Noun Phrase Complexity in Academic Writing: A Comparison of Research Proposals Written by Chinese EFL and Malaysian ESL Postgraduates

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Abstract
An increasing body of scholars have investigated noun phrase complexity in L2 English writing from varied perspectives, but few of them focus on the differences of the English writing produced by EFLs and ESLs. Thus, the study explored how three international postgraduates from China and three local Malaysian postgraduates in a top university of Malaysia differ in noun modification. The noun modifiers in their research proposals were coded, categorized, counted, and compared. Based on the findings, the EFLs used premodifiers more frequently than the other group, especially for attributive adjectives and nouns as premodifiers, while the ESLs made more frequent use of advanced postmodifiers, including prepositions other than ‘of’ as postmodifiers to express both concrete/locative meanings and abstract meanings, and multiple prepositional phrases with levels of embedding. The findings highlighted the need to implement explicit individualized instruction for the students with different L1 backgrounds but within the same classroom.

Keywords: noun phrase complexity, EFLs, ESLs, academic writing

1. Introduction
Complexity has been deemed as a reliable indicator to evaluate writing quality. When investigating writing complexity, quite a few scholars (Lu, 2010; Yang, Lu, & Weigle, 2015) have adopted syntactic and clausal complexity indices. Nevertheless, the elaborate and varied use of phrases has been reported in the writings by advanced EFL/ESL learners or native speakers (Kyle & Crossley, 2018; Lan, Lucas, & Sun, 2019). Currently, academic writing researchers have paid limited attention to noun phrase complexity. Noun phrases refer to certain words with a noun head, which may be preceded by determiners (such as her, a, and the) and be accompanied by premodifiers and/or postmodifiers (Biber, Conrad, & Longman, 2002). Noun phrase complexity is measured via the modifiers of noun phrases. Among the few scholars with a keen interest in this fine-grained construct, Biber, Gray, and Poonpon (2011) put forward a hypothesis about the development sequence of noun phrase complexity in writing. According to the authors, writers use more complex and advanced ways to modify nouns as their writing competency develops.

The hypothesis of Biber, Gray, and Poonpon (2011) has inspired some scholars to investigate noun phrase complexity via diverse research lines. One research strand is to explore how this variable is shaped by factors such as academic levels (Díez-Bedmar & Pérez-Paredes, 2020), English proficiency levels (Lan, Lucas, & Sun, 2019), L1 backgrounds (Jitpraneechai, 2019; Xu, 2019), disciplines (Elliott, 2019), and genres (Schaub, 2016). Among these studies, L1 backgrounds seem to have occupied the largest proportion. Nevertheless, the heterogeneity of writers in most of such studies might confound the findings and pose a threat to data validity and reliability. Meanwhile, most scholars have compared the writing samples of EFL/ESL students with those of native English speakers, neglecting the variation between EFL and ESL students.

Nowadays, an increasing number of EFL students have chosen to pursue further study in countries within the outer circle of English varieties. Particularly, Malaysia has been a hub of international education, attracting numerous students from China (Singh & Jack, 2018). Undoubtedly, one academic priority of these Chinese international students is to develop English writing competency. However, it might be a huge challenge for them, possibly due to L1 interference and limited previous exposure to English. The difficulty might be exacerbated by
their unfamiliarity with Malaysian English, which has developed its linguistic features distinct from native English varieties like standard American English (Pillai & Ong, 2018).

2. Research Objective and Questions
As a result of different language backgrounds, Chinese international students and local Malaysian students might differ in noun modification despite their same academic level. Nevertheless, there is a dearth of empirical evidence as to whether the two groups have developed different habits of using noun modifiers. To resolve the research problem, the present study aims to investigate whether the English writing samples of Chinese international students differ from local Malaysian students in the utilization of noun phrase modifiers. In response to the objective, the researchers have developed the question: To what extent do Chinese international students’ noun modifiers differ from those of local Malaysian students in research proposals?

3. Literature Review
Under the influence of Biber, Gray, and Poonpon (2011), a growing body of researchers have investigated noun phrase complexity, a distinctive feature of academic writing and a “predictor for rating scores” (Xu, 2019). Especially, increasing attention has been diverted to the writings of advanced non-English-speaking writers against the backdrop of English as Lingua Franca. Generally speaking, quite a few scholars conducted relevant studies by comparing the noun modification patterns of non-native speakers at different proficiency or academic levels. Lan, Luca, and Sun (2019) targeted 100 Chinese university students, revealing the differences between high-proficiency and low-proficiency students in the use of all the eleven noun modifiers covered by the hypothesized developmental progression index of Biber, Gray, and Poonpon (2011). Particularly, the higher-proficiency students used more premodifying nouns than expected, while the low-proficiency ones adopted fewer attributive adjectives and relative clauses, but more PP (of). The study sheds some light on how freshmen use noun modifiers and can inform instructors whether they need to implement personalized instruction. However, the findings are not generalizable because the argumentative essays involved different genres, which have been found to influence the use of complex noun phrases (Yoon, 2017). Considering the potential impact of both disciplines and genres, Ansarifar, Shahriari, and Pishghadam (2018) shifted focus to the abstracts produced by graduate students and expert writers in applied linguistics. The findings also corroborated the view that writers develop more complex noun modifiers with experience. MA-level L1 Persian writers differed from expert writers in every noun modifier hypothesized by Biber, Gray, and Poonpon (2011), while PhD-level Persian writers only varied from the expert group in the use of multiple prepositional phrases, which is the last stage of the development sequence. When balancing the three sets of abstracts, the researchers reduced the number of Ph.D. abstracts, presumably affecting the actual level of complexity under study.

On another note, some studies involving advanced EFL/ESL students aim to explore how their noun modifiers differ from native English speakers. For instance, Jitpraneechai (2019) examined the noun phrase complexity in the argumentative essays written by Thai second-year university students by comparison with the writings of native speakers. It was found that Thai students used much fewer noun postmodifiers and nouns as premodifiers. Although the topic is set as marketing to better control confounding variables, the unknown information about the proficiency and English variety of the native speakers threatens the study’s transparency and reliability. Xu (2019) also followed this research line by investigating the use of noun phrases by Chinese advanced English learners and that by native English speakers of similar age. Surprisingly, Chinese students could approach or even outtake the native groups in almost every feature of noun phrase complexity. The unexpected result might be explained by the highly homogenous non-native group. It also suggests that advanced EFL learners tend to use an array of complex noun modifiers in academic writing.

The inconclusive findings arising from these studies highlight the necessity for further empirical research. As shown in the literature regarding the noun phrase complexity of advanced EFL learners, there is a paucity of studies that compare the high-proficiency EFL learners with ESL students at similar academic levels. This under-researched context has motivated the researchers to divert attention to the international students from the Chinese mainland and their Malaysian peers. Furthermore, the linguistic feature of research proposals, an essential part of academic writing has not garnered sufficient attention. Instead, most existing corpus-based studies failed to control the type of academic writing tasks while aiming for a large body of writing samples. Thus, the present study aims to present a comprehensive picture of how each noun modifier (except for the determiner) is used in research proposals by small groups of highly similar graduates in the Faculty of Language and Linguistics, University of Malaya.
4. Methodology

4.1 Datasets

As the study aims to compare EFLs and ESLs, the researchers targeted a small group of students from either of the two programs (i.e., Master of Linguistics and English Studies) offered in the Faculty of Language and Linguistics from the University of Malaya. To guarantee high within-group homogeneity, the researchers adopted purposive sampling. Six postgraduate candidates who have completed the required assigned research proposal task for the course, Research Methodology, were gathered as data sources. To be noted, all of the international postgraduates achieved 6 or 6.5 in the writing section of IELTS, and as for the Malaysian counterparts, all of the candidates passed the Malaysian University English Test (MUET) with Band 4 and above (maximum is Band 6). While the English evaluation courses differ slightly in their own aspects such as the scheme and scoring, the writing competency of all the candidates is similar. Hence, this is evident in the researchers’ effort to control disturbing factors. The sampling choice can guarantee a high level of between-group homogeneity except for L1 backgrounds, which means extraneous factors have been well-controlled. In spite of the small sample size, the writing samples by the Malaysian postgraduates fit our study because we only include Malay ethnicity. Namely, the L1 background of the Malaysian group is well-controlled as the Chinese and Indian ethnicities have different first languages which may pose their own set of influences - nevertheless, this phenomenon is irrelevant as it goes beyond the circumferences of this study.

During the compulsory course of Research Methodology, all six participants completed individual research proposals, which provide a comprehensive and brief description of their own research plan. The research proposal is a wise choice because existing literature has not fully explored this writing genre, which is an integral part of academic writing. All of these research proposals under study are within various linguistic disciplines and are roughly similar in word count (see Table 1). They are standardized as they consist of all the necessary components of a research study, including introduction, literature review, findings, discussion, and conclusion.

Table 1. Details of All the Postgraduates’ Research Proposals

<table>
<thead>
<tr>
<th>Writer</th>
<th>Group</th>
<th>Topic</th>
<th>Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>EFLs from mainland</td>
<td>Impact of Phonological Awareness on Speech Production of ESL students in Chinese Universities</td>
<td>1294 words</td>
</tr>
<tr>
<td>2</td>
<td>EFLs from mainland</td>
<td>The effects of lexical tone contour on Mandarin speech intelligibility</td>
<td>1361 words</td>
</tr>
<tr>
<td>3</td>
<td>EFLs from mainland</td>
<td>Exploring EFL learners’ attitudes towards learning English academic writing by using online platforms</td>
<td>1480 words</td>
</tr>
<tr>
<td>4</td>
<td>ESLs (Malaysian)</td>
<td>Malaysian undergraduate students’ perceptions and attitudes towards using social media in improving creative writing skills in English language learning</td>
<td>1528 words</td>
</tr>
<tr>
<td>5</td>
<td>ESLs (Malaysian)</td>
<td>ESL teachers’ perspective towards teaching pronunciation in Malaysia</td>
<td>1503 words</td>
</tr>
<tr>
<td>6</td>
<td>ESLs (Malaysian)</td>
<td>The barriers in reporting sexual harassment among Malaysian youths</td>
<td>1569 words</td>
</tr>
</tbody>
</table>

4.2 Coding and Analytical Procedures

The data analysis relies on the framework of Biber, Gray, and Poonpon (2011), who hypothesized the development sequence stages of noun modifiers. Due to the small sample size of the study, manual coding was adopted. During manual coding, the researchers followed the coding method by Jitpraneechai (2019). We firstly recognized noun phrases based on the syntactic rule that they should be composed of two or more words, headed by a noun with modifiers. For each of the noun phrases found, all modifiers excluding the determiners were identified and coded. They were then presented as distinctively-classified modifier groups. Each of the writing samples was coded by both of the two researchers and then cross-checked repetitively, which guarantees a high level of data reliability.

Subsequently, the mean frequency of each noun modifier for each group was calculated in Excel. As the research proposals are not of the same length, the researchers calculated the percentage of each noun modifier for each
group. Based on the percentages, the researchers identified whether obvious differences existed between the two groups in terms of each noun modifier group utilized. While illustrating the differences between the two groups, the excerpts from the writing samples were also provided in the Findings section as solid textual evidence.

5. Findings

5.1 Premodifiers

As shown in Table 2, the EFLs (63.61%) used premodifiers more frequently than the ESLs (57.80%), with roughly a 6% difference. Particularly, the EFLs exhibited frequent usage of attributive adjectives (31.88% vs 27.44%) and nouns as premodifiers (15.14% vs 11.22%) in comparison to the ESLs. The EFLs also displayed a slightly higher proportion of relative clauses and multiple premodifiers (attributive adjectives and nouns as premodifiers). On the other hand, the ESLs showed a marginally higher percentage of possessive nouns as premodifiers (4.27% vs 2.47%) and an obvious higher proportion of participial premodifiers (5.49% vs 2.62%) compared to the Chinese group.

Table 2. The frequency and percentage of noun phrase modifiers for EFLs and ESLs

<table>
<thead>
<tr>
<th>Stage</th>
<th>Noun modifiers</th>
<th>EFLs (Chinese)</th>
<th>ESLs (Malaysian)</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Attributive adjectives</td>
<td>73 (31.88%)</td>
<td>75 (27.44%)</td>
<td>2.1</td>
</tr>
<tr>
<td>3</td>
<td>Participial premodifiers</td>
<td>6 (2.62%)</td>
<td>15 (5.49%)</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Relative clauses</td>
<td>6.67 (2.91%)</td>
<td>7.67 (2.80%)</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>Nouns as premodifiers</td>
<td>34.67 (15.14%)</td>
<td>30.67 (11.22%)</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>Possessive nouns as premodifiers</td>
<td>5.67 (2.47%)</td>
<td>11.67 (4.27%)</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td>Of phrases as postmodifiers (concrete/locative meanings)</td>
<td>13.33 (5.82%)</td>
<td>11 (4.02%)</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Prepositions other than of as postmodifiers (concrete/locative meanings)</td>
<td>10.00 (4.37%)</td>
<td>18.33 (6.71%)</td>
<td>3.6</td>
</tr>
<tr>
<td>4</td>
<td>-ed participle as postmodifiers</td>
<td>5.0 (2.18%)</td>
<td>8 (2.93%)</td>
<td>4.1</td>
</tr>
<tr>
<td></td>
<td>-ing participle as postmodifiers</td>
<td>0.00 (0.00%)</td>
<td>0 (0.00%)</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>Multiple premodifiers in the NP: attributive adjectives and nouns as premodifiers</td>
<td>26.33 (11.50%)</td>
<td>25.67 (9.39%)</td>
<td>4.3</td>
</tr>
<tr>
<td></td>
<td>Of phrases as postmodifiers (abstract meanings)</td>
<td>24 (10.48%)</td>
<td>15 (5.49%)</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>Prepositions other than of as postmodifiers (abstract meanings)</td>
<td>13 (5.68%)</td>
<td>35.67 (13.05%)</td>
<td>4.5</td>
</tr>
<tr>
<td>5</td>
<td>Of+ing</td>
<td>1.33 (0.58%)</td>
<td>2.33 (0.85%)</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>That + N. complement clauses</td>
<td>2.67 (1.16%)</td>
<td>6.33 (2.32%)</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>Appositive noun phrases</td>
<td>3.67 (1.60%)</td>
<td>0 (0.00%)</td>
<td>5.3</td>
</tr>
<tr>
<td></td>
<td>Multiple prepositional phrases as postmodifiers, with levels of embedding</td>
<td>3.67 (1.60%)</td>
<td>11 (4.02%)</td>
<td>5.4</td>
</tr>
</tbody>
</table>
More frequent premodifiers observed in EFL writing samples might be attributed to L1 language transfer. In Mandarin, all the modifiers precede the relevant nouns (Chan, 2014). This overall trend is consistent with previous studies (Wang & Beckett, 2017; Liu & Li, 2016) which also claimed that generally speaking, Chinese EFL students tend to use more premodifier but fewer postmodifiers than more proficient writers or writers with publication experience. In more detail, the more frequent use of attributive adjectives by EFLs might be caused by inflexible writing. The Chinese international students repeatedly used certain phrasal patterns possibly because they failed to flexibly substitute key terms due to limited writing experience. For instance, as shown in the research proposal of Writer 3, the phrase, ‘Online Platform’ occurred a total of 24 times. The worth-noting fact is that EFLs incorporated more nouns as premodifiers, which is consistent with findings by Jitpraneechai (2019), but inconsistent with some studies (Ansarifar, Shahriari, & Pishghadam, 2018; Parkinson & Musgrave, 2014). The latter studies conclude that higher-proficiency writers or more experienced ones are more likely to use nouns frequently to modify nouns. We approve of Jitpraneechai (2019)’s explanation that the inconsistency might be influenced by the topic chosen by the Chinese writers and their habit of directly using relevant noun phrases that they had read in journal articles. For instance, the recurring patterns in the writing of Writer 3 (titled ‘Exploring EFL Learners’ Attitudes towards Learning English Academic Writing by Using Online Platforms’) include ‘EFL learners/students’ (29 counts) and ‘Google documents’ (11 counts). Meanwhile, Writer 2 mentioned ‘Mandarin’ as a noun modifier 20 times. In the Literature Review section of Writer 1, a large number of terms are directly imported from his reading:

These sub-tests are rhyme judgment, syllable blending, phoneme blending, phoneme segmentation, phoneme transportation, and phoneme deletion (Begic, Mrkonjic, & Salihovic, 2014)

Interestingly, the local Malaysian students frequently used participial premodifiers, while the other group used this linguistic device less frequently. The result is not unexpected according to the claim of Parkinson and Musgrave (Parkinson & Musgrave, 2014). Namely, the greater incidence of participial premodifiers in the writings of ESLs indicates that they are developed later than other attributive adjectives as premodifiers. Namely, they are acquired at Stage 3, while common attributive adjectives are developed at Stage 2 (can be referred to in Table 2). In our case, ESLs are more experienced in English academic writing as it has become a compulsory part of Malaysian’s pedagogical system. Therefore, although the ESLs are of similar English writing proficiency based on the IELTS writing scores, richer English writing experience can enable them to use more advanced modifiers in general and participial premodifiers in particular (Lei, 2017).

5.2 Postmodifiers

When it comes to noun postmodifiers, obviously frequent categories in the writings of Malaysian ESLs encompass prepositions other than ‘of’ as postmodifiers including both concrete/locative meanings (6.71% vs 4.37%) and abstract meanings (13.05% vs 5.68%), multiple prepositional phrases with levels of embedding (4.02% vs 1.60%). Besides, ESLs also relied more upon -ed participles (2.93%), of+ing (0.85%), and that+N (2.32%). complement clauses. But the difference in these three categories was not marked. One surprising result was that neither of the two groups used -ing participle as postmodifiers. For other unmentioned postmodifiers, the Chinese ESL groups occupied a larger proportion than the other group. Especially, the Chinese international students showed a preference of using ‘of phrases’ after noun phrases to indicate abstract meanings, with the proportions of EFLs and ESLs respectively of 5.68% and 13.05%.

As summarized in the preceding paragraph, ESLs exhibited competence in using varied propositions except for ‘of’ as postmodifiers to indicate both concrete/locative and abstract meanings. The result is highly congruent with the findings of Jitpraneechai (2019) that Thai students, classified as ESLs, used this type of prepositional phrases “significantly less than native speakers did”. However, Parkinson and Musgrave (2014) only claimed obvious distinction in the prepositions for indicating abstract meanings, and the findings of Ansarifar, Shahriari, & Pishghadam (2018) supported no significant distinction in such prepositional phrases for both abstractive and locative/concrete meanings. Such inconsistence might be related to the small sample size of this study or the inaccurate automatic coding of the two studies that are contradictory to our findings. Expectedly, ESLs also showed more frequent use of multiple prepositional phrases with levels of embedding, which is developed at Stage 5. This has been corroborated by most previous studies (Ansarifar, Shahriari, & Pishghadam, 2018; Parkinson & Musgrave, 2014; Jitpraneechai, 2019), which all point to the more prevalence of such linguistic feature in the writings of more advanced or proficient or experienced writers. Overall, the findings regarding these three noun modifiers confirm the hypothesis of Biber, Gray, and Poonpon (2011) and can be traced back to the inclusion of English from the primary level and upwards in the Malaysian education system (Rashid, Abdul Rahman, & Yunus, 2017).
Interestingly, ESLs relied more on ‘of phrases as postmodifiers (abstract meanings)’ and ‘appositive noun phrases’. The greater percentage of the former linguistic device used by EFLs might be caused by awkward overuse of the preposition “of” (such as ‘the role of input of English speech’, ‘performance of speech production’, and ‘an improvement of input of English speech sounds’ in the research proposal by Writer 1; ‘questionnaire of demographic information’ in the writing sample by Writer 2). It is also possibly associated with the use of prevalent chunks that EFLs have memorized and used frequently (such as ‘continuous development of science and technology’ and ‘the influence of’). The use of appositive noun phrases by the EFLs might be related to the topic. For instance, the writer of the writing sample titled The Effects of Lexical Tone Contour on Mandarin Speech Intelligibility employed this device 7 times because she needed to further explain some unique terms related to Mandarin, a tonal language different from English.

6. Conclusion

This study has compared the noun modification in research proposal writings by three Chinese international students and three local Malaysian students. Based on the findings, the EFLs used premodifiers more frequently than the other group, especially for attributive adjectives and nouns as premodifiers, while the ESLs frequently relied upon advanced postmodifiers (prepositions other than ‘of’ as postmodifiers including both concrete/locative meanings and abstract meanings, multiple prepositional phrases with levels of embedding). The findings generally support the development sequence of noun modifiers hypothesized by Biber, Gray, and Poonpon (2011). However, the findings of some linguistic devices (such as ‘appositive noun phrases’) seem to be inconsistent with the hypothesis as a result of the specific writing topic and EFLs’ writing inflexibility.

The study can fill the research gap by comparing EFL and ESL students in terms of the noun phrase complexity employed in academic-genre writing. The findings can reveal the typical noun modifying structures utilized by each of the distinct learner groups and inform relevant instructors of the need to implement explicit individualized instruction. The different proportions of noun modifiers may also assist in identifying specific modifier groups of which either EFL or ESL groups lack a good command, particularly within a research-based writing. However, the study suffers from some limitations. The obvious shortcoming lies in its small sample size. The researchers only incorporated six writers and six research proposals, which might render the findings less generalizable. Thus, more empirical studies of a similar context but with a larger sample size may further justify whether our findings are reliable. The researchers also fail to elaborate on the common features shared by them in noun modification, which can be of significance for the writing instruction concerned with students from different L1 backgrounds.

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References


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