study (Japanese Ministry of Education, Culture, Sports, Science and Technology, 2018), Japanese learners are expected to memorize about 5,000 English words by the time they take university entrance exams. In the same way, they are expected to master English grammar to the extent that they can solve different kinds of grammatical problems (e.g., combining two simple sentences together using a relative clause, transforming an active form into a passive one). In fact, many Japanese students work hard to accumulate a great amount of knowledge about English, and still many of them complain that they cannot use English to communicate with people. For these students, learning English at school for many years does not seem to contribute much to the development of communicative competence in English.

It is generally assumed that mechanical memorization is a major learning strategy adopted by Japanese learners of English when it comes to learning vocabulary and grammar. Memorization is necessary for any learning (Stevick, 1976). However, as Stevick (1998, p. 22) puts it, learning experience makes a difference and it becomes deep, if “it draws more energy from the learner’s ‘world of meaningful action.’” In short, learning experience should “enhance the meaningfulness of the action” (Stevick, 1998, p. 23). In other words, rote learning does not contribute to active and deep learning.

Ausubel (1968) contrasts rote learning and meaningful learning. Rote learning is described as the process of learning “discrete and relatively isolated entities that are relatable only in an arbitrary and verbatim fashion” (p. 108). In contrast, meaningful learning is a process of relating new material to relevant established concepts, thus establishing meaningful relationships between items. Thus, according to Ausubel (1968), an essential property of meaningful learning is the “relatability” of a new learning task to what is already known.

Sweller (1988) proposed a theory called Cognitive Load Theory that considers “schema” as the cognitive unit that constitutes our knowledge base. A schema allows us to treat scattered elements as a single meaningful whole. According to Rumelhart and Ortony (1977), who first elaborated the notion, “schema” can be characterized as something

containing “the network of interrelationships that is believed generally hold among the constituents of the concept in question” (p. 100). Valcke (2002) notes that the schemas of prior knowledge (L1, in our case) “serve as advance organizers that help to interpret sensory information and link it (organize) to the existing schema and/or schema elements. (p.5).

Thus, a schema provides a frame within which to put elements in a meaningful way, and once a schema is formed, we can not only elaborate its internal structure with more elements, but we also relate it to other schema to form a larger schema. In this paper, I focus on the process of forming a schema rather than the schema itself, and call the process of relating linguistic items in a meaningful way “linguistic networking,” or “network building” and consider it a condition of meaningful learning. I take it that learning becomes meaningful and deep when students engage in network-building exercises as group work, through which learners are “active sense makers who seek to build coherent and organized knowledge” (Mayer, 2004, p. 14).

In the field of L2 teaching, the importance of lexical networking has been discussed (Crossley, Salsbury & McNamara, 2009; Evans, 2009; Lewis, 2000; Meara, 2006; Verspoor & Lowie, 2003). Verspoor and Lowie (2003) emphasize the importance of capturing a word in a semantic network as follows:

“....the word not only is attached to a particular meaning but will be included in a network of semantically related words, and the success of semantization is dependent on the degree to which words can be incorporated into this semantic network. In the case of a polysemous word, the semantization process should be aided if the learner recognizes the meaning relation between the word’s separate senses” (p. 551).

In our mind, a word or word concept does not stand alone in isolation of other words or other concepts, but rather it is linked with semantically related words or concepts to produce a lexical network.

In this paper, I propose the possibility that the technique of linguistic networking can be applied not only to the lexical domain, but also to the grammatical domain in the form of form-based grammatical networks, a new possibility still unexplored in the field of L2 teaching and learning.

In the following sections, I will show the findings from an informal survey concerning learning strategies used by Japanese students in learning vocabulary and grammar, and then report my attempt at teaching vocabulary and grammar in an alternative meaningful way.

Informal Survey

Prior to practicing network building activities with the Japanese college students in the study, I conducted an informal survey in an attempt to identify how they had learned English vocabulary and grammar in their junior and senior high school days, and to what degree they were satisfied with what they had done.

The participants in this study were 48 university students (21 males and 27 females), who were taking my high-intermediate English course. The range of their TOEFL scores was 500 to 540. The classroom atmosphere was positive and cooperative. I asked them to participate in an informal survey about their English learning experiences, and in two linguistic networking sessions as a brief survey. To see how Japanese students actually approach the task of learning English, I first asked the following questions to the students.

1. How did you learn English vocabulary?
2. How did you learn English grammar?
3. Are you satisfied with the way you learned English vocabulary and grammar during your junior and senior high school years?
4. Are you confident in using vocabulary and grammatical knowledge in communication?

Regarding the first two questions, I obtained 158 responses for question 1 and 83 responses for question 2. The students' responses were content analyzed. As for vocabulary learning, I found that the following key words were used by the participants: memorization 48 (100%), the use of prefix and suffix 8 (17%); the use of images 7 (15%); the use of a word list 41 (85%); the use of Japanese 36 (75%); vocabulary quizzes 18 (38%). The percentages here indicate how many participants used each key word. The most frequently mentioned response was "I just memorized words as told by the teacher." Mechanical memorization was a dominant strategy reported for learning English vocabulary. Equally frequent responses were related to the use of word books and translation. One participant said, "I bought a word book and tried to memorize English words because the teacher gave us a series of word quizzes." This is a common practice in Japanese high school. When they memorized English words, they used translation as a dominant learning strategy, although there were some students who mentioned that the teacher had explained to them about the use of prefixes and suffixes.

Similarly, the students' responses to the question about grammar learning contained the following key words: mechanical memorization 42 (88%); drills 11 (23%); teacher's

explanation 35 (73%). As an example, one student said, “We were forced to memorize grammatical rules one after another.” Another added, “I was able to do drills comfortably, but I cannot use rules in communication.”

Overall, it seems that the students tried to memorize what was given by the teacher by rote learning. In the questionnaire, I also asked the participants if they were satisfied with the way they had learned English vocabulary and English grammar. The results are shown in Table 1.

Table 1: Learners’ satisfaction of their ways of learning English

	YES	NO
Vocabulary learning	9(19%)	39(81%)
Grammar learning	4(8%)	44(92%)

Clearly, most of the students answered reflected negative feelings or impressions about the way they had learned English. A follow-up interview with them revealed that they were not satisfied with memorizing words and grammar mechanically. Only 8% of the students had positive opinions about their past grammar learning experiences.

As Table 2 shows, the students who answered questions 3 and 4 showed a low degree of confidence in their ability to use vocabulary and grammar in communication.

Table 2: Learners’ confidence level in using English vocabulary and grammar

	YES	NO
Vocabulary learning	12(25%)	36(75%)
Grammar learning	13(27%)	37(73%)

The results in Table 2 suggest that the students have difficulties with vocabulary and grammar, difficulties largely relating to the limits of memorization as an effective strategy. In the following sections, I will demonstrate how the idea of linguistic networking can be used to better teach L2 vocabulary and grammar.

Lexical networking

In order to help students improve vocabulary learning, I hold that the teacher should present a lexical network as a primary unit of learning and encourage students to actively form their own lexical networks. A lexical network is a network which represents semantic relations between words and expressions. Lexical networking encourages and facilitates learners to search out connections, finding similarities, and weaving different ideas loosely in a network. Ur (2013) suggests that “semantic relations between previously taught words that need consolidation can be used for interesting and varied practical exercises” (p. 136).

In the area of L2 vocabulary teaching, the idea of lexical networking can be put into practice topically and/ or conceptually. Verbs can be conceptually linked into, for example, a network of perception verbs or a network of movement verbs (Sato & Tanaka, 2017). For example, given a set of movement verbs (ascend, pivot, descend, depart, advance, enter, exit, progress, flee, leave, sink, fall, revolve, rotate, rise, and drop), we can build a conceptual network considering the factor of ‘directionality’ as follows:

[move + upward] : ascend, rise revolve, rotate	[move + around] : pivot, revolve, rotate
[move + downward] : descend, fall, sink, drop leave, flee	[move + away]: depart, exit, progress, flee
[move + forward]: advance, progress	[move + inward]: enter

Figure 1: A lexical network of movement verbs in English

Thematic or topical networking is easier to practice. For example, given the topic “rain,” we may list the following words: heavy rain, light rain, hard rain, soft rain, drizzling rain, scattered rain, sprinkle, drizzle, downpour, shower, precipitation, chance of rain, etc. Similarly, the topic “snow” may contain the following words: sleet, snowstorm, blizzard, slush, powdery snow, hail, hailstone, the first snowfall, frost, etc.

If students are familiar with most of these words, then encouraging students to build a topical network will help. In the same vein, Ur (2013, p. 135) suggested that “if the learner has already come across items in the past and can retrieve them, then these can be used as a basis for learning other words that are semantically linked to them.... or as a basis for review and consolidation through the use of semantic links.”

Lexical networking exercises

In this section, I will discuss the possibilities of using network building activities to enrich language resources in the domain of lexicon. The same group of 48 students mentioned above participated in network building activities. The session was 90-minutes long, and the participants were asked to give free comments on what they did during the session. In lexical networking exercises, students did the following:

1. Students are asked to form six groups.
2. Each group decides on what topic to work on.
3. Each group produces a set of topically related words or phrases, using paper or digital dictionaries, and then categorizes them into groups to form a lexical network or topic-based network.
4. Each group produces their own lexical network.
5. If possible, the (advanced) group is asked to make a passage using their self-generated lexical network. The teacher corrects errors if necessary.
6. Share the outcomes (i.e., lexical networks) with the class.

I divided 48 university students taking a high intermediate-level English course into six groups of 7 or 8 students and encouraged them to create topic-based networks in any way they chose. The selected topics included nuclear power, IT, sports day (a Japanese school tradition), crime, cooking, and job hunting. They produced a series of lexical items by means of free association, and then organized them in a thematically meaningful way.

Figure 2 represents a lexical network built by one group who selected the topic “nuclear power” with the use of dictionaries as well as the help of the teacher. Since the lexical network was produced in handwritten form, the author reproduced it here in typewritten form.

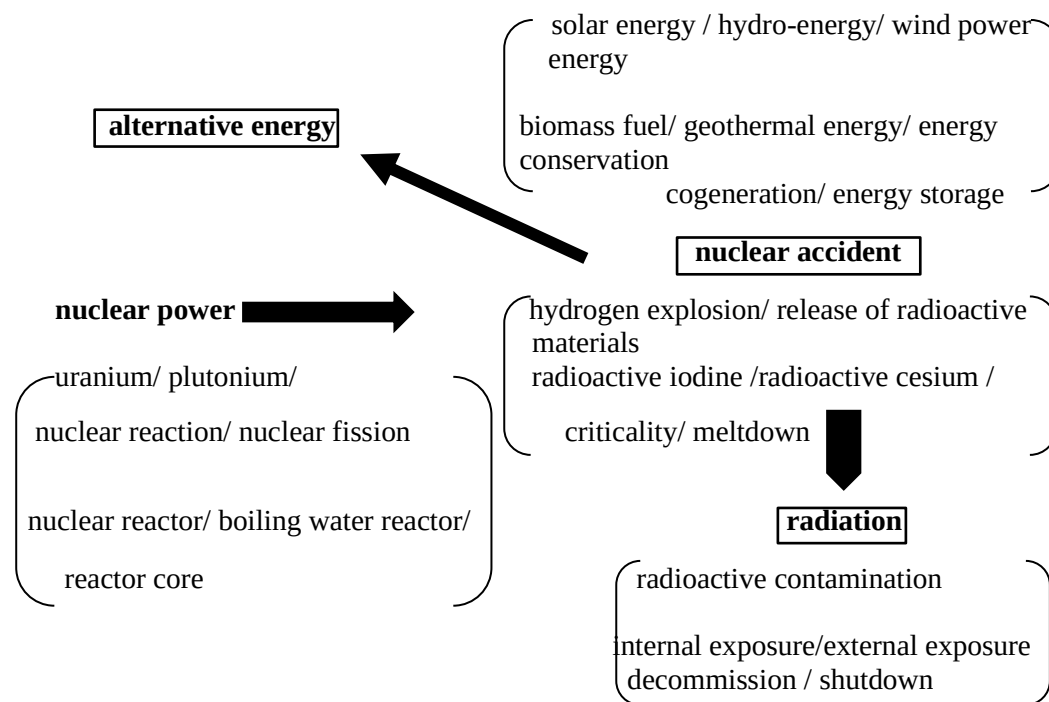


Figure 2. Topic-based lexical network: nuclear power

The group reported that they formed this network with the following ideas in mind: What is nuclear power? If there is an accident, what happens? What are possible alternative energies?

The other group worked on IT or Information Technology. They produced a lexical network with four components (network, boot, application, and server) as in Figure 3.

Information Technology

NETWORK

{ · local area network (LAN) · login · logout · cable · router · domain
· wireless LAN · WiFi · account · username · password · security · leak }

BOOT

{ boot · shutdown · freeze · reboot }

SERVER

{ · data · database · data storage · upload · download · data compression
· update · deletion · modem }

APPLICATION

{ · software · word processor · spreadsheet · browser · mailer · freeware
· shareware · malware · computer virus · anti-virus software }

Figure 3. Topic-based lexical network: information technology

Since a few advanced students were in the group, the teacher asked the group to write a short passage using their lexical network, and they produced the following passage.

“The development of information technology has made it possible to exchange various data through a computer network. Computers at work, school, or home can be connected through a local area network or LAN and exchange data. With a LAN, each computer is connected to a cable and data is exchanged via a router. Today, a wireless LAN, which uses WiFi and enables us to exchange data without a cable, is common. In a network, we need to set up an account, which authorizes us to use it, so that others cannot enter the network without permission. When we first attempt to connect, we will be asked for a username and a password. Although it is convenient to exchange data on the network, we should consider the possibility of an information leak, and we need to pay very close attention to security, including managing our domain, which indicates the location of our computer in the network. We must protect the computer from viruses with anti-virus software.” [Note: Some grammatical errors were corrected.]

Because of the time constraints, they said that they were not able to complete the passage. It is, however, easy to speculate that by trying to put the target words into text, students are able to produce a “textual network” of topically related expressions, which

will reinforce memorization. Interestingly, one student in the IT group made the following list of verbal collocations as extra work.

open a Facebook account/ accept a friend request on Facebook/ be on Facebook (e.g., Are you on Facebook?)/ frequently use Twitter/ add someone to one's friends list/ thank someone for the add/ follow someone on Twitter/ have 1,000 followers on Twitter/ tweet/ update one's blog/ write a blog/ click "Like"/ check one's email on one's smartphone/ force quit this application/ leave it unread/ post one's photo/ reply to a comment on one's Facebook posting/ share a post on Facebook

In this way, our students generated topically related networks, which were later shared with classmates. Student-generated materials are authentic, meaningful, and personal to the students because students can learn what they want to learn, not what they have to learn. As their instructor, I had the impression that students were actively learning when they were engaged in lexical networking exercises, and it seemed that they were enjoying what they were doing.

Students' responses

With respect to their overall impressions about the lexical networking activities, all the students reported that it was a positive experience. One student said, "Organizing words this way is challenging but fun." The other students agreed with this comment. They enjoyed what they did in class. This is encouraging in that most students in the above-mentioned survey complained that vocabulary learning was boring. In fact, one student expressed his preference of this style of lexical learning by saying, "I should have learned this way when I was in high school!"

Several students commented on the usefulness of theme-based lexical networking. One student, who worked on the nuclear power lexical network, said: "I feel it easier to talk about nuclear power." Another student commented, "I think these words are useful when I talk about the topic." Each group was able to choose their own theme, which seems to have contributed to the personalization of the vocabulary learning experience. A student skilled in computers commented, "SNS-related phrases are exactly what I wanted to know! I'm glad I can share it." One student demonstrated a particular increase in motivation when he said, "I'd like to select different topics and make the lexical networks myself."

Similar positive comments were obtained from other students. It is important to note that in our network-building sessions, success is not achievable by an individual

learner working alone. In fact, one student commented on her lexical group activity: “It is good to work together with other students and share the output.” This comment shows that collaboration and interaction in a group are integral parts of the meaningful network building activities, which will lead to the final outcome of co-creation.

The students used online dictionaries to search for the English equivalent to Japanese expressions. One student pointed out that she had difficulty when she found there were multiple English expressions and had to decide which one was correct. It was the teacher’s role to suggest the right expression for a given Japanese phrase.

Grammatical Networking

In Japan, grammar is generally taught by the grammar-translation method. According to Richards & Rodgers (2001), the grammar-translation method is “a tedious experience of memorizing endless lists of unusable grammar rules and vocabulary and attempting to produce perfect translations of stilted or literary prose” (p. 4). In most cases, the teacher explains a grammatical rule deductively and then lets students practice the rule in mechanical drills. As described above, many students recollect their grammar learning with negative feelings.

In this paper, I argue that network-building exercises are especially needed in the area of grammar teaching because grammatical items are rarely organized in teaching practice. In order to create a grammatical network, we may focus on grammatical areas such as tense-aspect, post-modification, expressing modality, expressing the future, and intensifiers, or we may highlight lexical forms such as *doing*, *done*, *have*, *which*, and *who*.

For example, we have a set of expressions available when we talk about things in the future. In conventional grammar teaching, however, expressions such as *will do*, *be going to do*, *be doing*, and *be scheduled to do* are taught on different occasions so that students tend to treat them as separate items. In order to help students develop their linguistic repertoire, we may present these forms in a way that a learner has options to choose when and how he or she wants to talk about the future (see Figure 4).

<u>Intended Meaning</u>	<u>Expressions</u>	<u>Choice</u>
Talking about the future join us?"	will do	"Will you marry me?" "Yes, I will."
	be going to do	"Watch! We're going to crash."
	will be doing.....	"We'll be having a party tonight. Won't you
	be doing	"He's leaving tomorrow morning."
	be scheduled to do... tomorrow."	"We're scheduled to have a meeting

Figure 4. Grammatical network for talking about things in the future

Grammar teaching should help students understand the different nuances behind each expression within a set, so that they can choose the right expression according to their specific intention. Japanese college students often automatically choose "will do" and say, "We'll have a party tonight. Won't you join us?" in that they naïvely associate the future with the form of "will do," without being able to differentiate "will do" and "will be doing." It is pedagogically important that students understand that if forms are different, then their meanings also differ. When a telephone rings, you will say, "I'll get it," not "I'm going to get it." Referring to a pregnant woman, you will say, "She's going to have a baby next month," instead of "She will have a baby next month." Each expression has its semantic features. You might say, for example, "She will have a baby next month" as a response to "Why isn't Yuko coming with us to Disneyland?" In grammatical networking exercises, the teacher should put semantically related expressions together and help students understand the different meanings of the expressions.

Grammatical networking exercises

Here I will show a lesson illustrating how grammatical networking works in class. I conducted a lesson focusing on the form *doing*. Here, I will demonstrate how my students built a networking of *doing* collaboratively in a grammatical network-building session. As compared with lexical networks, grammatical networks are far more difficult to make without teacher support. Thus, in this session, I (the teacher in this case) guided the process of constructing a grammatical network of *doing*.

1) *The problem area*

Japanese students are taught the following grammatical items in high school: the present (past) progressive form, the gerund, the post-modification using the present participial form, and the participial construction. Since each usage has its own grammatical terminology, students tend to think that they are totally different grammatical items. The term “present progressive” is relatively easy to understand, and yet, the remaining “gerund,” “present participial,” and “participial construction” are far beyond the student’s comprehension, and cause unnecessary cognitive burden. In fact, the gerund and the participial construction are considered among the most difficult grammatical items for Japanese learners of English (Sano & Ino, 2000). These two constructions are considered problem areas for two reasons. First, their grammatical terminologies baffle students, and second, students fail to capture the functional characteristics of the forms in question. The following lesson was devised to overcome these problems: to use the plain name (i.e., the *doing* form) and to show the semantic connection (similarities and differences) of the four forms of *doing*.

2) *Noticing*

University students are generally familiar with the different grammatical usages of *doing*: (1) the present /past progressive form, (2) post-modification using the form *doing*, (3) the gerund, and (4) the participial construction. In this lesson, I pointed out to students that the following examples use the same form *running in the rain*, but the grammatical function in each example is different.

- Jane is running in the rain. (present progressive)
- The woman running in the rain spoke to me. (post-modification)
- Running in the rain is not good for you. (gerund)
- Running in the rain, she bumped into an old friend of mine. (participial construction)

As mentioned above, Japanese students usually learn these grammatical functions in a mutually independent fashion. As a consequence, they tend to treat these items as if they were completely different grammatical forms. Putting these together in a list, they will notice that the same form (i.e., *doing*) is used across four usages. Networking exercises are designed to put these usages together in an

organized fashion. The following demonstrates the way I guided the exercise of network building of *doing* in the class.

3) *Post-noticing Teaching Procedures*

Stage 1: Conventionally, Japanese teachers present a grammatical rule and practice the rule with examples. Instead of this deductive way of teaching grammar, I adopted an inductive, usage-based approach, presenting usages first and encouraging students to extrapolate the rule. I first introduced the most basic progressive form (i.e., the present progressive form “Jane is running in the rain”) without using the grammatical terminology and asked the students what situation was being described in the sentence. Students replied by saying: “It is now, and you can see it.” “She is just in the process of running in the rain.” “She will stop running sometime in the future.”

Stage 2: I then encouraged the students to compare the two sentences and find similarities:

- Jane is running in the rain.
- The woman running in the rain spoke to me.

I asked whether or not the woman in the second sentence is actually running now. The students’ answer was “no,” because the main verb (i.e., *spoke*) of the sentence is in the past form. But the noun phrase refers to a woman who was actually running in the rain. I gave another example to show the characteristics of the post-modifying *running in the rain*: “The woman running in the rain will speak to you.” The point to notice here was that the post-modifying *doing* is tense-neutral, although it refers to an actual continuous action.

Stage 3: I let the students compare *Jane is running in the rain* and *Running in the rain is not good for your health*. The gerundive *running* is an abstraction of the recursive event of *Someone is running in the rain* (Freed, 1979). One student came up with a drawing like the following to illustrate the abstraction process (Figure 5).

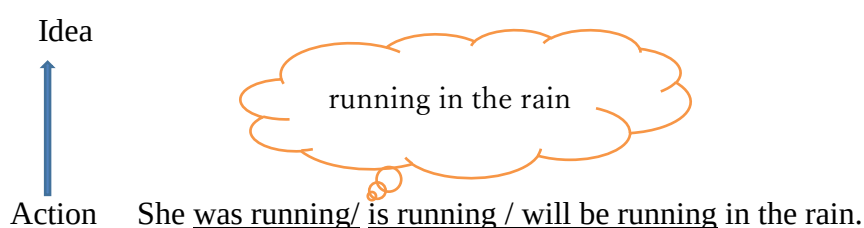


Figure 5. Abstraction to form a gerund

In other words, the gerundive *running in the rain* refers not to an actual event, but an abstracted generalization, memory, concept, or idea, which is in the brain. However, we see a connection between “Jane is running in the rain” and “Running in the rain is not good for your health” through the process of abstraction.

Stage 4: I showed another example using the form of *doing* as a participial construction, as in: “Running in the rain, she bumped into an old friend of hers.” I explained that this *running in the rain* is a clausal construction, thus suggesting something like *While she was running in the rain, she bumped into an old friend of hers*. In this construction, a conjunctive sense is implied, and it is recoverable only in relation to the main clause. When someone says, “Running in the rain, she did not get wet because she was wearing a raincoat,” this *running in the rain* should be interpreted with an implied conjunction such as *although*.

Stage 5: In the final stage, I constructed a grammatical network with the students. Like the post-modifying *running in the rain*, the participial construction *running in the rain* refers to an actual event, which is tense-neutral. The participial construction has an additional feature [+context-dependent conjunctive function]. Thus, the students and the teacher co-created a form-based grammatical network of *doing*, as shown in Figure 6. At this point, I introduced the grammatical terminology, which was already known to the students, in order to raise metalinguistic awareness.

This figure shows that the progressive doing can function as a prototypical construction, from which three functions derive. With this grammatical network of *doing*, the students were able to understand the inter-relationships and differences of these grammatical structures.

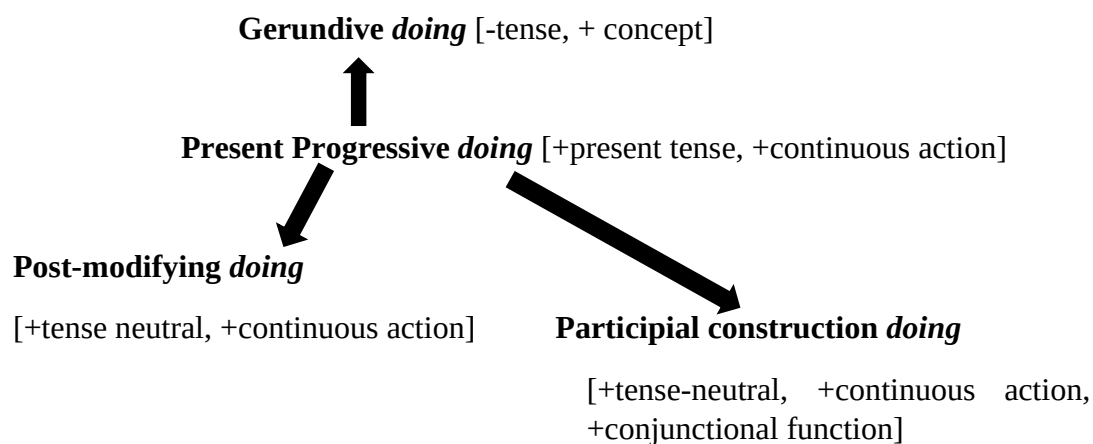


Figure 6. Form-based Grammatical network: *doing*

Student responses

One whole class period (90 minutes) was spent on networking exercises, and I we asked the students to give their comments. Here again, most of their responses were positive, and they seemed to center around three points: awareness-raising, meaningfulness, and collaborative learning.

Prior to this session, many students had had negative impressions about English grammar because the teacher's explanations were abstract and hard to understand. Many participants pointed out that they finally comprehended the functions of *doing* from this form-focused grammar networking session. One student reported: "The power of *doing* is really amazing." Another said, "I understood how the participial construction *doing* is used for the first time." These comments suggest that the networking activity helped students raise their awareness about the form *doing*.

"I had never imagined that different uses of *doing* could be linked," wrote one student. Another added, "Now, I don't have to learn English grammar by heart." Likewise, still another said, "I should've learnt that all of these *doings* were related while I was in high school. If you compare four *doings* within the same frame, you can understand each usage much better." These comments suggest that networking exercises make grammar learning meaningful.

In addition, one student said, "I think it's fun to work on English grammar as a team." A similar comment was obtained. "It's much more fun to work in a group, than simply listening to the teacher's explanation." These comments are related to the notion of collaborative learning. In collaborative learning or cooperative learning (McCafferty,

2006), students work in small groups to achieve shared learning goals. In collaborative activities, the students in the group must engage in an activity as a team. By working together on an assignment, the students make discoveries, and consequently, raise their grammatical awareness in a meaningful way. I talked to several students after the session, and they told me that they had had a good time working in a group. I interpret this as a psychological advantage of group working: group working reduced the fear of failure among students (Wills, 2007).

Conclusion

It is a challenge for language teachers to make meaning in their classrooms. Language learning involves learning vocabulary and grammar in the target language, without which learners cannot be the users of the language. In a foreign language classroom setting, however, rote learning, which is based on memorization, is a dominant strategy employed throughout Japan, and students are expected to memorize what is given, whether it is a word or a grammatical rule. The end product is that many students have a conflicting self-assessment of their own proficiency: they know a lot about English but cannot use it.

In this paper, I assumed that instead of just giving students useful expressions, we should allow time for students to work on networking exercises to build lexical and grammatical networks. Network building makes it possible for learners to connect dots, with the classroom being a knowledge-building learning community. Each dot or item has its meaning when it is situated in a network. If lexical items and grammatical items are stored out of context, language learners will not find them meaningful. When they are clustered together in an organic network, they can be good language resources, available whenever the student attempt to say something in the target language.

As a pedagogical implication, I suggest that teachers should pay attention to linguistic networks, not linguistic items, as the primary units of language teaching, when teaching vocabulary and grammar. Ellis (2003) argues for the need for “focused tasks” aiming at developing implicit and explicit knowledge. Implicit knowledge is developed through tasks necessary to use a targeted language form. On the other hand, explicit knowledge can be developed through “awareness-raising” tasks in which learners come to notice how particular forms (lexical or grammatical) are used. I suggest that linguistic networking exercises, as described in this paper, can be a powerful pedagogical tool for

developing explicit or metalinguistic knowledge in a meaningful way, which will contribute to L2 lexical and grammatical competencies in an input-poor context.

In this paper, I have shown the possibility of using networking activities to teach different uses of *doing* in English. As mentioned earlier, grammatical networking can be applied to different areas of English grammar, including post-modification, quantifiers, the system of tense and aspect, clause-initial adverbial functions, and modal auxiliaries. If English grammar is presented in the form of grammatical networks, we can assume that each grammatical item can attain its meaning by finding its place in a network context. Some students expressed their preference for doing their own activities rather than listening to their teacher's lecture about English grammar. Grammatical networking exercises can involve students in doing things and thinking about what they are doing, which will eventually lead to deep and meaningful learning.

Finally, we must note that this paper was concerned with the students' attitudes toward activities that would help them learn L2 grammar and vocabulary in a meaningful way. However, this paper did not further explore if the networking activities actually worked. Thus, future research should be conducted to show on an empirical ground that meaningful learning through network-building activities can indeed lead to better vocabulary and grammar learning than translation-based mechanical learning.

References

- Ausubel, D. (1968). *Educational psychology: a cognitive view*. New York: Holt, Rinehart and Winston.
- Crossley, S., Salsbury, T., & McNamara, S. (2009). Measuring L2 lexical growth using hypernymic relationships. *Language Learning*, 59(2), 307-334.
- Evans, V. (2009). *How words mean: Lexical concepts, cognitive models, and meaning construction*. Oxford: Oxford University Press.
- Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.
- Freed, A. F. (1979). *The semantics of English aspectual complementation*. Unpublished doctoral dissertation, University of Pennsylvania.
- Japanese Ministry of Education, Culture, Sports, Science and Technology (2018). *The New Course of Study*. Tokyo: Japanese Ministry of Education, Culture, Sports, Science and Technology.

- Lewis, M. (Ed.). (2000). *Teaching collocation: Further developments in the lexical approach*. London: Heinle.
- McCafferty, S. (2006). *Cooperative learning and second language teaching*. New York, NY: Cambridge University Press.
- Mayer, R. (2004). Should there be a three-strikes rule against pure discovery learning? The case for guided methods of instruction. *American Psychologist*, 59(1), 14-19.
- Meara, P. (2006). Emergent properties of multilingual lexicons. *Applied Linguistics*, 27(4), 620-644.
- Richards, J., & Rodgers, T. (2001). *Approaches and methods in language teaching* (2nd Ed.). Cambridge: Cambridge University Press.
- Rumelhart, D., & Ortony, A. (1977). The representation of knowledge in memory. In R. Anderson, R. Spiro, and W. Montague (Eds.), *Schooling and the acquisition of knowledge*. New Jersey: Lawrence Erlbaum Associates, pp. 99-135.
- Sano, H., & Ino, M. (2000). Measurement of difficulty on English grammar and automatic analysis. *Computer and Education*, 58(2), 5-12.
- Sato, M., & Tanaka, S. (2017). L2 lexical development and the lexical network model: The case of basic verbs of perception. *International Journal of Applied Linguistics*, 27(1), 110-131.
- Stevick, E. (1976). *Memory, meaning and method: some psychological perspectives on language learning*. Boston: Heinle & Heinle.
- Stevick, E. (1998). *Working with teaching methods: What's at stake?* Boston: Heinle & Heinle.
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2), 257-285.
- Ur, P. (2013). Memory and vocabulary acquisition. In Jane Arnold & Tim Murphey (Eds.), *Meaningful action: Earl Stevick's influence on language teaching* (pp. 131-142). Cambridge: Cambridge University Press.
- Valcke, M. (2002). Cognitive load: Updating the theory? *Learning and Instruction*, 12(1), 147-154.
- Verspoor, M., & Lowie, W. (2003). Making sense of polysemous words. *Language Learning*, 53(3), 547-586.
- Wills, J. (2007). Cooperative learning is a brain turn-on. *Middle School Journal*, 38(4), 4-13.

Balanced and Non-balanced Possible L2 Selves: An Attributional Study

Etsuko Shimo
Kindai University

Joseph Falout*
Nihon University

Glen Hill
Obihiro University of Agriculture and Veterinary Medicine

Matthew Apple
Ritsumeikan University

Bioprofiles

Etsuko Shimo (Ed.M. in TESOL) is an associate professor in the Department of General Education, Faculty of Applied Sociology at Kindai University, Japan. She teaches English and related courses in their undergraduate programs. Her research interests include student and teacher beliefs, learner autonomy, collaborative learning activities, and language education policy.

Joseph Falout, Associate Professor at Nihon University, College of Science and Technology (Japan), authored or co-authored over 50 papers and book chapters about language learning psychology. He teaches EAP, ESP, and public speaking to undergraduate and graduate STEM students, and he conducts workshops for language teachers at all educational levels.

Glen Hill is associate professor at Obihiro University of Agriculture and Veterinary Medicine in Hokkaido, Japan. He teaches and researches extensive reading and technical writing. His interests also include STEM career English. He has taught at private high school, individual lessons, and conversation school in Japan.

Address for Correspondence (*)
Nihon University
Department of Liberal Arts & Science
7-24-1 Narashinodai
Funabashi, Chiba, 274-8510
Japan

Matthew Apple is a professor in the Department of Communication, Ritsumeikan University, Kyoto. He has taught at various levels of education in Japan since 1999,

including junior and senior high school, technical college, undergraduate university, and graduate school. His research interests include individual differences in SLA, and intercultural communication.

Abstract

A motivational problem for many EFL students—especially students of science, technology, engineering, and mathematics (STEM) in Japan—is that they often have strong Ought-to L2 Selves, but weak Ideal L2 Selves. This exploratory study investigated potential contributing factors of balanced and non-balanced configurations of Ideal L2 Self and Ought-to L2 Self as envisioned by university students in Japan majoring in STEM fields. The participants ($N = 572$) first viewed survey results of a previous study in which they had participated, which quantified aspects of their motivations and placed these into a structural equation model. The students then self-rated their own personal levels of Ideal L2 Self and Ought-to L2 Self, and gave attributions for these self-ratings. These attributions were analyzed with text mining software, and a comparison was made among four groups of students along a continuum of balanced and non-balanced possible L2 selves. Students with balanced possible selves, in comparison to those with non-balanced possible selves, more often attributed their motivational possible-self visualizations to positive framing of social pressures to learn English, and more often saw capable others within their social milieu as near-peer role models. Implications relate to helping students who struggle with motivation to reframe their situations, peers, and themselves more positively.

Keywords

Ideal L2 Self; Ought-to L2 Self; science, technology, engineering, and mathematics (STEM); critical participatory looping (CPL); motivation; near-peer role models; text mining

Introduction

Research that investigates motivated learning and the relationships of learners' visions as future users of a second language (L2) has been expanding into greater areas of theory and applications and into wider sociocultural and geographical contexts. For example, different studies have examined connections of an Ideal L2 Self—e.g., an image of one's self fluently using the L2 in the future—with motivated behaviors in the present,

such as English in Iran (Papi & Abdollahzadeh, 2012), Korea (Kim & Kim, 2014), and Pakistan (Islam, Lamb, & Chambers, 2013), and English and German in Hungary (Csizér & Lukács, 2010). Some studies have examined preferred sensory styles for imagining Ideal L2 Selves in connection with different criterion measures, such as English in Korea (Kim & Kim, 2014) and English and Mandarin in Hong Kong (Dörnyei & Chan, 2013), while other studies have used positive images of future L2 Selves for motivational interventions, such as English in Japan (Fukada, Fukuda, Falout, & Murphey, 2011; Sampson, 2012), and English in England and Hong Kong (Magid & Chan, 2012). Also in Japan, Ideal L2 Selves have been found to correlate with English proficiency (e.g., Lake, 2013). For the present study, we attempted to explore further into the dynamics of possible selves theory for L2 motivation, particularly for identifying conditions that contribute to balanced and non-balanced configurations of possible L2 selves.

This study investigated student accounts of the influences upon their two possible selves, Ideal L2 Self and Ought-to L2 Self. This population, Japanese university students majoring in science and engineering fields, displays a general lack of an Ideal L2 Self alongside a general strong sense of Ought-to L2 Self as users of English, i.e., an overall non-balanced configuration of possible selves. They were shown the results of their own motivation toward studying English from a large-scale study (Hill, Falout, & Apple, 2013) in which they had earlier participated. After they had considered the overall validity of the results, the students were then requested to rate the level of their own Ideal and Ought-to L2 Selves and to explain their reasons for each rating.

Based on the self-ratings given by the participants, four types of motivational configurations were determined for the purpose of comparing differences across the four groups (details in Table 1 and Figure 1): High Visionaries (HVs) with high-level Ideal and Ought-to L2 Selves (balanced in a way likely to promote motivation); Moderately Non-balanced Visionaries (MNVs) with a small discrepancy between low-level Ideal L2 Selves and high-level Ought-to L2 Selves; Extremely Non-balanced Visionaries (ENVs) with a considerable discrepancy between low-level Ideal L2 Selves and high-level Ought-to L2 Selves; and Low Visionaries (LVs) with low-level Ideal L2 Selves and low-level Ought-to L2 Selves (balanced in a way *unlikely* to promote motivation). This exploratory study aimed to discover what conditions may lead to these configurations of motivational self-guides, particularly for STEM students in Japan.

Table 1: Groups in the study (N = 572) created from responses to 6-point Likert questions

Group Name	Ideal L2 Self Indicator [Q5]	Ought-to L2 Self Indicator [Q8]	Difference between the responses to Q5 and Q8	No. of students
High Visionaries (HVs)	4 or higher	4 or higher	2.0 or smaller	105
Moderately Non-balanced Visionaries (MNVs)	3 or lower	4 or higher	smaller than 3.0	143
Extremely Non-balanced Visionaries (ENVs)	3 or lower	4 or higher	3.0 or larger	177
Low Visionaries (LVs)	3 or lower	3 or lower	2.0 or smaller	147
Total				572

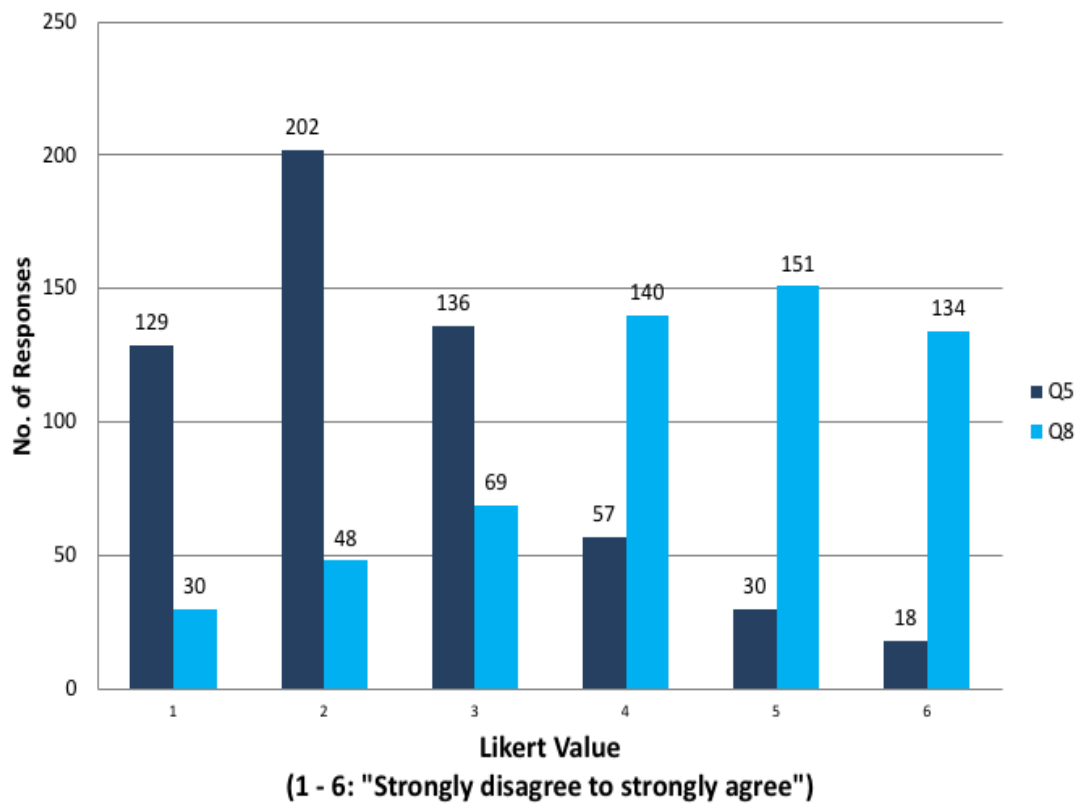


Figure 1: Likert scale responses to Q5, “I can clearly imagine myself in the future using English (my Ideal L2 Self),” and Q8, “I can clearly imagine being required in the future to use English.”

Literature Review

The theory of possible selves is used to understand and predict motivated behaviors in specific situations according to the imaginations people have of themselves in their future. In the first part of the literature review, the psychological mechanisms behind promotional and preventive actions will be described in relation to future-self images that L2 students may have. The importance of balance among different types of future-self images will be highlighted using results from previous studies that concern not only the realization of academic motivation, but also health and well-being across the human lifespan. The second part of the literature review exposes the current motivational imbalance of possible L2 selves found in STEM students studying English in Japan.

Motivational power of balanced possible selves

Imagining what may happen helps people to make changes in their life for the better. Imagining that a test could be passed if more were memorized may inspire a student to study ahead of time with the intention of promoting a positive outcome, which in this case is doing well on a specific test. Imagining forgetting to bring a textbook to class could make a student pack it into a backpack the night before. The intention of this action is to avoid a negative outcome, which in this example is preventing the textbook from being forgotten on a specific day. Similarly, envisioning how one's own self may become in the future can motivate action with the intention of promoting a positive outcome or avoiding a negative outcome, as posited by possible selves theory (Markus & Nurius, 1986). Whether people wish to stay as they are now or change themselves in the future, their hopes of how they *wish* to become and their fears of what they *could* become provide them with desired and feared self-images, respectively. They can use these images to orient upon when setting goals and making decisions. They may then start taking action through certain steps that promote the potential of becoming the person they wish to be. Or they may start taking specific measures to prevent becoming the person they wish not to be. Or they may try a combination of both approaches. Through these two psychological mechanisms—promotion and prevention—future self-images help regulate behavior by raising awareness of differences in possibilities of the future. These images are thus known as self-guides in self-discrepancy theory (Higgins, 1987).

People can also have various components of self-images, or self-concepts, that relate to different and even opposing aspects of their personality, lifestyle, physical

attributes, skills and capabilities, public image, and occupation. Whether they are aware of it or not, people can often be composed of self-contradictions, reconciliations, and pluralities, which do not negate or subtract from the validity of an individual's self-identity:

If we consider possible selves as systematic components of the self-concept, we can conceive of a self-concept that is diverse and multifaceted without being fake, wishy-washy, or incoherent. Possible selves provide for a complex and variable self-concept but are authentic in the sense that they represent the individual's persistent hopes and fears and indicate what could be realized given appropriate social conditions. (Markus & Nurius, 1986, p. 965)

Incorporating elements of possible selves theory, the L2 motivational self system (Dörnyei, 2005, 2009), has recently become a widely used contemporary model of motivation for language learning comprising three parts. The first construct, the Ideal L2 Self, relates primarily to how a learner hopes to become as a user of the language, and thus this self-guide generally acts through promoting positive outcomes, such as finding ways to improve speaking abilities. The Ought-to L2 Self, the second construct, mainly comes from expectations derived from the social realm, such as friends, parents, and teachers. This self-guide generally acts through preventing negative outcomes, as in how one can avoid getting bad grades. The third construct is the L2 Learning Experience of the immediate learning context, including experiences with teachers, classmates, and curricula. Dörnyei and Ushioda (2011) explain that conflicting images between the Ideal and the Ought-to L2 Selves can counteract the potential of these self-guides to self-regulate motivated behavior. Conversely, when future self-images from these two self-guides are in harmony with each other, their potential to induce motivated action is increased. Konno's (2011) findings corroborate this, with learners making greater effort to learn English in classes at universities in Japan when their Ideal and Ought-to L2 Selves were in balance with each other.

Balanced possible selves play a critical role in motivated learning across various cultures and school subjects, a balance that may be shaped by sociocultural context (Unemori, Omoregie, & Markus, 2004). For instance, when at-risk youth in the U.S. had balanced possible selves, they showed greater classroom participation, persistence in studying, and academic achievement—but only if these motivators were accompanied by the knowledge of plausible self-regulation strategies necessary for attaining their envisioned academic goals (Oyserman, Bybee, & Terry, 2006; Oyserman, Bybee, Terry, &

Hart-Johnson, 2004). Another study (McElwee & Haugh, 2010) found that the *frequency* with which U.S. college students imagined their own futures correlated to also imagining feared self-images, while the *clarity* of imagining their future selves correlated to imagining hoped-for selves. Yang and Noels (2013) looked at international students at a Canadian university, representing 30 ethnic groups, whose L2 was English. Students with balanced possible selves, regarding educational expectations and fears, exhibited less depressive tendencies than students with non-balanced possible selves. This corroborates results from a study (Penland, Masten, Zelhart, Fournet, & Callahan, 2000) at a U.S. university, which revealed that students with depressive tendencies had greater negative than positive expectations for their possible selves. Such findings suggest that balanced possible selves can serve to self-regulate not only academic achievement but also well-being. Moreover, in a longitudinal study of older adults in the U.S., balance between hoped-for and feared selves in the health domain (i.e., health-promoting and health-protecting) was associated with continuity of preserving one's self-concept (Frazier, Hooker, Johnson, & Kaus, 2000). Therefore, balance in possible selves also appears linked to resiliency over time. In sum, the motivational power of balanced possible selves seems relevant for various cultural contexts, age groups, and life endeavors.

Non-balanced EFL possible L2 selves of Japanese STEM students

As the lingua franca of science is English, it is imperative that young scientists-to-be have communicative competency if they wish to attain competitive jobs and keep updated in their field of study. Staying occupationally relevant means being able to read the latest research reports, express one's own research in spoken and written forms, communicate effectively among project team members who may be based around the globe, and act in the service of public relations. Individual countries rely on professionals from STEM fields to build infrastructures and solve innumerable local problems, while the international community relies on them and their technologies to enable and improve trade, economic growth, and living standards; prevent large-scale disasters or assist in evacuation, rescue, and cleanup thereof; and monitor and care for global systems of natural ecologies and environments, information and technology, and health and welfare.

Possible EFL selves may rarely form in a balanced configuration for STEM students in the L2 educational system in Japan. Findings from one study indicated that Japanese college students, compared to their counterparts in Chile and the U.S., have less balanced

possible selves across a wide variety of areas, specifically those in the intrapersonal, interpersonal, occupational, extracurricular, financial, and health domains (Unemori et al., 2004). Moreover, Japanese students exhibited the highest percentages of career-related self-images, negative expected selves, and feared selves. Another lack of balanced selves for this population could be corroborated in a more recent study (Hill et al., 2013) involving 2,503 Japanese students studying in STEM programs. That population's overall lack of a sense of an Ideal L2 Self, a promotion-focused self-guide aiming for positive outcomes, contrasted with an overall strong sense of Ought-to L2 Self, a prevention-focused self-guide avoiding negative outcomes.

The present study will attempt to account for the non-balanced configuration of possible L2 selves by asking a subset sample of the students in that previous study (Hill et al., 2013) to attribute the formations of their own personal Ideal and Ought-to L2 Selves. The purpose is to gain initial insights into the conditions that contribute to the formation of balanced and non-balanced configurations of L2 future self-guides of Japanese college STEM students.

Research Questions

Given the lack of a balance between Ideal L2 Selves and Ought-to L2 Selves among Japanese STEM students, we formulated the following two research questions:

RQ 1. What conditions may contribute to non-balanced configurations of low-level Ideal L2 Self and high-level Ought-to L2 Self?

RQ 2. What conditions may contribute to balanced configurations of high-level Ideal L2 Self and high-level Ought-to L2 Self?

Research Methods

The methods of the present investigation were designed to draw upon the metacognitive capabilities of STEM students by first showing them the results of a former study in which they had participated, then through a specially designed questionnaire asking each participant to rate and account for their own individual levels of Ideal and Ought-to L2 self. According to their self-reported levels, the data from each participant were sorted into one of four groups which ran along a continuum of balanced and non-balanced possible

L2 selves. The ways each group tended to account for their levels of balanced or non-balanced configurations was investigated by clustering together same or similar words and phrases with the aim of uncovering telltale patterns of attributional styles.

Questionnaire

The current study has stemmed from a large-scale survey (Hill et al., 2013) that investigated EFL motivations. In that study, data collected from 2,503 STEM college students from 20 educational institutions in Japan were fit to a structural equation model that tested interrelationships between L2 motivational variables. Results indicated that learners' perceptions of poor classroom atmosphere led to low confidence in speaking English, which in turn decreased the likelihood of imagining using English in the future (i.e., hindering the rise of an Ideal L2 Self). On the other hand, learner perceptions of facing social obligations led to the likelihood of expecting to use English in future situations (i.e., encouraging the rise of an Ought-to L2 Self). Thus emerged an imbalance between the majority of students' Ideal L2 Selves, which was generally low, and their Ought-to L2 Selves, which was generally high.

In the first step for the present study, the results from Hill et al. (2013) were shown to over 600 of the same participants. For the second step, the same cohort of students was then administered a looping survey, following the process of critical participatory looping (Murphey & Falout, 2010). In other words, these students' own data results obtained from Hill et al. (2013) were provided back to them, alongside explanations in Japanese about the meanings of Ideal and Ought-to L2 Selves, plus explications of the conditions that influence the formation of these possible selves in this particular educational context. This CPL process was used to validate the data results and to offer students a way to voice their own explanations and opinions. Also, it was hoped that students who may have been struggling with their motivations would not feel alone when seeing these results, and perhaps even gain insights about becoming adept users of English. The questionnaire comprised the following contents:

Q1. Year in School.

Q2. Gender.

Q3. Where has your education primarily been up through now?

Q4. I usually feel the atmosphere is positive in my English classes.

Q5. I can clearly imagine myself in the future using English (my Ideal L2 Self).

Q6. For my answer to Q5, I tend to agree or disagree because . . .

Q7. I perceive that using English is usually expected of me from society.

Q8. I can clearly imagine being required in the future to use English.

Q9. For my answer to Q8, I tend to agree or disagree because . . .

Q10. What do you think of this research and these results?

Participants ranked their level of agreement or disagreement to Q4, Q5, Q7, and Q8 by responding with a 6-point Likert scale, 1 = “I strongly disagree” to 6 = “I strongly agree.” The four questions regarding the level of their personal Ideal (Q5) and Ought-to L2 Selves (Q8) were utilized to delineate participants into four main groups (explained in the subsection titled, ‘Participants’). The open-ended questions (Q6 and Q9) were used for gathering the reasons that students gave to their self-reported levels of Ideal and Ought-to L2 Selves, which were then analyzed for attributional patterns (explained in subsection titled ‘Methods of analysis’).

Participants

A total of 614 questionnaires were collected containing the aforementioned quantitative and qualitative data. Responses from nine participants were eliminated due to insufficient data points (e.g., items left blank), and eight more participants whose responses indicated high Ideal L2 Selves with low Ought-to L2 Selves were not used because this group was not focused upon by the research questions. Such non-balanced configurations of possible selves do not appear to occur frequently in the Japanese L2 educational context. However, for contexts in which such imbalances may be more likely to appear, it seems most appropriate to study such groups. Also, to focus the present study only on the Japanese EFL educational context, responses from an additional 25 students were culled (i.e., students who claimed that they received almost all of their prior education outside of Japan before participating in the study). This resulted in $N = 572$ Japanese college STEM students for this study.

The assumption was that learners with balanced, high-level possible selves would hypothetically be more motivated than learners with non-balanced, low-level possible selves. Thus, regarding the participants’ Ideal L2 Selves and Ought-to L2 Selves, a

continuum from balanced to non-balanced and high-level to low-level groupings needed to be established from within the population of this study to help determine if there were qualitative differences among the attributions. For this study, it was decided that configurations of four groupings of relatively equal size would be useful for comparison in the analysis. Therefore, based on Likert-scale responses to Q5 and Q8, the four groups (Figure 1 and Table 1) became: High Visionaries (HVs) with high Ideal and Ought-to L2 Selves (the balanced group); Moderately Non-balanced Visionaries (MNVs) with a small discrepancy between low Ideal L2 Selves and high Ought-to L2 Selves; Extremely Non-balanced Visionaries (ENVs) with a larger discrepancy between low Ideal L2 Selves and high Ought-to L2 Selves; and Low Visionaries (LVs) with low Ideal and Ought-to Selves. Although the groupings and the operationalization for making them seemed appropriate for this study, there may be other configurations and ways to operationalize groupings that make sense for other studies and contexts. The present study is intended to be investigatory rather than definitive in the balances between Ideal L2 Selves and Ought-to L2 Selves.

Methods of analysis

Qualitative data of student responses to open items Q6 and Q9 were analyzed using text mining software (SPSS Text Analytics for Surveys 4.0.1). First, the text mining examination selected certain words or phrases as salient, then a Microsoft Excel search function was used to confirm the number of students who used those words. Word frequency was measured differently between the text mining and Excel. Text mining focused on linguistic features, and when the same word was used in different forms (e.g., adjective or part of compound nouns), they were counted separately. In contrast, the Excel search function highlighted the form of chosen words used in different expressions, enabling a way to determine the actual number of students who used each term.

Most participants wrote their responses in Japanese, although some wrote in English. The English comments were translated into Japanese by one of the researchers, who is a native speaker of Japanese. Some students wrote “the same as Q6” in their answer to Q9, so such comments in Q9 were replaced by the actual comment that the student had written for Q6. The students’ wrong choices of kanji characters (i.e., “misspellings” in kanji characters) were corrected by the researchers because the content would otherwise be dismissed, or accounted for inaccurately, by the software. All text mining analysis was conducted in Japanese. The results were then translated into English by the researcher who

is a native speaker of Japanese and checked by the other researchers who are native speakers of English.

Results

A pattern of attributional styles emerged. The more balanced and higher their motivations were, the more likely students (1) felt confident with using English, (2) saw their future situations in STEM as opportunities to use English rather than as pressures, and (3) found inspirations in their peers and others as English learning role models. As the imbalance of possible L2 selves increased and overall motivations decreased, the more students tended to (1) believe themselves poor at English, (2) feel incapable of controlling both their abilities and opportunities to learn English, and (3) see those around them as similarly incapable of using English or in no need of using it.

Confidence with using English

The text mining analysis of the students' attributions revealed many key words that could help to explain attitudinal differences across the groups (Table 2 and Table 3). HV students' self-ratings of their own personal Ideal and Ought-to L2 Selves were on the positive side, and therefore most of their reasons for these choices were also generally positive. On the other hand, MNV and ENV students provided negative self-ratings of these possible selves, with their accompanying explanations similarly somewhat negative. Likewise, LV students' self-ratings were negative, but their attributions for these low levels of both their Ideal and Ought-to L2 Selves were decidedly more negative.

Table 2. Ten most frequently used words in explanation of Ideal L2 Self (Q5) and explanation of Ought-to L2 Self (Q8) identified by the text mining software¹

Group	Ranking	Q5: Reason for their perceived Ideal L2 Self level		Q8: Reason for their perceived Ought-to L2 Self level	
		Word(s) ²	Frequency count	Word(s) ²	Frequency count
HVs (n = 105)	1	speak	30	be there	20
	2	future	18	necessary	19
	3	study	12	use	12
	4	be there	14	overseas	11
	5	myself	14	speak future	10
	6	study	12		
	7	can do it	9	word	9
	8	necessary	9	communication	9
	9	good / well	8	globalization society	7

	10	(not) very work overseas imagine	7		
MNVs (n = 143)	1	speak	38	necessary	30
	2	no / not	25	be there	24
	3	can do it to speak	19	use	15
	4			proceed work	14
	5	future	17		
	6	study imagine	15	company overseas	13
	7				
	8	(not) very myself good / well	13	enterprise	11
	9			globalization many	10
	10				
ENVs (n = 177)	1	speak	54	necessary	31
	2	no / not	27	be there	22
	3	good / well	22	society	21
	4	myself	18	overseas	18
	5	poor ³	17	become	17
	6	be there	14	enterprise	15
	7	study	11	speak	14
	8	not very	10	proceed foreign Japan	12
	9	understand can do it conversation currently class	9		
	10				
LVs (n = 147)	1	speak	34	use	29
	2	no / not	27	no / not	27
	3	myself	16	necessary	20
	4	study	15	be there	16
	5	speak	13	work	15
	6	future imagine	10	Japan	13
	7			myself	12
	8	can do it work few / little	8	can do it	11
	9			speak	10
	10			future imagine	9

Notes. 1) “English,” and “think” were the most frequently used words in all groups, and those words and their synonyms are excluded from this Table; 2) The original Japanese words have been translated into English for this paper. One Japanese word sometimes needed two English words in translation; 3) *Nigate* was the original Japanese word and it is defined as “lacking a specified quality.”

It is understandable that students who cannot visualize positive possible selves would provide reasons that were negative in sentiment. For MNV and ENV's Ideal L2 Selves and LV's Ideal and Ought-to L2 Selves, the words "no" and "not" appeared together as the second most frequently used words, while they did not appear on the same list of top words for the HV group (Table 2). For MNV, ENV, and LV groups, the word "not" collocated with "opportunities," "confidence," or "English ability," meaning that the students believed they did "not" have many opportunities to practice speaking, and that they did "not" have confidence in their English abilities. The text mining software identified many negative patterns in the MNV, ENV, and LV groups (e.g., "bad + frustration + English," "bad + frustration + class," "bad + myself," "bad + frustration + opportunity"). The word "poor" was used frequently in explaining their negative responses for low Ideal L2 Self; it was used forty times (15.4%) by the ENV group, twenty-two times (22.6%) by the MNV group, and fifteen times (10.2%) by the LV group (Table 3). The ratio was the largest for the ENV students, whose low self-confidence was distinctive to this group.

Table 3: Selected characteristic words: The number and percentage of students who used them

	HV (<i>n</i> = 105)	MNV (<i>n</i> = 143)	ENV (<i>n</i> = 177)	LV (<i>n</i> = 147)
poor (Q2)	4 (0.4%)	25 (17.5%)	40 (22.6%)	15 (10.2%)
research paper (Q4)	3 (2.9%)	7 (4.9%)	11 (6.2%)	0 (0%)
class (Q2)	3 (2.9%)	9 (6.3%)	14 (7.9%)	4 (2.7%)
teacher (Q4)	0 (0%)	4 (2.8%)	6 (3.4%)	1 (0.7%)
parent / relative (Q4)	0 (0%)	2 (1.4%)	5 (2.8%)	2 (1.4%)
TOEIC (Q4)	0 (0%)	0 (0%)	3 (1.7%)	3 (2.0%)
Japan (Q4)	15 (14.3%)	18 (12.6%)	25 (14.1%)	26 (17.7%)

Notes. Excel search function was used to determine the number of the students who used the word. The number of words being used is different from the numbers shown in Table 2 because the text mining software word recognition was not simply based on the actual word. For example, "Japan," "Japanese people," and "Japanese companies" were all recognized as different expressions (simple noun, compound noun, adjective, respectively) and counted separately by the text mining software, but counted all together by the Excel search function.

Pressures and opportunities to learn English

Words that collocated with "English" also revealed group differences. For example, "communication" appeared as one of the most frequently used words by HV students for attributions regarding their Ought-to L2 Selves, but not for the other groups, and collocated with the word "English" (Table 2). For HVs, "English" in turn collocated frequently with words such as "future" or "use." "English" was often used in positive sentiments, confirming that HVs were interested in English now, felt a need to improve their abilities

using it in the present, and desired to speak it in the future. Collocations between “English” and “future” or “use” were found in MNV and ENV groups. However, the distinctive difference was that for both groups, “English” collocated with “research papers” and “enterprises” or “companies,” indicating tendencies toward instrumental motivation. Very few of these collocations were seen in the HV group, whose own collocations relate more with integrative motivation. The word “research paper” was used three times by the HV group, seven times by the MNV group, eleven times by the ENV group, and not at all by the LV group (Table 3), as in the following example comments:

- In the field of science and engineering, communicating with foreign people [even] inside Japan is considered important. I have many opportunities to read English research papers while I do my research and I think English is important to improve my knowledge and widen my views. (HV)
- Most research papers and articles in [today’s] science fields are published in English. As long as we work in fields related to science, we won’t be able to do our job if we can’t use English. (MNV)
- English is used in most research papers and for newest research information. (ENV)

The larger the discrepancy between perceived Ideal L2 Self and Ought-to L2 Self, the more frequently the word “research paper” was used: three HV students (2.9%), seven MNV students (4.9%), and eleven ENV students (6.2%) (Table 3). That this tendency was stronger among the MNV and ENV groups suggests a higher sense of urgency, while HVs’ comments generally lacked situational reference as to how English would be used in the future, except for non-specific “communication.”

The word “class” can be considered key to the group differences. Only three students in the HV group used the word “class.” On the other hand, “class” appeared more frequently from students in the MNV and ENV groups when giving their attributions for their comparatively lower Ideal L2 Selves. They claimed that they had no other opportunities to use English than in their classes, or that they did not consider English classes were helpful in improving their English. For example:

- I can’t feel that I’m studying English in my classes at school. (MNV)
- I don’t think I will take the time to study English once I stop taking English classes

at university. (MNV)

- I don't think I can improve my English-speaking ability through the current English classes. Also, there is almost no opportunity to speak English in my daily life. (ENV)
- There are few opportunities to speak during the class. The number of class hours is small. (ENV)

Social inspirations and influences to learn English

The words “teacher,” “parent,” and “relative” have also revealed intriguing group differences. The word “teacher” was not mentioned often by either of the MNV or ENV groups in their attributions of Ought-to L2 Selves, but it is noteworthy that the few mentions of “teacher(s)” were in relation to “teachers” telling students that English will be necessary. In one case, for the inability to imagine being required in the future to use English, an LV student explained that it was “because I only saw foreigners among tourists or teachers.” In their attributions of their Ought-to L2 Selves, none of the HV students mentioned anything that their “teachers” said or represented. The following are examples relating to “teachers”:

- I have been told to the extent that my ears hurt that teachers and people from corporations think that we need English. (ENV)
- . . . I think teachers including non-English teachers have said English is necessary. (ENV)

As for the words “parent” or “relative,” the following two comments are from the LV group:

- . . . my parents can't use English . . . (LV)
- I've never seen my parents use [English] and so I think I can live without using it. (LV)

Conversely, all of the ENV students' attributions using the word “parent” indicated that they learned the necessity of English from their parents. Four attributions indicated that a parent used English at work, and one student further said that the parent emphasized its

necessity. For instance:

- I hear my father's stories and others and deeply feel the necessity of English on overseas business trips. (ENV)
- My parent earns money overseas using English. (ENV)

Two MNV students and one ENV student also indicated they learned the importance of English from the stories of their "senior students." Similarly, another MNV student explained the influence of real-world stories from *near-peer role models* (Murphey & Arao, 2001):

- An acquaintance of mine, who is now working, is required to respond in English when answering phone calls, even though the person works domestically. (MNV)

The above examples indicate that older students, and even parents, could be effective near-peer role models. Also, TV programs can provide such models. One student wrote:

- I understand from teachers' stories and from TV shows that companies need people who can speak English. (ENV)

A similar comment was found from one HV student: "I have seen a TV program showing engineers using English, dealing business with people from overseas." These people on TV, working in related fields in which the student was majoring, may have been taken as future-self models, or even as near-peer role models. This means the student had visualized using English while working as an engineer, potentially triggering intrinsic motivation. On the contrary, MNV and ENV students more often expressed feeling pressured to learn English, rather than inspired, by "significant members of the field," including their teachers, parents, and older students, suggesting extrinsic motivational influences.

The Test of English for International Communication (TOEIC), a standardized test frequently used in Japanese universities and companies, potentiates external motivations to

learn English. Of the few students who explicitly mentioned “TOEIC,” they were represented in only the ENV and LV groups (i.e., less motivated), whereas HV and MNV students (i.e., higher motivated) did not mention this test at all (Table 3). For students with high-balanced possible selves, TOEIC seems not to be a primary reason for learning English.

Lastly, the word “Japan” was used in various ways, such as in the sense of Japanese people, Japanese companies, or Japan as a country. HV, MNV, and ENV students typically expressed their understanding about Japan becoming globalized:

- As Japan has been internationalized, there are more and more chances to speak with foreign people in foreign languages even inside the country. (HV)
- There are already many cases in Japan where English is used a lot. If I want to contribute successfully in a corporation, I will have to be able to use English. (HV)
- The number of global enterprises is increasing in Japan. (MNV)
- There will be customers from foreign countries, not all the company workers will be Japanese, and I may be sent overseas to work. (MNV)
- The number of jobs that we can do only in Japan is getting smaller. The job I get in the future will most likely require me to use English. (MNV)
- When I start to work for an enterprise in society, I might have to work overseas, and there may be chances when I have to speak English even in Japan. (ENV)
- I don’t think it is any longer the era when Japanese people can work only by themselves. (ENV)

On the other hand, typical opinions from the LV students were that as long as they stayed in Japan, they would not need English, as revealed in the following comments:

- I want a job for which I don’t use [English] if possible, and I don’t want to leave Japan. (LV)
- I want to work in Japan. (LV)
- Because I live in Japan, it would be nice if I could use English, but I can live comfortably without using it. (LV)

To summarize, HV, MNV, and ENV students exhibited a globalized visualization of Japan or Japanese companies. The LV students, however, seem basically uninterested in leaving Japan and do not have any perceptions that they will need to interact with non-Japanese in their futures, so their worldview and sense of possible L2 selves might be relatively limited, perhaps due to a lack of role models using English, or a dearth of experience and opportunities to communicate with L2 users, or for other reasons that could be explored in future research.

Discussion

The survey results allowed for attributional comparisons across four groups of students in terms of their characteristics towards motivation for learning English—HVs as a group with high motivational potentials, and MNVs, ENVs, and LVs as groups with motivational potentials at risk. Through text analysis, certain conditions were found to contribute to the formation of balanced, high-level possible selves (HVs), and to non-balanced, low-level possible selves (i.e., MNVs, ENVs, and LVs). Discrepancies among the following four features could characterize the differences: (a) confidence in English ability, (b) perception of external pressures, (c) attribution to uncontrollable factors, and (d) orientation toward global or parochial mindedness.

Comments from students with non-balanced, low-level possible selves revealed low confidence in English abilities. Conversely, HV students were not as frustrated with their abilities, and even students who were not satisfied tended to believe their continuing efforts would eventually lead to reaching their desired abilities.

Students with non-balanced, low-level possible selves indicated frustration with English, such as the demands of writing research papers and giving presentations. The findings suggest that MNV and ENV students have spent more time visualizing career-oriented goals in their field. Thus, compared to HV students, MNV and ENV students may have higher self-expectations in professional situations involving English. Or they may feel external pressures to improve English for career goals more strongly than do HV students. It appears that HV students do not need or use external motivators as do MNV or ENV students. Perhaps their high-level, balanced possible selves correspond with intrinsic motivators, whereas the non-balanced possible selves correspond with extrinsic motivators. The HV groups may simply like English for itself more than do the other groups. HV seemed to have found others as near-peer role models linked to positive visualizations of

their own future selves, whereas MNV and ENV students perceived others more negatively, exerting an unwanted pressure to study English.

The tendency to blame uncontrollable factors was stronger among students with non-balanced, low-level possible selves. Many of the MNV and ENV students expressed frustration about English classes. Their complaints may reflect common problems for many students with the current EFL educational system. The HV students' perceptions, however, implied a rather positive attitude. Their comments revealed that they would rather make constant efforts to improve their English than criticize their learning environment.

In sum, HV students showed the highest confidence levels in their English, whereas MNVs were less confident, and ENVs even less so. LV students' confidence level was unknown—they did not express self-perceptions of their “poor” English as frequently as MNV or ENV students; LVs did not seem to care about their abilities nor have any English goals. HV students seemed the most resilient to external pressures and uncontrollable factors in their learning environment, whereas MNVs seemed less resilient, and ENVs even less so. On the other hand, all the HV, MNV, and ENV students exhibited a strong mindfulness of the need for English in a globalized world. Perhaps the most salient difference of the LV group from the rest was their lack of global-mindedness (Figure 2).

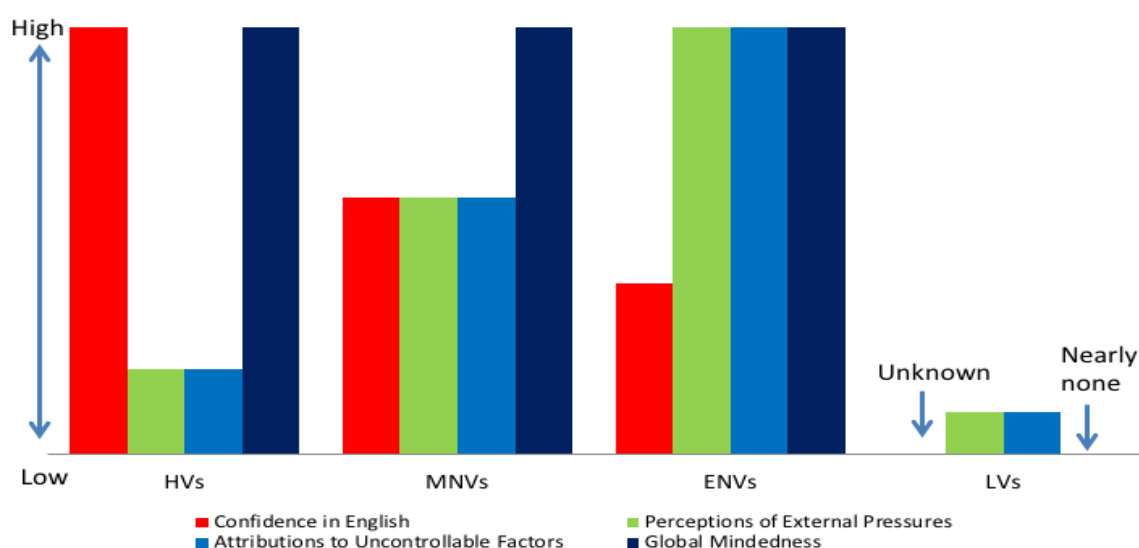


Figure 2. Image patterns of key factors in learning English among the four groups of study participants.

The majority of these Japanese STEM students fall into the non-balanced, low-level possible selves groups. Due to the pressures in their classroom environments to learn a subject challenging for them, MNV and ENV students may not be aware that they can be responsible for improving their own outlooks about learning. Perhaps these students could use assistance to gain confidence in using English, and that other students or professionals might be framed for them as near-peer role models, good examples from which students with at-risk motivations could turn on their own self-motivators during learning situations in the present. Given a chance to collaborate in an environment where spoken language is used and making mistakes with it is encouraged, students might find opportunities to hear oral output from their peers and to practice speaking themselves. Such an antidote to traditional Japanese classrooms of teacher-fronted grammar translation could lower students' affective barriers that instigate self-monitoring and increase their resistance and silence (King, 2013). Moreover, if allowed to share their goals, hopes, and fears about learning English, students with non-balanced, low-level possible selves could be in a better position to learn metacognitive strategies for dealing with the pressures of learning and for motivating themselves. The classroom environment may then become more open and friendly, allowing both the access to and the positive influences of near-peer role models to flourish (Murphey & Arao, 2001) via emotional contagion, the phenomena of "catching" other people's moods, attitudes, and even aspirations (Hatfield, Cacioppo, & Rapson, 1994).

Seeming unconcerned about the present pressures to learn English and their future situations, LV students' lack of clear, specific English learning goals and global-mindedness puts them, their future employers and clients, and the larger populace at risk of missing out on their potential contributions. This makes a pedagogical necessity out of early awareness-raising of globalization as it relates to each individual's responsibility, particularly those within STEM backgrounds.

To better understand the formation of STEM students' possible selves, further investigation is necessary, particularly in classroom expectations and experiences in both English and science classes. Although students individually perceive their own self-guides, possible selves are primarily formed by what students perceive of their external environments, especially from the social milieu. Thus, further research might cover:

- attitudes and beliefs of English and science teachers about what STEM students need to learn and why

- other academic contexts that require or offer opportunities to use English (i.e., writing research papers and giving presentations)
- language-related requirements for graduation
- exposure to information about what STEM students might be doing with English in their chosen careers
- employment practices of STEM-related employers regarding the role of English
- actual expectations and situations for using English that STEM students will be facing as future scientists, technicians, engineers, mathematicians, and all other related experts to whom the world entrusts with creating the physical, virtual, and social infrastructures upon which the livelihood and health of general society depends.

Conclusion

Balanced possible selves can motivate learning more effectively than non-balanced possible selves. This study investigated the attributional differences of students with highly envisioned, balanced possible selves (i.e., of Ideal and Ought-to L2 Selves), non-balanced configurations of these possible selves, and poorly envisioned possible selves. The predominant type of learner among STEM students in Japan is that of non-balanced, low-level possible selves, and from this study they expressed feeling over-pressured to learn English, alongside a lack of confidence about and control over their learning. Students also mentioned they became influenced by significant members of their communities, such as teachers, parents, and senior students. Students with non-balanced, low-level possible selves tended to consider others less often as role models than did students with highly envisioned, balanced possible selves. Since self-guides are primarily constructed from such social referents, potential role models in EFL learning might be highlighted for STEM students to help them increase and maintain their overall balance and high levels of possible L2 selves motivations.

References

- Csizér, K., & Lukács, G. (2010). The comparative analysis of motivation, attitudes, and selves: The case of English and German in Hungary. *System*, 38(1), 1-13.
- Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in*

- second language acquisition*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Dörnyei, Z. (2009). The L2 motivational self system. In Z. Dörnyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 Self* (pp. 9-42). Bristol, UK: Multilingual Matters.
- Dörnyei, Z., & Chan, L. (2013). Motivation and vision: An analysis of future L2 self images, sensory styles, and imagery capacity across two target languages. *Language Learning*, 63(3), 437-462.
- Dörnyei, Z., & Ushioda, E. (2011). *Teaching and researching motivation* (2nd ed.). Harlow, UK: Pearson Education.
- Frazier, L. D., Hooker, K., Johnson, P. M., & Kaus, C. R. (2000). Continuity and change in possible selves in later life: A 5-year longitudinal study. *Basic and Applied Social Psychology*, 22(3), 237-243.
- Fukada, Y., Fukuda, T., Falout, J., & Murphey, T. (2011). Increasing motivation with possible selves. In A. Stewart (Ed.), *JALT2010 Conference Proceedings* (pp. 337-349). Tokyo: JALT.
- Hatfield, E., Cacioppo, J., & Rapson, R. (1994). *Emotional contagion*. Cambridge, UK: Cambridge University Press.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94(3), 319-340.
- Hill, G., Falout, J., & Apple, M. (2013). Possible L2 selves for students of science and engineering. In N. Sonda & A. Krause (Eds.), *JALT2012 Conference Proceedings* (pp. 210-220). Tokyo: JALT.
- Islam, M., Lamb, M., & Chambers, G. (2013). The L2 Motivational Self System and national interest: A Pakistani perspective. *System*, 41(2), 231-244.
- Kim, T.-Y., & Kim, Y.-K. (2014). A structural model for perceptual learning styles, the ideal L2 self, motivated behavior, and English proficiency. *System*, 46, 14-27.
- King, J. (2013). *Silence in the second language classroom*. Basingstoke, UK: Palgrave
- Konno, K. (2011). Temporal shifts in L2 selves in the EFL classroom. *Language Education and Technology*, 48, 23-48.
- Lake, J. (2013). Positive L2 Self: Linking positive psychology with L2 motivation. In M. T. Apple, D. Da Silva, & T. Fellner (Eds.), *Language learning motivation in Japan (Multilingual Matters)*. (pp. 225-244). Bristol, UK: Macmillan.
- Magid, M., & Chan, L. (2012). Motivating English learners by helping them visualize their

- ideal L2 self: Lessons from two motivational programmes. *Innovations in Language Learning and Teaching*, 6(2), 113-125.
- Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist*, 41(9), 954-969.
- McElwee, R. O., & Haugh, J. A. (2010). Thinking clearly versus frequently about the future self: Exploring this distinction and its relation to possible selves. *Self and Identity*, 9, 298-321.
- Murphey, T., & Arao, H. (2001). Reported belief changes through near peer role modeling. *TESL-EJ*, 5(3), 1-15.
- Murphey, T., & Falout, J. (2010). Critical participatory looping: Dialogic member checking with whole classes. *TESOL Quarterly*, 44(4), 811-821.
- Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology*, 91(1), 188-204.
- Oyserman, D., Bybee, D., Terry, K., & Hart-Johnson, T. (2004). Possible selves as roadmaps. *Journal of Research in Personality*, 38(2), 130-149.
- Papi, M., & Abdollahzadeh, E. (2012). Teacher motivational practice, student motivation, and possible L2 selves: An examination in the Iranian EFL context. *Language Learning*, 62(2), 571-594.
- Penland, E. A., Masten, W. G., Zelhart, P., Fournet, G. P., & Callahan, T. A. (2000). Possible selves, depression and coping skills in university students. *Personality and Individual Differences*, 29(5), 963-969.
- Sampson, R. (2012). The language-learning self, self-enhancement activities, and self perceptual change. *Language Teaching Research*, 16(3), 317-335.
- SPSS Text Analytics for Surveys 4.0.1. (2011). SPSS. [computer software]
- Unemori, P., Omoregie, H., & Markus, H. R. (2004). Self-portraits: Possible selves in European-American, Chilean, Japanese and Japanese-American cultural contexts. *Self and Identity*, 3(4), 321-328.
- Yang, R. P.-J., & Noels, K. A. (2013). The possible selves of international students and their cross-cultural adjustment in Canada. *International Journal of Psychology*, 48(3), 316-323.

How Thai Students Use Mobile Devices When Learning EFL and the Effect of Urban/Rural School Location

Graham Howlett

Prince of Songkla University, Thailand

Bio-Profile

Graham Howlett has a Master's degree in Teaching English as an International Language and has taught English in Asia for eight years. His research interests include online learning, mobile assisted language learning (MALL), and ways to provide EFL students with exposure to authentic English using technology. He may be contacted at grahamhowlettresearch@gmail.com.

Abstract

Mobile devices, technology such as smartphones and tablets, are resulting in escalating transformations of the educational world, particularly as an aid to language acquisition. This study examined the ways Thai high-school students use mobile devices to aid learning English as a Foreign Language (EFL) in educational settings, and if school size and location affects the level of access and ability students have. The participants were two hundred and seventy-seven students studying in eight schools in Southern Thailand, which were split into urban and rural sub-groups during analysis. Participants completed a questionnaire regarding access, time spent using devices in school, and the specific ways they used mobile devices for EFL related school work. The findings indicated that whilst almost all students had ability and access to mobile devices, there were significant differences ($p < 0.01$) across all items relating to urban and rural school location, due to what appeared to be policy issues. Recommendations are made for schools and policymakers to promote the use of mobile devices, and the ways EFL students reported using and not using mobile devices are detailed, allowing suggestions for teachers on which specific uses to promote.

Address for Correspondence
Sherwood, Fakenham Magna,
Thetford Road,
Suffolk, IP24 2QX
England

Keywords: Mobile Assisted Language Learning (MALL),
mobile devices in EFL context, digital divide, urban-rural
differences

Introduction

Mobile devices are digital, easily portable, and internet accessible devices (such as smartphones and tablet computers) which have become a ubiquitous part of daily life with the potential to be used for varied educational and learning activities (Nankani & Ojalvo, 2010). As the level of access to such devices has grown for today's inherently able digital native students, increasing attention has been placed on where these devices belong in school and the classroom. Whilst there is much literature (Squire & Dikkers, 2012; Thomas & Muñoz, 2016; Thomson, 2009; West & Vosloo, 2013) highlighting the powerful learning possibilities supported by mobile devices, especially as an aid to language acquisition (EF EPI, 2018; Godwin-Jones, 2018), schools often prohibit mobile device use within the classroom and school (Beland & Murphy, 2015). This can be for a multitude of reasons, but primarily:

1. The belief that mobile devices can have a negative influence on learning, reducing students' ability to pay attention in class (McCoy, 2016). Pahomov (2015) found that a typical response from teachers as to why they restrict use is that students have not yet learned how to manage their technology responsibly. Moreover, the ability to use personal and social functions on mobile devices is not necessarily a good indicator of EFL students' knowledge of the educational functions (Stockwell & Hubbard, 2013).
2. The inequality of a 'digital divide' between those who have access to Information and Communications Technology (ICT) and those who do not, due to economic, educational, or social reasons. Thailand is a developing country with many disparities between urban and rural contexts, which may influence the practicality of incorporating mobile devices into Thai EFL classes.

Selwyn (2010) argued that "...greater attention now needs to be paid to how digital technologies are actually being used – for better and worse – in 'real-world' educational settings" (p. 66) - in particular the social, political, economic and cultural contexts. Thus, the present study set out to examine the two aforementioned barriers preventing the widespread adoption of mobile devices in education; how (and if) students are using mobile devices in spontaneous uninstructed ways to aid EFL learning, and whether the digital divide has bearing in the Thai context by looking at the effect of urban/rural school location. At the time of writing there was little previous investigation done regarding how Thai EFL students were using mobile devices in school and the classroom, and especially the affect

rural and urban context may have on access and subsequent experience and ability.

Literature Review

Mobile devices and MALL in schools

Mobile Assisted Language Learning (MALL) is language learning that is assisted or enhanced using mobile devices (Valarmathi, 2011). There are numerous educational affordances unique to mobile devices which include portability, connectivity, the ability to exchange data and collaborate, context sensitivity, individuality, enabling multiple modality, supporting student improvisation as needed within the context of learning, and supporting learning on the move (Klopfer, Squire, & Jenkins, 2002; Liu, Scordino, Renata, Navarrete, Yujung, & Lim, 2015). MALL can bridge between formal and informal learning, providing students with the ability to easily access supplementary materials to clarify ideas introduced by a teacher (West & Vosloo, 2013). Many students seem pro-MALL, with 67% of Saudi EFL students in Alsulami's (2016) study believing that mobile devices can help improve their English language skills and 86% of students depending on mobile devices to understand English words and sentences.

Mobile devices hold special promise in EFL learning and teaching, as they can provide students with easy access to up-to-date materials and connect them to the real world and an authenticity of English that can be missing in EFL classrooms with teachers who do not speak English as their first language (Godwin-Jones, 2018). Technology can transform the language classroom, making English learning more personalised, more interactive, and more accessible (EF EPI, 2018), though the effectiveness of integrating technology will depend on the learning activities that students encounter (Pheeraphan, 2013). Studies have found that technology can aid the learning of EFL grammar (Kılıçkaya, 2013; Saeedi & Biri, 2016), highest reading proficiency is acquired by students who use online dictionaries (Dwaik, 2015), and Saudi EFL students reported using online dictionaries and Google translate significantly more than print dictionaries when given permission (Alhaisoni, 2016). Conversely, the convenience mobile devices provide caused undergraduate students in the EFL context of Saudi Arabia to feel like they do not need to learn English spelling because they can always use a mobile phone to aid them (Nalliveetil, & Alenazi, 2016). In the Thai context, previous research described Thai students using their devices to aid learning through Google searching, translation and taking photos (Phillips, Grosch & Laosinchai, 2014).

Mobile devices and the Thai EFL context

Thailand was classed as having ‘low’ proficiency of English skills in 2018 (EF EPI, 2018), ranked 16th among 21 listed Asian countries and with average English scores of 30.45% for 9th grade and 28.31% for 12th grade students (National Institute of Educational Testing Service, 2018). This far-from-satisfactory English language competence is a consequence of the few opportunities there are to use English in daily life in EFL settings, where “there is no widespread English speech community or domain of daily life where English is necessary” (McCarty, Sato, & Obari, 2017, p. 22). Moreover, in the Thai EFL learning and teaching context, the Grammar Translation Method of instruction - a traditional method with a focus on grammar and rote learning - is said to still be very popular and successful among Thai EFL teachers (Sittirak, 2016). Teacher-directed rote learning in Thai classrooms strengthens Thai cultural norms which put value on status and age, and thus the learner-centred approach rooted in Thailand’s comprehensive Education Reform Law of 1999 was not widely accepted by teachers, students, or parents (Kantamara, Hallinger & Jatiket, 2006). Currently, the government is pushing Thailand 4.0, an economic model which promotes a ‘smart Thailand’ of creativity, innovation, and educational technology (Koanantakool, 2016). Whilst this suggests Thai policymakers have an agenda for incorporating technology and a more learner-centred approach, vague mobile device policy and seemingly contradictory comments from the Prime Minister Prayut Chan-o-cha asking teachers to consider restricting mobile phone use (Thai PBS, 2017) seems to have left many teachers and schools unaware of how to transition to MALL.

Urban-rural disparities, digital divide, and BYOD

A prominent argument against allowing in-class usage of mobile devices is the inequality of a traditional divide between those who have access to ICT like mobile devices, and those who do not due to a multitude of economic, educational, and social reasons (West & Vosloo, 2013). Thailand is a developing country that has been faced with this problem in recent years, though the overall levels of access have been rapidly increasing (Srinuan, Srinuan & Bohlin, 2012). There are some general urban-rural disparities in the Thai context, as summarized by Lounkaew (2013)¹;

¹ Using data from the Programme for International Student Assessment (PISA) 2009 literacy test

1. Students in urban areas performed better than their rural counterparts.
2. There are considerable disparities in educational resources between these two locations (with students in urban areas enjoying more educational resources, higher socioeconomic status, and better access to computers at home).
3. Whilst urban/rural schools differ in size, the student–teacher and computer per student ratios are similar.

In urban areas, Internet subscriptions in Thailand more than doubled from 21.2% of the population in 2005 to 44.9% in 2014. In rural areas it increased three-fold from 8% to 26.9%, but the gap between urban and rural areas during this period remained relatively wide with a margin of approximately 13–19% (Malisuwan, Kaewphanuekrungsri & Milindavanij, 2016). The utilization of computers has followed a similar trend, with a margin of approximately 15–19% between urban and rural users between 2005–2014 (Malisuwan et al., 2016). In their 2012 study, Srinuan et al. (2012) posited that mobile Internet could be an alternative technology to bridge the digital divide in Thailand.

UNESCO's mobile learning policy guidelines claim that mobile devices hold special promise for education due to the access to devices people generally already have (West & Vosloo, 2013). Moreover, Thomas and Muñoz (2016) argue that a new digital divide has emerged between the low levels of access to technology schools have in comparison to students. The Bring Your Own Device (BYOD) model, where learners supply their own device, is inexpensive for schools and easy to implement, creating an appropriate learning environment for digital native students, allowing them to adopt such devices as personalized learning tools and use them in informal contexts (West & Vosloo, 2013). The limitation of this model is that it fails to accommodate those who do not own mobile devices, so an aim of this present study was to quantify the extent of learners who own mobile devices, looking for any differences in relation to urban or rural school location.

Methodology

Research questions

As highlighted by the literature, mobile devices hold huge potential for current education, especially in EFL learning and teaching. This study did not focus on how teachers explicitly utilise mobile devices as a pedagogy, but rather the ways students use them when they take the initiative to seek out information for themselves in educational situations (Stockwell, 2015). This study was designed to address the following questions:

1. In what specific ways are Thai EFL students using mobile devices as a learning tool in the classroom and school setting?
2. What effect, if any, does urban/rural location of schools have on the amount of use of, access to, and ways of using mobile devices in the Thai EFL setting?

Setting and sampling

Southern Thailand was chosen as the geographical setting for this study due to a lack of related research having previously been conducted in the area, and its proximity to the author's university. Purposive sampling of high schools was based on the following criteria: 1) schools located in both urban and rural areas, 2) schools of different sizes, 3) public high schools under administration of the Office of Education Area 16 (which covers two southern Thai provinces).

All schools operating under the Office of Education Area 16 were invited to participate, with students from eight of the responsive schools making up the population of this study. Of these eight schools, four were extra-large ($> 1,500$ students), two were large (600-1,500 students), and two were small/medium (< 600 students)². The four extra-large schools were in urban areas, while the large and small/medium schools were in rural areas, with school population decreasing relative to district population. The urban school populations ranged from 1,675 to 3,510 students, while the rural schools ranged from 325 to 1,048 students³. In this study these two sub-groups will henceforth be referred to as urban (those schools located in a city) and rural (those schools located in villages, small towns, or towns).

Participants

The population of this study were 4,037 Thai high-school students; 2,429 studying in Grade 8 and 1,608 studying in Grade 11. Grade 8 students (junior high school) and Grade 11 students (high school) were selected as sub-groups within the sample to represent both the lower and upper sections of Thai high schools, sitting in the middle of each respective section of school (junior high school Grades 7-9, and high school Grades 10-12).

² As categorized by the Thai Ministry of Education (2008)

³ School population data as of December 2017 from Official Statistics Registration System (2017) and Office of the Basic Education Commission (2017)

Table 1: Participants

School Location:	Rural		Urban		Overall	
	n	%	n	%	N	%
Grade 8	79	56.03	76	55.88	155	55.96
Grade 11	62	43.97	60	44.12	122	44.04
	141	50.90	136	49.10	277	100.00

From the population of 4,037 students, using a margin of error of 5% and a confidence level of 91.5%, the sample size was calculated as 277 participants. Split into their rural and urban sub-groups, the percentage of participants was almost equally balanced (urban 50.9% / rural 49.1%). Efforts were made to replicate the un-even proportion of the Grade 8 and Grade 11 populations in the samples, with 155 students from Grade 8 and 122 students from Grade 11 (and this ratio consistent within rural and urban sub-groups). Within each school, students were selected from Grade 8 and 11 to complete the questionnaire using simple random sampling.

Instrument and piloting

This study followed a quantitative approach in the form of a questionnaire which used 5-point Likert-type scale questions from always (1) to never (5), adapted from previous studies (Phillips, Grosch & Laosinchai, 2014), informal focus groups, and piloting. The questionnaire established participants' demographic details and mobile device access, whether they took mobile devices to school and were allowed to use them in the classroom, and how they used mobile devices for EFL related school work. A bilingual translator translated the questionnaire from English to Thai and worked closely with the researcher during the various incarnations of the instrument pre and post pilot.

A Thai government high school in the same geographical area but outside of the Office of Education Area 16 was randomly chosen to participate in the pilot. Ten Grade 7 and Grade 10 students were randomly chosen to complete the questionnaire and participate in an item-by-item discussion with the researcher and his Thai assistant on the clarity and content of each item. Following this, there was a short focus group to discuss the topic of mobile devices in the EFL context (in particular to identify any educational uses the questionnaire did not already address). Whilst the structure of the questionnaire remained the same, some items were edited or removed for clarity before it was assessed for validity by three experts in the field and prepared for data collection.

Data collection and analysis

The final questionnaire consisted of 30 items and was distributed to schools in December 2017. All students regardless of grade received the same questionnaire, and participation was voluntary and anonymous to encourage students to give honest answers without fear of repercussions from their teachers, who administered the physical data collection.

In order to understand the data collected by the questionnaires, it was analysed using a software package used in statistical analysis of data. In the findings that follow, the mean ($\bar{x}$) and standard deviation (SD) of the Likert-type scale responses is presented. To analyse distributional differences between the different school locations, independent samples t-test was used. The 5-point Likert-type scale of frequency intervals are accepted as equal, interpreted as always (1.00 - 1.80), often (1.81 - 2.60), sometimes (2.61 - 3.40), rarely (3.41 - 4.20) and never (4.21 - 5.00).

Results

This study set out to investigate the ways students use mobile devices as a learning tool and the effect school location has on this, the findings of which follow. Several items first addressed participants' demographic details and mobile device access/ability, to look for any potential digital-divide between urban/rural schools.

As previously mentioned, the participants were 155 8th-grade and 122 11th-grade students, made up of 199 females and 78 males (with this 7/3 gender ratio consistent in both rural and urban sub-groups). The types of mobile devices students reported owning/using (with the option to select multiple choices) were; 62.45% Android phone, 22.74% iPhone, 12.27% other smart phone, 10.47% tablet/iPad, 2.17% iPod, and 6.14% other devices. Only 6.14% of participants reported not owning a mobile device and 6.50% owning a mobile phone with no connectivity to the internet, meaning a significant majority of the sample owned and used mobile devices. Whilst 9.22% of students in rural schools did not own a mobile device, only 2.94% of students in urban schools were in the same situation.

Participants rated their ability to use technology on a scale interpreted using the Dreyfus model of skill acquisition (Dreyfus & Dreyfus, 1980) from 'novice' (1) to 'expert' (5) as 'proficient' ($\bar{x}$ = 3.49, SD = 0.79), with school-size/location provoking no significant differences (rural $\bar{x}$ 3.44, urban $\bar{x}$ 3.54).

Table 2: Time students spend using mobile device in school/class per day

	Rural		Urban		All	
	n	%	n	%	N	%
0 mins (none)	70	49.65	22	16.18	92	33.21
less than 30 mins	24	17.02	18	13.24	42	15.16
30 – 60 mins	13	9.22	23	16.91	36	13.00
1 – 2 hours	15	10.64	16	11.76	31	11.19
2 – 3 hours	12	8.51	21	15.44	33	11.91
3 – 4 hours	3	2.13	9	6.62	12	4.33
4 + hours	3	2.13	25	18.38	28	10.11

There were some clear differences in relation to urban/rural school location regarding how much time students spent using mobile devices in school or class. Whilst a third of the overall sample appeared to not use mobile devices at all in school or class, the school location variable revealed that 49.65% of students in rural schools were not using their devices compared to only 16.18% of those in urban schools. Remarkably, in urban schools a larger number of students (18.38%) reported spending over four hours a day using their device than not using them at all (16.18%), which is vastly different to in rural schools where the proportion of students never using devices was the equal to those that do. This limited use in rural schools is a likely consequence of the items in Table 3 regarding school and teacher policy.

Table 3: Bringing and using of mobile devices in school/class

	Rural		Urban		All		t-test	p
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD		
I bring a mobile device to school.	3.55	1.45	1.76	1.36	2.67	1.66	10.55	0.00
My school allows me to bring my mobile device(s) to school.	3.74	1.61	1.96	1.52	2.87	1.80	9.35	0.00
My teachers allow me to use my mobile device(s) in the classroom.	4.07	1.06	3.05	1.15	3.57	1.22	7.64	0.00

There were significant ($p < 0.01$) incremental differences in relation to urban/rural school location and students bringing mobile devices to school and using them in class. Using a 5-point scale from always (1) to never (5), students in the rural schools reported rarely bringing their devices ($\bar{x} = 3.55$, $SD = 1.45$) compared to students in urban schools who reported always bringing their devices to school ($\bar{x} = 1.76$, $SD = 1.36$), which correlates with and appears to explain the data in Table 2. Whilst students in rural schools claimed that they were rarely allowed to bring devices to school ($\bar{x} = 3.74$, $SD = 1.61$), they reported

that schools rarely/never allowed use in the classroom ($\bar{x} = 4.07$, $SD = 1.06$), and though students in urban schools claimed they were almost always allowed to bring their devices to school ($\bar{x} = 1.96$, $SD = 1.52$), they reported that teachers only sometimes allowed in class use ($\bar{x} = 3.05$, $SD = 1.15$). Perhaps unsurprisingly, students responded that they bring their devices to school more often than their school permits.

Table 4: How students use dictionary apps/online translation in school/class

	Rural		Urban		All		t-test	p
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD		
To check spelling	3.11	1.42	2.12	1.05	2.63	1.35	6.50	0.00
To check the meaning of words	2.96	1.36	2.00	0.95	2.50	1.27	6.80	0.00
To look at synonyms / antonyms	3.40	1.25	2.69	1.13	3.05	1.24	4.81	0.00
To check pronunciation	3.39	1.29	2.57	1.11	2.99	1.27	5.64	0.00
To look at a word used in context	3.51	1.29	2.67	1.15	3.10	1.29	5.68	0.00
To use photo to text translation	3.22	1.48	2.61	1.26	2.92	1.41	3.70	0.00

There were significant differences again between the rural and urban schools ($p < 0.01$) for all items regarding the specific ways students reported using dictionary applications (apps) or online translation to aid EFL learning in the classroom or general school setting. Students as a whole reported often checking the meaning of words, while sometimes looking at synonyms / antonyms, looking at words used in context, taking photos of English text and translating it (to Thai), checking spelling, checking pronunciation, and checking the meaning of words. When looked at in their sub-groups however there were significant differences between the rural and urban schools, with rural schools rarely using many of the functions compared to often in urban schools.

Table 5: Other ways students use mobile devices for EFL learning in school/class

	Rural		Urban		All		t-test	p
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD		
Check grammar	3.59	1.32	2.70	1.22	3.16	1.35	5.80	0.00
Find pictures of vocabulary	3.46	1.26	2.84	1.26	3.16	1.30	4.06	0.00
Record audio/video of the teacher	4.07	1.29	3.57	1.28	3.83	1.31	3.16	0.00
Find further information online	2.90	1.44	1.91	1.05	2.41	1.35	6.51	0.00
Listen to native-English audio materials	3.42	1.30	2.40	1.23	2.92	1.36	6.61	0.00
Watch native-English video materials	3.11	1.41	2.48	1.21	2.81	1.35	3.88	0.00
Upload/download work	3.39	1.33	3.03	1.25	3.21	1.30	2.29	0.02
Share information with classmates	2.99	1.52	2.13	1.12	2.57	1.40	5.35	0.00
Take photos of the board / class materials	3.46	1.30	2.26	1.15	2.87	1.37	8.05	0.00
Other	3.81	1.29	2.90	1.45	3.55	1.39	3.15	0.00

Once again, for all items regarding other educational ways students use mobile devices for EFL learning in school/class, the urban school students reported significantly more regular use of the functions than rural school students. The top two uses for both sub-groups were to find further information online (such as by using Google or Wikipedia) and to share information with their classmates. Both sub-groups similarly reported only sometimes uploading/downloading homework/school work, and rarely recording audio/video of the teacher.

Table 6: Overall EFL related use ranked

	$\bar{x}$	SD	Freq.
Find further information online	2.41	1.35	Often
Dictionary: Check the meaning of words	2.50	1.27	Often
Share information with classmates	2.57	1.40	Often
Dictionary: Check spelling	2.63	1.35	Sometimes
Watch native-English video materials	2.81	1.35	Sometimes
Take photos of the board / class materials	2.87	1.37	Sometimes
Listen to native-English audio materials	2.92	1.36	Sometimes
Dictionary: Use photo to text translation	2.92	1.41	Sometimes
Dictionary: Check pronunciation	2.99	1.27	Sometimes
Dictionary: Look at synonyms /antonyms	3.05	1.24	Sometimes
Dictionary: Look at a word used in context	3.10	1.29	Sometimes
Check grammar	3.16	1.35	Sometimes
Find pictures of vocabulary	3.16	1.30	Sometimes
Upload/download work	3.21	1.30	Sometimes
Other	3.55	1.39	Rarely
Record audio/video of the teacher	3.83	1.31	Rarely

Table 6 ranks all participants responses regarding the types of EFL mobile device use, from most often to least often. As individual sub-groups and as a whole, students reported finding further information online as the most frequent use, more than any of the six items in Table 4 regarding dictionary skills.

Table 7: Frequency of mobile device use for learning reasons or other reasons

	Rural		Urban		All		t-test	p
	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD		
I use my mobile device in school for learning/class related reasons	3.34	1.40	2.13	1.08	2.75	1.39	8.11	0.00
I use my mobile device during class for learning/class related reasons	3.84	1.23	2.88	1.11	3.37	1.27	6.72	0.00
I use my mobile device in school for other reasons	3.67	1.37	2.97	1.13	3.33	1.30	4.64	0.00
I use my mobile device during class for other reasons	3.94	1.25	3.55	1.17	3.75	1.23	2.65	0.01
I use my mobile device at school/in class for English language learning.	3.45	1.30	2.50	1.03	2.98	1.27	6.72	0.00

The final items investigated the frequency of mobile device use in the classroom and generally in school, and whether usage was for learning/class related reasons or for other reasons (such as messaging, social media). There were significant differences ($p < 0.01$) for all items between rural and urban schools, though this is likely due to aforementioned school policy and not students' choice. Students from both sub-groups reported using mobile devices in other school settings more often than during class, and for learning/class related reasons more often than for other reasons in both classroom and general school environments. Both sub-groups reported using mobile devices for English language learning more often than for other non-educational reasons.

Discussion

The purpose of this study was to investigate how students use mobile device to complement their EFL studies within the real-world educational contexts of urban and rural Thai high schools, and the findings of the study are presented according to the research questions.

In what specific ways are Thai EFL students using mobile devices as a learning tool in the classroom and school setting?

Despite urban/rural school location provoking significant differences, the specific ways the students use mobile devices to aid their EFL learning were similar among all schools. Students reported often finding further information online, using dictionary or translation applications/websites to check the meaning of words, and sharing information with classmates. There were also ways which students seemed to not be taking advantage of their devices to aid learning. It is hoped knowledge of these underutilized ways

encourages teachers to consider promoting the varied use of mobile devices to aid EFL learning. Numerous studies have found that technology can aid the learning of grammar (Kılıçkaya, 2013; Saeedi & Biri, 2016), but it is one of the least frequently used by students in this present study. Dictionary skills also feature low in the list, and this may be a result of Thai EFL students' traditional expectation that teachers provide them with second language (L2) knowledge such as vocabulary and grammar (McCarty et al., 2017). As previous research has highlighted the positive impact dictionaries/translation on mobile devices can have (Alhaisoni, 2016; Dwaik, 2015), it is recommended varied dictionary use on mobile devices is also promoted. Moreover, with class sizes of often 45 students in the Thai context, allowing mobile device usage in these ways optimises teachers' time - one of the most valuable and limited resources in the classroom - by supporting student practice and having students work independently on digital devices while they can provide instruction to small groups of students (EF EPI, 2018).

What effect, if any, does urban/rural location of schools have on the amount of use of, access to, and ways of using mobile devices in the Thai EFL setting?

The previous large technological margin observed by Malisuwan et al. (2016) of 13-19% between rural and urban areas is not consistent with what was observed in this study. The majority of students reported having access to mobile devices, and only 9.22% of rural and 2.94% of urban school students reported not owning a mobile device. As the majority of students reported owning mobile devices and claimed to be proficient in using them, it is recommended that given the unique affordances mobile devices provide when learning EFL (as highlighted in the literature review) schools should utilize the BYOD model and allow students to complement their learning using mobile devices (as recommended by West & Vosloo, 2013).

The significant differences observed in all items regarding the frequency of mobile device use between urban and rural school students appear to be attributed to one factor; rural schools rarely allowed students to bring devices to school whereas urban schools almost always allowed students to bring their devices. Consequently, there were significant differences between the time students spent using devices in school, with half of the rural school students not using their devices at all compared to only a sixth of those in urban schools. There seems to be a cultural difference between schools and teachers in urban and rural locations which perhaps stems from an outdated belief that an inequality of access or

digital divide still exists. Therefore, it is reasoned that any rural schools which have built policy on the assumption that their students do not have access to mobile devices due to a digital divide should reconsider.

In both urban/rural contexts, EFL teachers seem to be restricting the use of mobile devices in their classroom, with students reporting being allowed to use devices in class less often than being allowed to bring them to school. It seems that whilst the situation in rural schools is more extreme, teachers in all schools could benefit with some educating on the affordances of mobile devices in EFL learning. For students to make the most efficient use of mobile devices to aid their EFL learning, it is important they are provided scaffolding from teachers. Thus, if schools/ policymakers have policy which promotes the use of mobile devices in EFL learning, it is essential teachers are given adequate training and pedagogical knowledge of how to manage and utilise them in school (as suggested by Pheeraphan, 2013). If clear expectations and guidelines are laid out to students regarding how and when it is appropriate to utilise mobile devices, teachers (and students) may have a more positive experience and better attitude towards embracing MALL.

On an international level, mobile internet uptake is spreading rapidly not just in Thailand but across all of Asia in countries with similar EFL contexts (GSMA Intelligence, 2018). Indonesia, a country with lower GDP per capita than Thailand but similar population density and urban/rural populations (World Bank, 2018), is forecast to overtake the US during 2018 to become the world's third largest smartphone market (GSMA Intelligence, 2018). With a majority of English teachers in Asian EFL contexts who speak English a second language, increasing awareness of MALL and the ability for students and teachers to access authentic and fluent English materials using the mobile devices they increasingly own should be a priority, as it could have a huge impact on English proficiency (as suggested by Godwin-Jones, 2018).

Conclusion

There is growing evidence that mobile devices not only aid learning, but particularly language learning. This study was conducted in schools of varying sizes and locations and found that despite lower than average economic status of the population area (and in particular of the rural schools), there was no significant digital divide or differences in levels of access to mobile devices, meaning the BYOD model is possible. Whilst there were significant differences in relation to urban/rural school location regarding frequency of

educational uses learning EFL, it appears that in situations where students are allowed to use mobile devices they are using them in varied educational ways, though explicit instruction from teachers on how to be most effective using devices in uninstructed improvisational ways is recommended.

There are, however, some limitations to this study. This study was carried out in two Southern Thai provinces, it is recommended similar studies are conducted in other Asian EFL contexts (especially the more extreme urban and rural areas where access to mobile devices may be substantially different to the current study's research setting). The addition of qualitative interviews may have enriched the data, though it should be noted that Thais may not be as forthcoming in an interview session as in an anonymous questionnaire due to their passive and shy nature (Mann, 2012). Despite this, the benefits of mixed method research are well known (Creswell, Clark, Gutmann & Hanson, 2003) and it is recommended further research in this field use additional methods to gather data.

While the study highlighted consistent significant differences between the urban and rural sub-groups, these differences seem to be able to be attributed to one key factor; rural schools not allowing students to bring mobile devices to school, even though the majority of students possessed them. Subsequently, they are not being utilized by students in school and the classroom. It is recommended that future studies investigate the reasons why there are such policy differences, when it appears the BYOD model is possible in both urban and rural contexts.

Acknowledgements

This work was supported by the Thailand Higher Education Commission - TEH-AC Higher Education Research Promotion Fund.

References

- Alhaisoni, E. (2016). EFL teachers' and students' perceptions of dictionary use and preferences. *International Journal of Linguistics*, 8(6), 31-52.
- Alsulami, S. (2016). The effects of technology on learning English as a foreign language among female EFL students at Effatt College: an exploratory study. *Canadian Academy of Oriental and Occidental Culture*. 12(4), 1 -16.
- Beland, LP., & Murphy, R. (Summer 2015). In brief... Phone home: should mobiles be banned in schools? *CentrePiece*, 20(1), 10-11.

- Cell phone-free classroom good for students, teacher says (2017, July 22). *Thai PBS*. Retrieved on 21 May 2018 from <http://englishnews.thaipbs.or.th>.
- Creswell, J. W., Clark, P., V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. In A. Tashakkori and C. Teddlie (Eds.), *Handbook of Mixed Methods in Social and Behavioural Research* (pp. 209-240). Thousand Oaks, CA: Sage.
- Dreyfus, S. E., & Dreyfus, H. L. (1980). *A Five-Stage Model of the Mental Activities Involved in Directed Skill Acquisition*. Washington, DC: Storming Media.
- Dwaik, R. (2015). English digital as valuable blended learning tools for Palestinian college students. *English Language Teaching*, 8(11), 1-10.
- EF EPI. (2018). Education First English Proficiency Index, Ef.edu. Retrieved on 8 November 2018 from <http://www.ef.edu/epi/>
- Godwin-Jones, R. (2018). *Using Mobile Devices in the Language Classroom*: Part of the Cambridge Papers in ELT series. Cambridge: Cambridge University Press.
- GSMA Intelligence. (2018). *The Mobile Economy Asia Pacific 2018*. Retrieved on 10 November 2018 from <https://www.gsmainelligence.com/research/?file=28401018963d766ca37d014fa9cbffb1>
- Kantamara, P., Hallinger, P., & Jatiket, M. (2006). Scaling-up educational reform in Thailand: context, collaboration, networks, and change. *Planning & Changing*, 37(1), 5-23.
- Kılıçkaya, F. (2013). Computer-based grammar instruction in an EFL context: improving the effectiveness of teaching adverbial clauses. *Computer Assisted Language Learning*, 28(4), 325-340.
- Klopfer, E., Squire, K., & Jenkins, H. (2002). Environmental detectives: PDAs as a window into a virtual simulated world. *Proceedings. IEEE International Workshop on Wireless and Mobile Technologies in Education*, 95-98.
- Koanantakool, T. (2016). Digital Park for SMEs - Digital Thailand 2016, May 28, 2016 at QSNCC. Retrieved on 8 January 2019 from <https://docplayer.net/27668364-Digital-park-for-smes.html>
- Liu, M., Scordino, R., Renata, G. Navarrete, C., Yujung, K., & Lim, M. (2015). A look at research on mobile learning in K-12 education from 2007 to the present. *Journal of Research on technology in Education*, 46(4), 325-372.
- Lounkaew, K. (2013). Explaining urban-rural differences in educational achievement in

- Thailand: Evidence from PISA literacy data. *Economics of Education Review*, 37(C), 213-225.
- Malisuwan, S., Kaewphanuekrungsi, W., Milindavanij, D. (2016). Digital divide in Thailand: analysis and recommendations. *International Journal of Advanced Research in Engineering and Technology*, 7(1), 41-46.
- Mann, V. J. (2012). *Cross-Cultural Teaching: Experience Of American Teachers In Thai Higher Education*. Dissertation submitted to the graduate division of the University of Hawaii at Manoa, Doctor of Philosophy in Education, UMI Number: 3520654
- McCarty, S., Sato, T., & Obari, H. S. (2017). *Implementing mobile language learning technologies in Japan (Springer Briefs in Education)*. Singapore: Springer Singapore.
- McCoy, B. R. (2016). Digital distractions in the classroom phase II: Student classroom use of digital devices for non-class related purposes. *Faculty Publications, College of Journalism & Mass Communications. Paper 90*, 1-43.
- Thai Ministry of Education. (2008). *Thailand Basic Education Core Curriculum*. Retrieved on 09 March 2018 from <http://www.act.ac.th/document/1741.pdf>.
- Nalliveettil, G., & Alenazi, T. (2016). The impact of mobile phones on English language learning: perceptions of EFL undergraduates. *Journal of Language Teaching and Research*, 7(2), 264-272.
- Nankani, S., & Ojalvo, H. E. (2010). Going mobile: Debating and using cell phones in school. *The New York Times*. Retrieved on 08 January 2019 from <https://learning.blogs.nytimes.com/2010/04/19/going-mobile-debating-and-using-cellphones-in-school>
- National Institute of Educational Testing Service. (2018). Niets.or.th. Retrieved on 09 November 2018 from <http://www.niets.or.th/>.
- Office of the Basic Education Commission. (2017). *Management Information System: Secondary Education Service Area 16*. Retrieved on 05 March 2018 from http://data.bopp-obec.info/emis/index_area.php?Area_CODE=101716.
- Official Statistics Registration System (2017). Retrieved on 19 March 2018 from http://stat.dopa.go.th/stat/statnew/upstat_age.php.
- Pahomov, L. (2015). In pursuit of a cell phone policy. *Teaching with Mobile Tech*, 72(8) (online manuscript – no page numbers available).
- Pheeraphan, N. (2013). Enhancement of the 21st Century Skills for Thai higher education by integration of ICT in classroom. *Procedia - Social and Behavioral Sciences*, 103, 112

- (Special Issue – 26 November) 365-373.
- Phillips, B. J., Grosch, M., & Laosinchai, P. (2014). Mobile media usage by undergraduates and implications for m-learning instructional design. *International Journal of Mobile Learning and Organisation*, 8(1), 1-15.
- Saeedi, Z., & Biri, A. (2016). The application of technology in teaching grammar to EFL learners. The role of animated sitcoms. *Teaching English with Technology*, 16(2), 18-39.
- Selwyn, N. (2010). Looking beyond learning: notes towards the critical study of educational technology. *Journal of Computer Assisted Learning*, 26(1).
- Sittirak, N. (2016). Grammar-Translation Method in an EFL class in Thailand: A Glance at an English song's lyrics. *Journal of Education Thaksin University*, 15(2), 30-47.
- Squire, K., & Dikkers, S. (2012). Amplifications of learning: Use of mobile media devices among youth. *Convergence: The International Journal of Research into New Media Technologies*, 18(4), 445-464.
- Srinuan, C., Srinuan, P., & Bohlin, E. (2012). An analysis of mobile Internet access in Thailand: implications for bridging the digital divide. *Telematics and Informatics*, 29(3), 254-262.
- Stockwell, G. (2015). *Mobile Learning for Language Learning - Trends, Issues and Way Forward*. Presentation at Digital Education Show, Asia 2015, Kuala Lumpur Convention Centre.
- Stockwell, G., & Hubbard, P. (2013). *Some Emerging Principles for Mobile-assisted Language Learning*. Monterey, CA: The International Research Foundation for English Language Education. Retrieved on 08 January 2019 from https://www.tirfonline.org/wp-content/uploads/2013/11/TIRF_MALL_Papers_StockwellHubbard.pdf.
- Thomas, K., & Muñoz, M. A. (2016). Hold the phone! High school students' perceptions of mobile phone integration in the classroom. *American Secondary Education*, 44(3), 19-37.
- Thomson, A. (2009). Lecturers see the benefits of mobiles in classrooms. *The Times Educational Supplement*, 4832. Retrieved on 08 January 2019 from <https://www.tes.com/news/tes-archive/tes-publication/lecturers-see-benefits-mobiles-classrooms>.
- Valarmathi. K. E. (2011). Mobile assisted language learning. *Journal of Technology for*

ELT, 1(2).

West, M., & Vosloo, S. (2013). *Policy Guidelines for Mobile Learning*. Paris: UNESCO.

Retrieved on 08 January 2019 from
<http://unesdoc.unesco.org/images/0021/002196/219641E.pdf>.

World Bank. (2018). Urban population (% of total). Retrieved on 14 November 2018 from

<https://data.worldbank.org/indicator/sp.urb.totl.in.zs>.

Key Multi-Word Expressions in Thai Learner English Argumentative Essays

Raksangob Wijitsopon

Department of English, Faculty of Arts, Chulalongkorn University

Bioprofile

Raksangob Wijitsopon is an associate professor at Department of English, Faculty of Arts, Chulalongkorn University, Thailand. She obtained her MA and PhD from Lancaster University, UK. Her research interests lie in corpus linguistics, stylistics and discourse analysis. She is also interested in combining concepts and methodology in these fields for pedagogical applications. She may be reached at raksangob.w@chula.ac.th or rwijitsopon@gmail.com.

Abstract

This paper investigates multi-word expressions that occur significantly in a corpus of Thai undergraduates' English argumentative essays, when compared with a corpus of native speaker learners'. Unlike most previous research on multi-word expressions in native and non-native learner writing, the present study applies the concept of *keyness* in corpus linguistics to identify phrasal units that mark Thai learner English argumentative essays off from their native speaker counterparts'. Overused expressions in the Thai learner corpus were extracted and they were put into different groups according to Halliday's concept of language metafunctions: ideational, interpersonal and textual. These different functional groups were analyzed in the light of distributional and lexicogrammatical patterns. It is found that most textual and some ideational multi-word expressions reflect the genre of academic writing in the Thai learner essays while the interpersonal and other ideational items exhibit features associated with spoken discourse. Moreover, concordance

Address for Correspondence

Department of English
Faculty of Arts
Chulalongkorn University
Henry Dunant Rd.
Patumwan
Bangkok 10330
Thailand

lines for a representative multi-word unit from each group were also examined to investigate the collocational patterns associated with each expression. These patterns reveal the ways in which Thai learner English writing tends to feature

references to a large quantity and sources of information as well as a forceful tone in their argumentation. Findings from the study provide pedagogical implications for ways to improve EFL writing lessons.

Keywords: Multi-word expressions, Keynes, EFL writing, Thai learners

Introduction

Over the past decades, continuous word sequences or multi-word expressions (henceforth MWEs) have received a great deal of attention in applied linguistics research, especially in discourse analysis and English language teaching and learning. MWEs are manifested in different forms, ranging from collocations, phrasal verbs, and compound nouns to syntactic phraseological constructions (Paquot and Granger, 2012). In this study, recurrent strings of uninterrupted word forms, derived automatically through computer software, are the kind of MWEs under investigation. This form of MWE is often referred to in different terms, including *n*-grams (where the *n* stands for the number of words that make up an MWE, e.g. four-grams), clusters (Mahlberg, 2013), formulaic sequences (Schmitt, 2004; Wray, 2008), recurrent word-combinations (Ädel & Erman, 2012) and lexical bundles (Biber et al., 1999). Nevertheless, it is worth noting that in some studies, e.g. Mahlberg (2013), the terms *lexical bundles* and *clusters* are not treated as interchangeable because the former are required to be phrases of high frequency that occur across a number of texts whereas these criteria do not necessarily apply to the latter (See detailed discussion of the differences in Mahlberg 2013).

MWEs have been demonstrated to play a central role in the structure and meanings of language use in communication. They are considered “text-type discriminators” (Stubbs & Barth, 2003), e.g. between conversation and academic prose (Conrad & Biber, 2004) and among student essays, academic prose and fiction (Ebeling, 2011). In the field of teaching and learning English as a foreign language (EFL), MWEs are important to the quality of learner output; the knowledge and use of them enhance naturalness in learner language use and reduce the chance of communication difficulty (Allen, 2011; Millar, 2009). MWEs, especially “lexical bundles”, have been studied particularly in studies of academic writing, ranging from those focusing on comparison between novice and expert writing (e.g. Cortes, 2004), to those on various disciplinary discourses (e.g. Hyland, 2008a; Hyland 2008b; Jalali 2017). Similarities and differences between native (NS) and non-native speaker (NNS)

learner writing have also consistently been illuminated through a number of studies focusing on lexical bundles, e.g. Ädel and Erman (2012), Allen (2011), Bychkovska and Lee (2017), Chen and Baker (2010), Huang (2015), and Ping (2009). In these studies, lexical bundles were extracted on the basis of specified frequency and dispersion criteria before the number of derived lexical bundle types and occurrences in the NS and NNS corpora were discussed in comparative terms. Chen and Baker (2010), for instance, have found that L2 Chinese EFL learners use fewer bundle types and tokens than their NS counterparts whereas the opposite tendency has been remarked on in Bychkovska and Lee (2017), Hyland (2008a; 2008b), Pan et al. (2016), Ping (2009) and Wei and Lei (2011), which show that NNS writing tends to contain more lexical bundles than its NS counterpart.

While it has usually been shown from such previous research that NS and NNS writing share very few MWEs, the question of NNS's distinctive uses of MWEs in their essays has not been dealt with much. Instead of focusing on number and types of MWEs in both NS and NNS written output, the present study approaches MWEs in NNS writing, specifically in Thai undergraduates' English argumentative essays, from a somewhat different perspective; it focuses on distinctive MWEs that characterize L1 Thai EFL learners' argumentative essays. This is operationalized through the concept of *keyness* in corpus linguistics (Scott & Tribble, 2006). Keyness has been widely applied in a number of corpus-based studies of text and discourse. Key linguistic items are those found to be statistically significant in a text or corpus under study, as a result of its comparison with a reference corpus that is considered to be representative of a norm contextually related to the main data. Those that turn up on a list of key items can be interpreted as characterizing and differentiating the data from a given norm and will usually be selected for further analysis of their significance to the data. Because key items are not identified prior to the analysis but emerge through a comparison via corpus software, keyness often serves as the first step in an inductive corpus-driven study of texts and discourse. Some key items may correspond to the analyst's intuition while many may not have been conceived of even through the analyst's close attention to the data. This virtue of keyness in revealing hard-to-detect items and textual patterns probably explains why it has been widely adopted in corpus-based research. Key words, in particular, have been explored in a wide range of studies, including those on literary works (e.g. Mastropierro & Mahlberg, 2017; Siepman, 2015), pharmaceutical texts (Gabrowski, 2015), telecommunication engineering texts (Rizzo & Perez, 2015) and newspaper articles (e.g. Lesley & Walker, 2012). With the

development of corpus annotation software, keyness has been applied to analyses of grammatical categories, e.g. Culpeper (2009), and semantic domains, e.g. Ali (2007) and Lin (2017).

The present study applies keyness to an analysis of multi-word expressions, a linguistic feature that has rarely been approached through keyness, with the exception of Mahlberg (2013), which investigates key clusters in Charles Dickens' fiction. At the same time, to the best of my knowledge, MWEs in learner writing have not been approached from the keyness perspective, and particularly not with Thai learner English writing. It should be noted here that the term *multi-word expressions* is used in the present study, following the term employed in Wmatrix (Rayson, 2008), the software applied to extract key MWEs in the present study. A term that is sometimes used interchangeably here is *clusters*.

The research questions the present study seeks to account for are:

1. What multi-word expressions tend to characterize Thai undergraduates' English argumentative essays when compared with their native speaker counterparts'?
2. What are the patterns, meanings and functions of those key multi-word expressions in Thai undergraduates' English argumentative essays?

The first question addresses the quantitative dimension of MWEs in the main data, with an aim to identify those that quantitatively differentiate Thai EFL learner writing from that of native speaker learners. The second question aims to explain why the MWEs identified in Question 1 are key, focusing on their functional contributions to Thai students' essays. To answer the latter question, the study combines corpus linguistic and text linguistic perspectives, looking at distributional and lexicogrammatical patterns of key MWEs and their relations to textual meanings, style, rhetorics and organization of the student essays.

To these ends, I first describe the methodology that leads to the discovery of key MWEs in Thai learner essays and outline analytical frameworks to be applied to a qualitative analysis of key MWEs. Then, key MWEs are reported, analyzed and discussed before concluding remarks are given.

Methodology

Data

As keyness involves a comparison of main data and at least one reference corpus,

two main corpora were used in this study: (1) a corpus of Thai undergraduates' English argumentative essays, as the main data (henceforth THAI) and (2) a corpus of native speaker learner English argumentative essays, as a reference corpus (henceforth NATIVE). The former contains Thai undergraduates' argumentative essays collected from five universities in Thailand, each of which contributed its top 20 best scored essays students wrote on their final exams in their first English composition course. The size of the corpus is 64,617 tokens, with 100 argumentative essays. A number of factors have been taken into account when compiling THAI for the purpose of the study. First, final exam essays were used to make up the corpus because they can be seen as concrete end products after undergraduate students have learnt and practiced essay writing over a four-month semester. Only essays within the top 20 best-scored ranking were recruited in order to minimize the chance in which grammatical errors, misspellings and inappropriate word choices would occur so often that they can turn up as key when compared with NATIVE.

As MWEs are often viewed as an index of EFL learner proficiency, it is a particular interest of this study to examine in what ways MWEs used in top-scored essay samples by Thai EFL students differentiate them from their native speaker counterparts. Nevertheless, although being ranked among the top 20 of the class in each university, the essays were collected from the first undergraduate course in English composition. It can be said that the essays put in THAI were written by Thai students trained to achieve the level of B2 in the Common European Framework of Reference for Languages (CEFR), based on the CEFR written production: [Students] [c]an write clear, detailed texts on a variety of subjects related to his/her field of interest, synthesizing and evaluating information and arguments from a number of sources. The rubrics adopted by the teachers in their grading system are: organization, contents, cohesion, grammar and word choices. The topics of the essays are varied, including animal rights, factory farming, single-sex schools, forms of assessment, technology, social media, information overload and voyeurism. Except for the subject on technology, the essay topics in THAI are different from those in NATIVE and this is a factor to be borne in mind when analyzing and interpreting the findings. As Granger and Paquot (2010) noted, learner corpus research usually involves a difference in essay topics and thereby it is an important factor to be spelled out and considered in studies using learner corpora. Finally, compared with previous studies, the size of THAI can be seen as very small for a study of MWEs. However, as Paquot and Granger (2012, pp. 132) indicate, "[...] small corpora can be of considerable value", as illustrated by Wang and Shaw (2008),

which examined collocations in small corpora of 20,000 words with controlled topics. As for THAI, its small size of approximately 60,000 tokens, may be compensated for by the fact that it holds data from students with a similar proficiency level, a quality that is generally lacking in most learner corpora, which tend to contain data from differing proficiency levels in exchange for maximizing corpus size (Gablasova, Brezina & McEnery, 2017).

The reference corpus, NATIVE, contains part of the Louvain Corpus of Native English Essays, generally known as LOCNESS. Only the essays written by British and American university students were used as a reference corpus, excluding the A-level components as many are paragraphs or extended paragraphs. Within the British and American university students' essay components, only those on social issues were included, including education in France, constitution, integrated Europe, euthanasia, death penalty, nuclear power and US school integration; the literary criticism essays were removed from the corpus since the data from Thai students do not contain argumentative writing on literary works. This results in a reference corpus of 206,666 tokens.

Key MWEs extraction

The two corpora were then compared via Wmatrix, a software tool for corpus analysis and comparison that extends the keywords method to key grammatical categories, key semantic domains and key multi-word expressions (Rayson, 2008). Wmatrix can yield MWEs from two to five words in length. The length, however, is not determined by the user; the software automatically tags data according to the semantic tagger. As a result, MWEs derived from Wmatrix are often complete units and formulaic, e.g. *in my opinion* or *kick the bucket*, unlike an extraction of lexical bundles, which requires the researcher to set the length of the bundles to be studied and hence may result in incomplete units, e.g. *of the*, *is considered to* or *in this essay i*. This also means that a list of key MWEs in this study will contain clusters of different lengths, ranging from two to five words, whose individual frequencies are significantly higher than expected from the reference corpus. The statistical measure used by default on Wmatrix to extract keyness is Log-Likelihood (LL). In this study, key MWEs are those set to occur at least 10 times in THAI, with the LL score of at least 6.63, equaling the p (probability) value of ≤ 0.01 . With this threshold, a total of 23 key MWEs turned up on the list.

After the list was produced, every single MWE on the list was checked manually as to in how many texts each of them appears because we cannot set minimal dispersion on

Wmatrix and therefore it is possible that some content-driven MWEs that occur in only a few texts can turn up on the list. The criteria set for this distribution scrutiny is a minimum of 10 texts for a key MWE to appear in. With this setting, some topic-driven MWEs still occur on the list but I decided not to raise the minimal dispersion level since it would reduce the number of key MWEs. More importantly, although frequent occurrences of content-driven MWEs may be predictable and hence do not seem very illuminating on Thai learner English writing, they can in fact throw an important light on Thai students' writing style when considered in relation to other key MWEs. This will be demonstrated and discussed in the Results and Discussion section.

Analytical frameworks

To explain the keyness of MWEs in THAI systematically, I adopt Halliday and Mathiessen's (2004) concept of language metafunctions, which states that the language we use in our communication performs three functions as follows:

1. Ideational function: Language serves for the expression of content.
2. Interpersonal function: The expression of one's comments, attitudes, viewpoints and evaluations on states of affairs, as well as that of the relationship that one sets up between himself and the listener/ reader.
3. Textual function: This function is concerned with the creation and organization of text. It is instrumental to the above two functions.

From this perspective, key MWEs occur significantly in Thai undergraduate writing because they serve to perform these functions. It must be noted, however, that categorizing key MWEs into separate groups does not mean that each MWE performs only one of the above functions. As Hasan (2009, pp. 9) remarked, these three metafunctions have equal status and operate simultaneously in every utterance. The fact that key MWEs were put in discreet categories, as will be seen below, is more related to their apparently major contributions and to operationalization of the analytical frameworks than an intention to treat them completely separately. Bearing this in mind, the relationship among MWEs in different categories was also considered in the analysis of the key MWEs in this study.

It should also be noted that some analytical frameworks have been developed specifically for analysis of MWEs, such as Biber (2006), Biber et al. (2004), Hyland (2008a) and Moon (1998) but they were not applied in this study for the following reasons. Biber's (2006) and Biber et al.'s (2004) taxonomies were applied to analyses of data from corpora that contain texts of various registers, both spoken and written, while the present

study is specifically concerned with learner argumentative essay writing. Hyland's (2008a; 2008b) model, on the other hand, has been developed for an analysis of research writing, comprising research articles, theses and dissertations. Argumentative essays written by undergraduate students are far from being close to the canonical research writing genres studied by Hyland (2008a; 2008b). Moon's (1998) framework, which has been applied to analysis of student essays in Ebeling (2011), was modelled upon Halliday's metafunctional categories but excludes the textual function. This would not be useful for the present study, since the creation and organization of text is essential to an explanation of learner use of key MWEs in their essay writing. As will be seen in the next section, quite a few key MWEs in THAI mainly fulfill the textual function.

Halliday's concept of metafunctions, though not specifically addressing MWEs, captures the essence of language use and has been widely applied in applied linguistics research, particularly in discourse analysis. In fact, Biber's (2006) and Biber et al.'s (2004) functional taxonomies of lexical bundles can be seen as closely related to the three metafunctions: the *Referential* category can be associated with the ideational one, the *Stance* category with the interpersonal function and the *Discourse organizer* group with the textual function. For these reasons, Halliday's metafunction concept was adopted to answer the second research question on the qualitative dimension of key MWEs in THAI.

After categorizing key MWEs in THAI into functional groups, the items in each group were examined in terms of their general distribution patterns across text types in the general corpus "A Corpus of Contemporary American English" (COCA). This is because occurrences of MWEs have been found to be associated with text types (Biber et al., 1999; Stubbs & Barth, 2003; Conrad & Biber, 2004). An examination of the general distributional profile of key MWEs in THAI by consulting a general corpus like COCA, as will be seen below, can shed light on the relationship between patterns of language use in learner essays and those in authentic communication.

In addition, concepts from corpus linguistics were also applied to an examination of some key MWEs in detail, particularly in terms of their lexicogrammatical and textual patterns. These concepts are:

1. Collocation: Following Sinclair (2004), the concept *collocation* applied in the present study refers to the occurrence of words that occur within a short space of the MWE. This concept focuses on the aspect of adjacency, i.e. one word occurring near another in a given context, rather than the statistical aspect of collocations

(Hoey, 1991) since collocates of a key MWE in this study are identified through a concordance analysis, not through an automatic extraction via software.

2. Colligation refers to a pattern of co-occurrence between a node word/ phrase and grammatical categories (Sinclair, 2004). For example, based on the fact that over 90% of the phrase *naked eye* in a corpus co-occurs with *with*, *to*, *by* and *from*, the word class *preposition* can thus be labelled as a colligation of *naked eye* (Sinclair, 2004).
3. Semantic preference refers to a pattern of co-occurrence between a node word/ phrase and lexical items in a particular semantic field (Sinclair, 2004). For example, the phrase *naked eye* was found to often co-occur with words related to seeing, e.g. *detect*, *spot*, *apparent* and *evident*. The phrase *naked eye* can thus be described as having a semantic preference for *visibility* (Sinclair, 2004).
4. Textual colligation refers to the textual position which a node word/ phrase frequently occupies (Hoey, 2005). For example, the MWE *as a consequence* has a strong association with the initial position in a sentence or clause.

Results and discussion

This section is divided into two major parts: (1) report and discussion of the overall results and (2) analyses of three major key MWEs.

Overall results

With the above-mentioned minimum frequency and dispersion threshold, a total of 16 key MWEs were derived, shown in Table 1 below. Of the 16 key MWEs, 11 are two-word clusters. This is more or less due to the fact that Wmatrix relies on the semantic tagger in identifying multi-word expressions. Hence, two-word meaningful units, such as *according to* and *have to*, turn up on the list. With different software, which does not incorporate a semantic tagger but features the length of clusters as a major extraction criterion, two-word MWEs do not generally receive attention in frequency-based studies on MWEs because they are very common, “rarely form full structural units” and hence often “have little impact as text-type discriminators” (Ebeling, 2011, pp. 55). Examples of bigrams generated through the frequency-based approach that illustrate this include *in the*, *to a* or *the paper*. However, as can be seen from the list, the keyness approach via Wmatrix can bring certain two-word MWEs to our attention for further investigation because they are not just frequent MWEs but statistically significant ones, which are in full structural and

meaningful units and “discriminate” THAI from NATIVE. In this case, the Wmatrix-based keyness approach throws light on MWEs whose length is generally ignored via a different approach.

Table 1: Key multi-word expressions in THAI when compared with NATIVE

No.	Key Multi-word Expression	Frequency in THAI	Per cent in THAI	Frequency in NATIVE	Per cent in NATIVE	Log-Likelihood Value
1.	according to	110	0.18	85	0.04	92.99
2.	a lot	85	0.14	54	0.03	86.11
3.	have to	131	0.21	136	0.07	77.96
4.	continuous assessment	24	0.04	0	0.00	68.35
5.	too much	44	0.07	17	0.01	62.49
6.	health problems	24	0.04	2	0.00	55.35
7.	to sum up	15	0.02	0	0.00	42.72
8.	such as	97	0.16	134	0.07	35.79
9.	in addition	23	0.04	8	0.00	34.51
10.	human beings	24	0.04	15	0.01	24.65
11.	in order to	54	0.09	77	0.04	18.66
12.	for example	61	0.10	105	0.05	13.25
13.	at all	16	0.03	17	0.01	9.22
14.	first of all	13	0.02	12	0.01	9.02
15.	in my opinion	12	0.02	12	0.01	7.52
16.	more and more	14	0.02	16	0.01	7.23

All these key MWEs are divided into three metafunctional groups as explained above. These are discussed in turn below.

(1) *Ideational key MWEs*, which include five MWEs that express contents, are: *a lot*, *continuous assessment*, *health problems*, *human beings* and *more and more*. A look at the occurrences of these MWEs reveals that the keyness of *continuous assessment*, *health problems* and *human beings* is attributed to the topics of the essays in THAI as they all occur in the essays on forms of assessment, animal rights and factory farming. The MWEs *a lot*, which was found to be mostly used as part of *a lot of* in THAI, and *more and more* are considered ideational MWEs because they are used to introduce the idea about the number of things related to the writer’s discussion. These MWEs would be seen as belonging to the referential expression group in Biber’s (2006) framework, specifically in the sub-category *Quantity specification*.

A number of observations arise from these two latter MWEs. First, the fact that *a*

lot and *more and more*, turn up as key in the comparison between THAI and NATIVE suggests that Thai undergraduates tend to refer to quantity or a high degree of something in their essays to a significant extent. Such expressions are also noted in previous studies on MWEs, especially those on Chinese learners'. Bychkovska and Lee (2017) have found frequent uses of *a lot of* and *more and more* while Chen and Baker (2010) point to the MWE *all over the world*. At the same time, Wijitsopon (2017) has found that the quantifiers *many* and *every* are key words in Thai students' English essays. It may therefore be observed that references to a large number of something are a textual strategy in NNS writing, especially in Thai undergraduates'. More details on this will be illustrated through a further concordance analysis of *a lot of* in the following section.

Furthermore, an examination of these five MWEs' general distribution patterns across different text types in COCA reveals a clash between topic domains and students' writing style. While *continuous assessment*, *human beings* and *health problems*, which are related to the essay topics given to the students, reflect topics of academic discussion, the other two MWEs point to a conversational style of communication. This is reflected through the frequencies and distribution patterns of these MWEs in different text types as found in COCA presented in Table 2 below.

Table 2: Distribution patterns of ideational MWEs in COCA

	SPOKEN	FICTION	MAGAZINE	NEWSPAPER	ACADEMIC
a lot	1,256.83	235.33	332.26	444.44	66.3
more and more	38.91	21.23	29.29	23.15	19.67
continuous assessment	0.01	0	0	0	0.09
human beings	15.29	9.21	16.28	8.32	32.91
health problems	3.73	0.46	8.25	6.2	11

* The highlighted columns show the highest frequency of each MWE.

As Conrad and Biber (2004) have demonstrated, academic and conversational discourse are greatly different, reflected through frequencies and types of lexical bundles found in each register. The fact that these MWEs occur significantly in Thai students' essays points to the tendency in which Thai students discuss academic issues in a conversational style, when they refer to quantity or a degree of something in their essays.

This can be seen as a clash in text types, topics and writing styles in Thai undergraduates' writing, which may stem from various factors, e.g. lack of knowledge in registers or that of linguistic resources. This tendency will be seen more clearly when key interpersonal MWEs are also taken into consideration.

(2) *Interpersonal MWEs* include the clusters that express the writer's evaluations and viewpoints on states of affairs under discussion, namely *have to*, *at all*, *in my opinion* and *too much*. Obviously, the meanings and functions of these phrases depend heavily on context but basically they are modal expressions. Upon examining the occurrences of these MWEs in THAI, it is found that they tend to be used in an evaluative manner or as part of the students' evaluation of situations. The MWE *have to* often signals the writers' interpretations of the propositions under discussion that they are necessary, obligatory or certain while *in my opinion* explicitly indicates the writers' assertions. The MWE *too much*, denoting a large quantity or a high degree in the same way as *a lot* and *more and more*, can arguably be treated as another ideational MWE like them. However, it is put in the interpersonal group because in the data it is often used to articulate the student writer's personal evaluation of a state of affairs as being excessive. As for *at all*, it shows the writers' emphases on the discussed propositions. These are illustrated in the statements from THAI below.

- We have to accept the truth that both genders, male and female, have influences on one another.

- Some of my friends even have to skip the class to do their homework and read books. That's very ridiculous but they have to because they don't have any time left. They already had cut their sleep time.

- I argue that many people spend too much time with computer and that can destroy work and study.

- It's obvious that homework in our faculty is way too much.

- But the pile of homework is what stops them from doing so and it's not good at all for their mental health.

- [...] I heard stories from my family that their company hired a new employee who had done very well in university but that person cannot do anything in a group and cannot cope with an office society at all and I strongly suggest that this is the result of judging people only their test scores.

- Therefore, in my opinion, electronic tablets shouldn't be allowed during class time.

These key interpersonal MWEs can be seen as related to one another in that they contribute to relatively strong emphasis or intensification in the context of students' discussion. The fact that these clusters are key in THAI, therefore, reflects Thai students' tendency to make their arguments in a relatively forceful emphatic way. When we consider the MWEs in this group in tandem with those in the ideational category shown above, the keyness of these two groups of MWEs suggests that, when compared with NATIVE, THAI features references to a large number, intensification and strong assertion. This corresponds to several previous studies that look at MWEs in NNS writing, e.g. Bychkovska and Lee (2017), Chen and Baker (2010) and De Cock (2004), all of which argue that MWEs found in their NNS learner corpora point to a tendency in which the students write in a forceful and overstating tone. For Thai students, this writing style might be explained in two ways. First, it may be an influence of their L1. Thai equivalents for *a lot*, *have to* and *at all*, i.e. มาก /maak2/, ต้อง /toon2/ and เลย /loej0/, respectively, are ranked among the top 75 most frequent words in Thai, according to the Thai National Corpus. As for *more and more* and *too much*, their equivalents contain the word มาก /maak2/ in Thai. These in turn may indicate that Thai discourse is largely characterized by these words and can thereby influence Thai students' English writing. Another possible reason is that references to large quantities, intensification and strong assertions are opted for by Thai learners to strengthen their arguments.

Furthermore, upon consulting COCA with regards to general distribution patterns in uses of these four key interpersonal MWEs, it is found that they are generally used in conversation, as shown in Table 3 below. Again, this points to a tendency in which Thai students express their stances in a conversational tone in their argumentative essays on academic issues, which has also been observed from the ideational MWEs discussed above.

Table 3: Distribution patterns of interpersonal MWEs in COCA

	SPOKEN	FICTION	MAGAZINE	NEWSPAPER	ACADEMIC
have to	1,023.62	523.8	414.89	443.95	157.08
too much	84.03	109.69	78.11	69.15	29.6
at all	204.98	193.94	104.55	81.68	91.46
in my opinion	13.12	2.61	3.48	5.04	3.01

* The highlighted columns show the highest frequency of each MWE.

(3) *Textual MWEs* include those that serve to create the flow in the essays and combine

different ideas and propositions in texts, namely: *according to*, *to sum up*, *such as*, *in addition*, *in order to*, *for example* and *first of all*. It is noteworthy that of all 16 key MWEs, this group contains the most members (7 out of 16 items). The density of these textual markers can be seen as a reflection of influences from teaching and assessment, given that Thai students are generally taught and assessed on the use of transitional expressions to cohesively connect different pieces of information in their essays.

Upon checking general distribution patterns of these textual MWEs in COCA, it was found that almost all of them are particularly frequent in academic prose, as shown in Table 4 below.

Table 4: Frequencies and distribution patterns of textual MWEs in COCA

	SPOKEN	FICTION	MAGAZINE	NEWSPAPER	ACADEMIC
according to	106.85	45.65	285.85	385.83	303.83
to sum up	0.81	0.38	0.69	0.56	1.24
such as	46.45	32.3	410.34	324.29	668.75
in addition	31.43	13.24	84.74	77.54	257.9
in order to	75.68	36.98	74.88	41.44	199
for example	123.52	19.82	197.56	120.62	461.68
first of all	117.13	5.14	5.85	5.36	6.46

* The highlighted columns show the highest frequency of each MWE.

Given that nearly all of the key textual MWEs are common in academic prose, they can be presumed to be common in both native and non-native learner writing and hence should not be remarkably frequent in either of the learner corpora here. However, as can be seen, these highly academic MWEs turn out to be significantly used in THAI. The keyness of this group of MWEs can therefore be attributed, apart from influences from teaching and assessment practices, to the fact that native speaker learners do not tend to use these clusters as often as Thai learners. In fact, some of the MWEs in this group occur very rarely or even not at all in NATIVE, e.g. *to sum up* (0 token) and *in addition* (8 tokens) (see Table 1). Such rarity is perhaps related to the fact that native speaker learners used a variety of expressions to carry out a particular textual function, whereas Thai students repeatedly use the same MWEs. For instance, in the case of *according to*, the most key MWE in THAI, native speaker learners seem to have different ways to refer to sources of information, instead of repeatedly adhering to *according to*, as illustrated in (a) below. In (b) the word *another* and paragraphing are used to introduce a new idea, rather than an explicit transitional MWE like *in addition*. Likewise, in (c), which is a concluding paragraph in a native speaker learner essay, no ‘popular’ concluding MWEs, e.g. *to sum up* or *in*

conclusion, are used.

(a) *Watching executions on television will be both well-received and rejected by those who choose to watch these events. Those who would view this specific execution and others in the future are not the only ones who have opinions about this idea. One point is made by pat Clark, director of Death Penalty Focus, a California anti-death penalty group. She insisted that if executions are televised*

(b) *[...] Computers have also been blamed for a fall in education standards among primary school children; [...] the vast majority of primary school children are unable to do simple arithmetic in their minds and rely on another computer, the calculator, to help them.*

Another moral dilemma that computers have created is their role in the workplace. There are many people who fear that computers will eventually replace man in the workplace. [...]

(c) *Taking all of the main claims and reasoning presented by the advocates into consideration, one can see a great deal of potential in their case. What they desire most is for schools to teach evolution and creation simultaneously, and the most probable method is through the school board of education of different schools. With this excellent reasoning they use to support their incredible claims, one can visualize how extremely important this issue is, especially considering how significant an education is to a student. [...]*

The overuse of MWEs in this group can therefore be seen as being tied as well to the particularly repeated uses of these textual MWEs that have been taught to Thai learners. The fact that they are fixed formulaic expressions and have relatively clear textual functions can facilitate NNS learner writing to the extent that the learners tend to use them again and again in their essays.

The overall examination of key MWEs in the three categories above has shown that Thai undergraduates' English argumentative essays tend to be characterized by repeated references to a large quantity or high degree of something, a relatively emphatic tone and mixed contrastive styles: highly spoken and at the same time highly academic. Specifically, the essays are 'conversational' in the ways the writers make claims about quantity/ degree (ideational) and express their opinions about certain propositions (interpersonal), while being 'academic' in the textual organization (textual) and topics of the essays (ideational). The significance of these findings and their pedagogical implications will be discussed in the Conclusion section.

Lexicogrammatical patterns of some key MWEs in THAI

While the above section discusses an overall tendency in which all the key MWEs characterize Thai students' English argumentative essays, this section aims to put the spotlight on some major key MWEs used by Thai learners to examine their patterns of usage in the essays. For this purpose, only three key MWEs were selected to be investigated: *a lot*, *have to* and *according to*, each of which is the most key in its category. The corpus linguistic focus on lexicogrammatical patterns of lexical items will be linked to text linguistic interests in text organisation, communicative context and rhetorical strategies.

a lot

Of 85 cases of *a lot* in THAI, 73 (85.88%) are used as part of the quantifier *a lot of* while 11 are used as adverbials (12.94%) and only one as a pronoun (1.18%). The concordance lines for *a lot of* in THAI were further examined. A focus on the nouns or noun phrases quantified by *a lot of* in THAI reveals that the MWE tends to collocate with those directly related to the topics of the essays in the corpus (see Table 5). In other words, *a lot of* in THAI has semantic preferences for *technology*, *environment* and *education* in accordance with the essay topics spelled out in the Methodology section above.

Table 5: Collocates of *a lot of* and essay topics

Collocates of <i>a lot of</i>	Essay topic
agricultural areas, carbon dioxide, chemicals, energy, factory farm, factory farming, fossil fuels (3), grains, junk, meat industries, manure (2), meat (4), pollution processed meat, waste (3), water, water and land (2)	Factory farming
all-boy schools single-sex high schools students	Types of assessment Single-sex schools
animal experiments, animal lives, animals (2), patient lives	Animal rights
functions (2), files, games, information (2), interesting invention, new creative invention, programs, data or information, data (3)	Technology, social media, data overload, and voyeurism

*The number in parentheses indicates the frequency of a collocate; without a number, the collocates occur only once.

These collocational patterns show that repeated uses of *a lot of* are directly related to essay topics in THAI; the MWE serves to advance the topics under discussion in terms of quantity. This in turn suggests that referring to a large number of entities directly related to the essay topics is a major textual strategy adopted by Thai undergraduates. This has also been observed in Wijitsopon (2017), which has found the quantifiers *many* and *every* to be key words in a corpus of Thai learner English argumentative essays. The MWE *a lot of* can thus be seen as an alternative expression for consistent references to a large quantity in Thai students' writing. Such repeated references to a large quantity can create overstatement in Thai students' argumentative writing. The extract below illustrates this point, with expressions related to a large number being underlined:

In contrast, most people think computers can make everything faster and easy. Especially, the big companies that have to make many documents per day, they can work faster because of machines. A large number of people who love arts believe that they can use them for retouching, editing, planning or designing their arts on computers and makes it easier than drawing on the paper and makes their works better. Most people think playing games doesn't make every child have violent behavior because there are a lot of games that can develop their skills such as games that teach different languages to them.

The direct relationship with essay topics is found to be less clear in NATIVE when examining nouns or nouns phrases quantified by *a lot of* in the corpus. In many cases, the MWE is used to describe various abstract nouns, including *progress*, *grief*, *controversy*, *speech*, *common ground*, *correlation*, *patience* and *spiritual meditation*. While it is possible that these abstract nouns occur because the essay topics in NATIVE are more concerned with abstract concepts as listed in the Methodology section above, it can also be argued that the essay topics in NATIVE are realized less straightforwardly through a look at collocational patterns of *a lot of*.

What has so far been discussed deals with the collocational patterns to the right of *a lot of*. Another co-occurrence pattern is found to the left of the MWE. Of 73 cases of *a lot of*, 17 instances (23.29 per cent) co-occur with words or phrases that indicate a cause, consequence of or reason for something, such as *because*, *cause*, *create*, *make* and *therefore*. Figure 1 below shows sample concordance lines illustrating this pattern of *a lot of* in THAI.

e continuous assessment. **Since** there are always Peter Vey, Vey states that factory farming **cause** up 1 carcinogens (Boseley). **Therefore**, consuming the best tool for studying **because** they contain report that factory farming is likely to **create** they act as. That can **because** why happen true? In fact, factory farming **make** us lose rming **causes** many pollutions **because** it produces farming do to the local **because** it provides - quality like some people claim **because** it uses hink that the computers **make** their children waste

a lot of students in university, most of a lot of waste that can contaminate the en a lot of meat from factory farm, one can a lot of data or information. It could be a lot of waste which will contaminate a lot of violence in real social. In contras a lot of agricultural areas and energy. Pe a lot of wastes. According to the article a lot of available job for local which mea a lot of chemicals that can cause diseases a lot of time with them. For example, th

Figure 1. Co-occurrence patterns of 'a lot of'

The above co-occurrence pattern suggests that references to a large number tend to be made by Thai students to discuss causes or effects of something as part of their elaboration to support their claims or refute counter-arguments. Extract (a) below illustrates the use of *a lot of* to refer to a cause of something while extract (b) refers to an effect:

(a) *Some people said computers are the best tool for studying **because** they contain **a lot of** data or information. It could be argued that computers may not have the information of the old books and we still need the real old books anyway. The computer may have only the data that are new.*

(b) *One of the most obvious effects is that our privacies have been intervened and many people think that it is quite normal thing we should accept. **Therefore**, there are **a lot of** concepts which state that "privacy has been already outdated so far", "the attitudes about privacy have changed", or "teenagers these days no longer expect privacy so, do not take it serious" etc.*

These collocational patterns of *a lot* show that Thai undergraduates use the fixed expression *a lot* significantly more than native speaker learners in their argumentative essays mainly because the students tend to refer to a large quantity of things as a major argumentative strategy, whether in order to highlight a large number of things related to the essay topics or to link them with the causes and effects of a particular state of affairs.

have to

The semi-modal *have to* is the most key MWE in the interpersonal group. It reflects that the writer sees an action as “an obligation, requirement or logical necessity” (Leech, 2004). A look at concordance lines for *have to* in both learner corpora shows that there is a sharp contrast between collocational patterns on the left of the MWE in THAI and NATIVE. Those in the latter display recurrences of *would* and *will* before *have to*, 24 (17.65%) and

16 (11.65%) of 136 occurrences, respectively, while these patterns are very rare in THAI, with 3 instances of *would* (2.29%) and 7 of *will* (5.34%) of 131 cases of *have to* in THAI. A glance at COCA reveals that *would*, *will*, *'ll* and *'d* are ranked among the top 10 statistically significant collocates of *have to* in the corpus. This thereby suggests that modal verbs are one of the colligational patterns of *have to* but this is not the case in Thai students' English writing.

This difference in colligational patterns of *have to* in these two learner corpora points to different tones in the student writers' assertions. While *have to* expresses a relatively strong forceful stance in Thai undergraduate writers' claims, the projection of obligation, requirement or necessity in NATIVE is hedged through the modal verbs *would* or *will*, making the statements sound more softened or hypothetical. Take a look at the excerpts from both learner corpora below.

THAI

*In conclusion, [...] and social media are ruining the real sense of social interaction. Using them might be useful for anyone, but people **have to** think and see it thoroughly if it is really helpful or destructive for us.*

NATIVE

*An obvious problem with a single Europe of course would be the language barrier, should we learn a common language? There is no way that people should allow their individual languages to be lost, and therefore it **would have to** be clearly defined as to where and when the common language should be used.*

In both extracts, the student writers used *have to* in their arguments for some action to be taken. However, the act of 'thinking and seeing it thoroughly' in THAI is asserted as an obligation, due to the MWE *have to*, while the action in NATIVE is presented as a recommendation, because of the use of *would* in collocation with *have to*. The finding on colligational patterns of *have to* here complements what has been observed in the overall analysis in the previous sub-section in that apart from the overuse of *have to* in THAI, a forceful tone of assertion in Thai learner writing is also attributed to its lexicogrammatical pattern, which is different from the general usage pattern found in both native speaker learner and general corpora.

according to

The formulaic expression *according to* has received notable attention in studies of learner language, particularly in terms of its misuse (cf. e.g. Bychkovska & Lee, 2017;

Humphries & Phoocharoensil, 2011). Its key status in the present study could add quantitative value to the study of Thai students' interlanguage. At the same time, an analysis of its textual patterns below can shed another qualitative light on the way in which Thai students use the phrase in their writing.

While all of the 110 cases of *according to* in THAI are used to designate a source of supporting information, 73 of all 85 entries (85.88%) of the MWEs in NATIVE are used in the same sense. The other 12 instances (14.12%) express the meaning *in a way that agrees with or depends on something* (Longman Dictionary of Contemporary English). Focusing on the dominant sense of *according to* in both learner corpora, while as many as 96 of 110 instances (87.27%) of the MWE in THAI occur in the Theme position (Halliday and Mathiessen, 2004), i.e. in the initial position of a clause, 50 of 73 cases (68.49%) occupy the similar position in NATIVE. Though not statistically significant, with the LL value of 1.98, when the LL value of 3.84 equals $p \leq 0.05$, this percentage difference may point to a tendency in which the MWE is likely to be used in a relatively 'static' fashion in texts written by Thai students, i.e. a formulaic expression used almost invariably in the same textual position, i.e. at the beginning of a clause, as shown in Figure 2 below.

e-long skill which is critical thinking. According to A. Gordon-Read (2013), "The ones who will
will not breakaway each other. According to a 2007 longitudinal pediatric neuroimaging
ifferences in physical and development. According to A. Novotney (2014), "..., Sex says, is that mos
try affects environment from soil to air. According to a recent article in Outlook Student Press,
healthy food will have harmful wastes. According to a recent article in The Province, the
reats workers and animals inhumanely. According to a recent article in Outlook Student Press,
, those feed additives are in the product. According to a recent article in Outlook Student Press,
ey). Also, processed meat is unhealthy. According to a rigorous article in The Guardian, The
sily, however, the brain is not working. According to A Silicon Valley School That Doesn't
ework doesn't really make you smarter. According to Adam Gopnik, an author and parent of

Figure 2: Textual colligation of 'according to' in THAI

It should be noted that these findings from the learner corpora, however, might be seen as being in contrast with those found in Hoey and O'Donnell (2015), which investigate the three-word cluster *according to a* in a corpus of texts from the newspaper *The Guardian* and have found that the cluster tends to be used in positions other than in the Theme position. Though not exactly the same cluster under study, the difference might be taken to hint at the relationship between contextual elements, including text types and writers, and textual positions of the phrase. While *according to a* in journalistic texts in *The Guardian*

corpus tends to occur in the medial or final positions of a clause, allowing other ideas to take the Theme position as the “point of departure” of the message (Halliday & Mathiessen 2004, pp. 65) for communication, the predominance of *according to* in the Theme position in THAI and NATIVE, particularly the former, can be interpreted as the student writers’ highlighting of references to authoritative sources of information to support claims or arguments in their essays. This is illustrated in three excerpts from three different corpora below.

A text sample from *The Guardian*:

ONE IN SIX drivers admits that they could be driving impaired, not because of alcohol or cannabis but because they have been taking over-the-counter or prescription drugs, many of which come without any warnings, according to a new survey. (Hoey & O’Donnell, 2015, pp. 130)

THAI

Some argue that data overload is making our life become so much easier as people can perform multiple tasks at the same time and so they are becoming more active. However, it is proved that doing too many things at the same time can lead to health problems. According to scientists, multitaskers are likely to live a more stressful life than ordinary people (Schumpeter, par. 7). People are expecting you to be available all the time, thus, the pressure is increasing.

NATIVE

One of the main objectives of school integration is to provide students from the inner city with a better quality education. Many find that the best way to accomplish this is by moving students from an environment that is infested with crime and drugs to one that has an atmosphere more suitable and conducive to learning. According to a thesis written by Howard Fuller, <>. In fact a study done by two researchers from New York found that black students did much better academically when they were bused to a formerly all white school than did those black students who remained at the all black school.*

Conclusion

An approach to multi-word expressions through the concept of keyness adopted in the present study has yielded an insight into multi-word units which tend to be significantly overused by Thai undergraduate students and mark Thai learner writing off from native speaker learner’s in several ways. Ideationally, it has been found that Thai learner argumentative essays tend to feature a large number or quantity of things related to the

essay topics in their writing. Interpersonally, the essays tend to show a relatively strong forceful voice of the writers. Textually, the essays rely heavily on explicit connectives in the organization of the essays. As the study involves a comparison between Thai and native speaker learner essays, these MWEs, their textual patterns and associated writing characteristics investigated in the present study may be the result of influences from the first language and teaching practice. These factors, however, have only been touched upon in this paper due to its main scope and purpose of identifying and explaining MWEs in Thai undergraduates' English argumentative essays. Further studies that can be conducted on the basis of the findings here include an examination of argumentative essays written in Thai to see whether the findings here correspond to MWEs in Thai essays, which may hint at the degree of L1 influence. With regards to the influences from pedagogical practices, the use of interview and questionnaire methods can be adopted to elicit reasons why students tend to use these MWEs.

Nevertheless, it is interesting that findings from the present study correspond to those from previous research even though they are based on different approaches, groups of learners, proficiency levels, L1 background, etc. One of the most noteworthy similarities is that the students' writing is very much close to "speech written down" (McCrostie, 2008, pp. 2). However, while this feature was found to be manifested by overuses of first- and second-person pronouns (cf. e.g. Hinkel, 2002; McCrostie, 2008), the present study has shown that this characteristic is reflected through quantifiers and some interpersonal MWEs. However, the keyness of the textual MWEs also points to a characteristic of the academic genre in Thai learner English argumentative essays. Therefore, we cannot simply describe Thai learner English writing as being close to conversation. Rather, all the key MWEs point to the mixed, somewhat contradictory, writing style of Thai EFL learners as being simultaneously conversational and academic.

This clearly has crucial pedagogical implications. First, if we take that argumentative writing is a stepping stone for undergraduate students to academic writing, it seems that so far extensive attention has been paid to the textual dimension of essays. The other two dimensions of academic writing, ideational and interpersonal, have apparently not yet been adequately dealt with. Thai students still express and develop their arguments conversationally while at the same time extensively using academic textual devices. Therefore, ideational and interpersonal expressions and strategies appropriate to academic writing need to be introduced to students in a further course in English composition, if not

the first one. For example, quantity expressions suitable for academic writing, or strategies to support claims in academic texts other than references to a large number, and hedging devices that soften the tone of argumentation should also be explicitly highlighted. In other words, awareness of association between text registers and linguistic expressions should be raised and consistent practice be given to students. Indeed, developing awareness of the nature of texts and that of differences between speaking & writing have also been called for in the field of English instruction (Richards & Reppen, 2016).

Secondly, the overuse of those MWEs reflects not only that Thai students use them repeatedly but also a lack of variety of expressions in Thai students' English writing. This can be seen particularly clearly from the above analysis of the key textual MWEs, where even MWEs generally common in academic prose are still found significantly overused in THAI when compared with NATIVE. Interestingly, repetition occurs not only in terms of choices of individual MWEs but also in terms of lexicogrammatical patterns as well as discourse strategies. As demonstrated above, the keyness status of some MWEs and collocational, colligational and textual colligational patterns of the top three key MWEs can be a reflection of repeated argumentative devices adopted by the students. Therefore, while it is necessary to teach students multi-word expressions, as generally argued, the keyness analysis here suggests that it is of equal importance to help students learn and use a variety of expressions and textual strategies. This is so that their writing would not be repetitive or based mainly on memorized expressions. After all, as many corpus linguistic studies have consistently emphasised, naturalness in English communication arises from the integration of free and idiomatic expressions (cf. Sinclair, 1991). Therefore, apart from highlighting MWEs in all three metafunctional dimensions, as suggested above, another challenge for EFL professionals is also promoting a balanced combination of formulaic and more open-choiced expressions in NNS learner English writing. One possible way to do this is to bring to students' attention both MWEs and some less formulaic ways to express similar meanings in texts; for instance, they might be taught that a conclusion can be achieved through the use of *to sum up* or through explicitly stating the writer's intention, e.g. *considering all the points mentioned so far*, as illustrated by the samples in the above analysis of textual MWEs. By doing this, students will learn MWEs common in the academic register and the importance of personalizing their writing at the same time.

Acknowledgement

This paper is part of a corpus-driven research project on stylistic differences between Thai

and native speaker learner English argumentative writing, funded by the Thailand Research Fund (TRF), Commission on Higher Education (CHE) and Chulalongkorn University via the TRF-CHE Research Grant for New Scholar and the Ratchadaphiseksomphot Endowment Fund of Chulalongkorn University (TRG5680084). I would like to express my gratitude to the sponsors for their continued support. I am also grateful to the anonymous reviewers for their comments and suggestions on the earlier version of the manuscript.

References

- Ädel, A., & Erman, B. (2012). Recurrent word combinations in academic writing by native and non-native speakers of English: A lexical bundles approach. *English for Specific Purposes*, 31(2), 81-92.
- Ali, A. (2007). Semantic fields of problem in business English: Malaysian and British journalistic business texts. *Corpora*, 2(2), 211-239.
- Allen, D. (2011). Lexical bundles in learner writing: An analysis of formulaic language in the ALESS learner corpus. *Komaba Journal of English Education*, 1, 105-127.
- Biber, D. (2006). *University language: A corpus-based study of spoken and written Registers*. Amsterdam, John Benjamins.
- Biber, D., Conrad, S. & Cortes, V. (2004). *If you look at ...: Lexical Bundles in University Teaching and Textbooks*. *Applied Linguistics*, 25(3), 371–405.
- Biber, D., Johansson, S., Leech, G., Conrad, S. & Finegan, E. (1999). *Longman Grammar of Spoken and Written English*. Essex, England: Pearson Education Ltd.
- Bychkovska, T. & Lee, J. (2017). At the same time: Lexical bundles in L1 and L2 university student argumentative writing. *Journal of English for Academic Purposes*, 30, 38-52.
- Chen, Y. & Baker, P. (2010). Lexical bundles in L1 and L2 Academic Writing. *Language Learning and Technology*, 14(2), 30-49.
- Conrad, S. & Biber, D. (2004). The Frequency and Use of Lexical Bundles in Conversation and Academic Prose. *Lexicographica*, 20, 57-71.
- Cortes, V. (2004). Lexical Bundles in Published and Student Disciplinary Writing: Examples from History and Biology. *English for Specific Purposes*, 23(4), 397-423.
- Culpeper, J. (2009) Keyness: Words, parts-of-speech and semantic categories in the character-talk of Shakespeare's Romeo and Juliet. *International Journal of Corpus*

- Linguistics*, 14(1), 29-59.
- De Cock, S. (2004). Preferred sequences of words in NS and NNS speech. *Belgian Journal of English and Literatures, New Series* 2, 225-246.
- Ebeling, S. (2011). Recurrent word-combinations in English student essays. *Nordic Journal of English Studies*, 10(1), 49-76.
- Gablasova, D. Brezina, V. & McEnery, A. (2017). Exploring learner language through corpora: comparing and interpreting corpus frequency information. *Language Learning*, 67 (Suppl. 1), 130-154.
- Gabrowski, L. (2015). Keywords and lexical bundles within English pharmaceutical discourse: A corpus-driven description. *English for Specific Purposes*, 38, 23-33.
- Granger, S. & Paquot, M. (2010). Lexical verbs in academic discourse: A corpus-driven study of learner use. Charles, M., Hunston, S. & Pecorari, D. (eds.) *Academic Writing: At the Interface of Corpus and Discourse*. London: Bloomsbury.
- Halliday, M. and Matthiesen, C. (2004). *An introduction to functional grammar*. London: Routledge.
- Hasan, R. (2009). *Wanted: a theory for integrated sociolinguistics*. London: Equinox.
- Hinkel, E. 2002. *Second language writers' text: Linguistic and rhetorical features*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Hoey, M. (1991) *Patterns of lexis in texts*. Oxford: Oxford University Press.
- Hoey, M. (2005). *Lexical priming: A new theory of words and language*. London: Routledge.
- Hoey, M. & O'Donnell, M. (2015). Examining associations between lexis and textual position in hard news stories, or *according to a study by...* In N. Groom, M. Charles, & S. John, (Eds.). *Corpora, Grammar and Discourse*, pp. 117-144. Amsterdam/Philadelphia: John Benjamins,
- Huang, K. (2015). More does not mean better: Frequency and accuracy analysis of lexical bundles in Chinese EFL learners' essay writing. *System*, 53, 13-23.
- Humphries, D. S. & Phoocharoensil, S. (2011). Examining the English complex prepositions "according to", "because of", and "due to" in Thai University student writing. *Thoughts*, 1, 48-73.
- Hyland, K. (2008a) As can be seen: Lexical bundles and disciplinary variation. *English for Specific Purposes*, 27(1), 4-21.
- Hyland, K. (2008b). Academic clusters: text patterning in published and postgraduate

- writing. *International Journal of Applied Linguistics*, 18(1), 41-62.
- Jalali, H. (2017). Reflection of stance through *it* bundles in applied linguistics. *Ampersand*, 4, 30-39.
- Leech, G. (2004). *Meaning and the English verb*. Harlow: Pearson Longman.
- Lesley, J. & Walker, B. (2012). Key words in the press: A critical corpus-driven analysis of ideology in the Blair years (1998- 2007). *English Text Construction*, 5(2), 208-229.
- Lin, Y-L. (2017) Keywords, semantic domains and intercultural competence in the British and Taiwanese Teenage Intercultural Communication Corpus. *Corpora*, 12(2), 279-305.
- Mahlberg, M. (2013). *Corpus Stylistics and Dickens's Fiction*. London: Routledge.
- Mastropierro, L. & Mahlberg, M., (2017). Key words and translated cohesion - A corpus stylistic analysis of Lovecraft's *At the Mountains of Madness* and its Italian translation. *English Text Construction*, 10(1), 78-105.
- McCrostie, J. (2008). Writer visibility in EFL learner academic writing: A corpus-based study. *ICAME Journal*, 32, 97-114.
- Moon, R. 1998. *Fixed expressions and idioms in English: A corpus-based approach*. Oxford: Clarendon Press.
- Millar, N. (2009). Assessing the processing demands of learner collocation errors. Poster presented at the 2009 Corpus Linguistics Conference, Liverpool, U.K.
- Pan, F., Reppen, R., & Biber, D. (2016). Comparing patterns of L1 versus L2 English academic professionals: Lexical bundles in Telecommunications research journals. *Journal of English for Academic Purposes*, 21, 60-71.
- Paquot, M. and Granger, S. (2012). Formulaic language in learner corpora. *Annual Review of Applied Linguistics*, 32, 130-149.
- Ping, P. (2009). A study on the use of four-word lexical bundles in argumentative essays by Chinese English-majors: a comparative study based on WECCL and LOCNESS. *Teaching English in China* 32(3), 25-45.
- Rayson, P. (2008). From key words to key semantic domains. *International Journal of Corpus Linguistics*. 13(4), 519-549.
- Richards, J. and Reppen, R. (2016). Principles of grammar instruction. Hinkel, E. (Ed.) *Teaching grammar to speakers of other languages*, pp. 151-170. New York: Routledge.

- Rizzo, C. & Perez, M. (2015). A Key perspective on specialized lexis: Keywords in telecommunication engineering for CLIL. *Procedia: Social and Behavioral Sciences*, 198, 386-396.
- Schmitt, N. (2004). *Formulaic Sequences: Acquisition, Processing and Use*. Amsterdam. John Benjamins.
- Scott, M. and Tribble, C. (2006). *Textual patterns: Key words and corpus analysis in language education*. Amsterdam: John Benjamins.
- Siepmann, D. (2015). A corpus-based investigation into key words and key patterns in post-war fiction. *Functions of Language*, 22(3), 362-399.
- Sinclair, J. (1991). *Corpus, concordance, collocation*. Oxford: Oxford University Press.
- Sinclair, J. (2004). *Trust the text: Language, corpus and discourse*. London: Routledge.
- Stubbs, M. and Barth, I. (2003) Using recurrent phrases as text-type discriminators. *Functions of Language*, 10(1), 65–108.
- Wang, Y., and Shaw, P. (2008). Transfer and universality: collocation use in advanced Chinese and Swedish learner English. *ICAME Journal* 32, 201-232.
- Wei, Y. and Lei, L. (2011). Lexical Bundles in the Academic Writing of Advanced Chinese EFL Learners. *RELC Journal*, 42(2), 155-166.
- Wijitsopon, R. (2017). Collocations and local textual functions of quantifiers in learner English essay. *Linguistic Research*, 34(1), 1-49.
- Wray, A. (2008). *Formulaic Language: Pushing the boundaries*. Oxford: Oxford University Press.

Expand Your English: A Guide to Improving Your Academic Vocabulary

Steve Hart. Hong Kong: Hong Kong University Press, 2017. Pp. viii + 237.

Reviewed by

Hongyan Liang

Shanxi University

Taiyuan, China

Bioprofile

Hongyan Liang is a lecturer at School of Foreign Languages, Shanxi University, China. She attained her PH.D. in English Language and Literature from Sun Yat-sen University, China. Her research interests are functional linguistics and conversation analysis. She may be contacted at hyliang@sxu.edu.cn.

Writing a strong academic essay in English can be especially difficult for non-native learners. In order to help them increase their productive vocabulary for writing well in English and producing good academic work, the author, has designed this new book, *Expand Your English: A Guide to Improving Your Academic Vocabulary*. Concentrating on the three key areas in increasing productive vocabulary: understanding, context and familiarity, this book equips the target reader with the ability to navigate around the complexities of English-language academic writing.

Covering 1,000 vocabulary items that are essential for good academic writing, this book is divided into two parts. The first part describes two hundred key academic terms, which are grouped into twenty logical sets of ten which are arranged alphabetically. In each set, the ten academic terms are introduced, in the first stage, in an academic context with a list of their parts of speech, pronunciation and definition. Collocations and usage for these ten terms are presented in the second stage with detailed analysis. Usage notes are also given for further explanation where needed. After each stage, exercises and checks are provided to test understanding of both meaning and function of these ten terms.

The second part, covering a further eight hundred terms, introduces the academic word categories according to function, meaning, and the parts of an essay in which they are

likely to be relevant. In the first category, the academic terms are grouped according to word types. Actions nouns, reporting verbs, evaluative adjectives and linking adverbs and sentence adverbs are explored. In the second category, words are grouped according to their meaning. Words for unity and division, fact and fabrication, change, amount and size are presented. The third category by area provides a list of key vocabulary items that researchers tend to use to introduce aims, objectives and responses from interviews and questionnaires, as well as vocabulary to do reviews and state conclusions. Through commentaries, semantic lists, definitions, synonyms, collocations or explanations, the eight hundred academic terms in the three categories are systematically and clearly explained.

Expand Your English: A Guide to Improving Your Academic Vocabulary is to be commended for its structure, illustrative examples, and utility for the academic writer. The book is very accessible following a natural progression from-basic-to-productive stage in academic writing. The examples used throughout the book, focusing on the academic terms which learners will encounter for effective and professional academic writing, are taken from the essays of Chinese postgraduate students. These anonymized essays have been carefully modified to ensure anonymity while retaining the essence of the sentence. Also, the comprehension checks after each stage and the revision of terms at different strategic stages help the reader to with comprehension and understanding.

This book is a very valuable resource for non-native English learners who want to get a good grasp of the basic practical techniques of academic writing. It is suitable for newcomers as well as for those who have already acquired basic knowledge of academic writing but would like more practice towards mastery.

The review has not been previously published or is not being considered for publication elsewhere.

Mixed Methods Research in Language Teaching and Learning

A. Mehdi Riazi. Equinox Publishing, Bristol 2017. Pp. vii-297.

Reviewed by

Carl Vollmer

Ritsumeikan Uji Junior and Senior High School

Uji, Japan

Bioprofile

Carl Vollmer is an instructor of English and social studies at Ritsumeikan Uji Junior and Senior High School. He holds a Master's degree in English Education/TESOL from the Graduate School of Language Education and Information Science at Ritsumeikan University, Japan. His research interests include the use of Conversation Analysis in the language classroom, written corrective feedback and task-based language teaching. Carl may be reached at carlvollmer34@gmail.com.

When debating which method to use in research, mixed methods is an approach which allows the positives of both quantitative and qualitative methods to shine. The constant need to review and reconsider research methods is a necessary aspect of research in order to test and improve the practices of the field. Building on Riazi and Candlin (2014), this book develops a framework and a guide for mixing methods in research. It is argued in this book that mixing quantitative and qualitative methods is a valuable approach for building a better understanding of a given topic, by allowing the strengths of each to cover the weaknesses of the other.

The book is intended to further the understanding of mixed methods research, an area Riazi argues is underdeveloped. Through this book, it is hoped that more research will utilize mixed methods and that such an expansion will lead to further developments in the field.

The first section of the book (chapters 1-2), titled, "Theoretical and Philosophical Aspects of Mixed Methods Research" outlines the greater context within which the book is positioned. Chapter one explores quantitative, qualitative, and mixed method approaches to

research. A significant point raised in this chapter is that qualitative studies seek to explain a phenomenon while quantitative studies look to confirm theories. Thus, it is argued that through the use of mixed methods a study can both explain and confirm concurrently. Chapter two takes a more focused look at mixed methods, specifically the philosophical grounds from which it has developed. While the topic of this chapter stands apart from the others, it was refreshing to see the origins and philosophical justifications of a research method explored.

The second section (chapters 3-7) titled “Practical Aspects of Mixed Methods Research” explores the procedures of designing a mixed methods study. It also describes some of the challenges facing researchers hoping to implement mixed methods in a study. Chapter three explains the purpose of using a mixed methods approach and some of the ways it expands what is achievable in research because of its use of both quantitative and qualitative approaches. Chapter four describes the various ways in which methods can be mixed, and when certain combinations are preferable. The level of focus and timing of each method can vary and a number of combinations are explored and given further explanation. Chapter five builds on the previous two chapters of the section while exploring sampling, and data collection strategies. This chapter gives specific examples of ways data can be collected within the combinations of methods shown in chapter four. Chapter six introduces how to make inferences and draw conclusions from mixed methods data sets. Chapter seven discusses writing research proposals using mixed methods. While the previous chapters of the section had a clear distinction between mixed methods and other methods, this chapter was not as distinctly different from general guidelines for writing a research proposal. The second section provides a comprehensive guide for planning and implementing a mixed methods study and could be especially valuable for those interested in starting a mixed methods research project.

The third section (chapters 8-12) titled “Review and Analysis of Published MMR Studies” introduces a framework for analyzing mixed methods studies. That framework is then used to interpret studies from various contexts. Chapter eight introduces the framework for analyzing mixed methods research (FRAMMR), which summarizes the study, considers the design of the study, and comments on various aspects of the study. Chapter nine uses the FRAMMR framework from chapter eight to analyze two targeting language components. The strengths and weaknesses of the studies are then brought to light by Riazi. Chapter ten follows a similar pattern, analyzing two studies that target communication

skills. Chapter eleven uses the FRAMMR framework to analyze two studies on motivation and attitude. Chapter twelve then analyzes two studies targeting testing and assessment. This section is particularly helpful in that it allows the reader to observe the concepts of the previous sections in use and see the ways in which these studies could have been improved.

The book then finishes with a conclusion chapter, reviewing the ideas and concepts seen throughout the book. Overall, this book provides a detailed view of the benefits that can be drawn from utilizing mixed methods. This book would be valuable to those considering a mixed methods research project and would especially be useful for graduate students starting their programs. While this book has many positive aspects, a few small issues with the book still remain after reading. The first is that section three could have given more details about the positive findings that were only achieved through using mixed methods. While the critiques are valuable, drawing a clearer connection between mixed methods and the benefits would have strengthened that section. The second issue is that the challenges of space in a research project are not addressed in this book. In book or dissertation length research, using mixed methods seems perfectly possible, but in journal articles, where space is constrained, the possibilities seem limited. It would have been more informative to see this issue addressed. Overall, the book can be a valuable resource for considering the appropriate research methods.

Reference

Riazi, A. M., Candlin, C. N. (2014). Mixed-methods research in language teaching and learning: Opportunities, issues and challenges. *Language Teaching*, 47(2), 135-173.