Development of noun phrase complexity in the writing of English for Academic Purposes students

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ABSTRACT

Compared to conversation or other written registers, written academic prose favours heavy nominal groups, in which the head noun is typically accompanied by premodifiers such as adjectives or nouns, and/or by postmodifiers such as prepositional phrases. Focussing specifically on the noun phrase, this article uses the hypothesised developmental progression index suggested by Biber, Gray, and Poonpon (2011) to consider academic writing produced by two groups of graduate L2 writers. The first group was preparing for graduate study, and the second was already enrolled for graduate study. Noun phrases in our two sets of data were identified and pre-and postmodifiers were manually coded. Findings confirm the proposed developmental index in the sense that the less proficient group relied heavily on attributive adjectives, a modifier hypothesised as being acquired early. In addition, use of noun modifiers by the more proficient group was much closer to published frequencies for academic prose than was use by the less proficient group. Based on our findings, we make suggestions for applications in the EAP classroom.

1. Introduction

A range of studies (e.g. Biber, 1988, 1995; Biber, Johansson, Leech, Conrad, & Finegan, 1999; Halliday, 1985) has indicated the wide differences between the way that meaning is expressed in speech and the way it is expressed in writing. In particular, academic writing shows extensive differences from speech. A number of studies have indicated that apart from having a range of features such as conciseness, formality, low frequency lexis, and focused organisation of ideas, academic writing becomes increasingly complex as writers advance in their studies (see Ortega, 2003 and Wolfe-Quintero, Inagaki, & Kim, 1998 for meta-analyses of these studies). There is evidence that this complexity is increasingly constructed in the noun phrase as writers develop along an academic path (Biber, Gray, & Poonpon, 2011; Lu, 2011). For university students therefore, the ability to pack meaning into the noun phrase, and to make their text nominally rather than clausally complex, becomes increasingly important.

Enrolments by international students at universities in New Zealand have increased in the past few decades (Ministry of Business, Innovation and Employment, n.d.). These students often begin their studies by taking an English language course. The focus of the present study is the development of complexity in the academic writing of international students enrolled in such a course in order to prepare them for graduate studies in the medium of English. In particular our focus is on complexity

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in the noun phrase. Our approach was to compare the writing of the international students in an English language course (the EAP group) with that of international students at a more advanced level of proficiency, those who had already achieved the goal of enrolment in graduate studies. Our aim was that this comparison would shed light on where EAP students' use of academic language could fruitfully be developed and where classroom teaching would be most productive. Our contribution in this article consists in measuring the use of nominal modifiers in two sets of learner writing. This allows us to shed some light on the developmental nature of these noun modifiers (Biber et al., 2011), and also to suggest areas that could benefit from language-focused instruction in English for Academic Purposes classrooms. In the next section, after looking at the different types of noun modifiers, we review studies of noun modification, especially in the academic register, before outlining the developmental framework for noun modifiers suggested by Biber et al. (2011).

2. Noun modification and its role in complexity in writing

Biber (1988) showed that clausal subordination is typical of speech while phrasal features (such as attributive adjectives and prepositional phrases) are characteristic of formal writing. These non-clausal dependent phrases function as optional pre- or postmodifiers to the head noun in noun phrases, which consequently have great potential for expansion. The basic structure of nominal phrases is:

Determiner + (premodification) + headnoun + (postmodification and complementation)
(Biber et al., 1999).

Premodifiers include adjectives (*nuclear* power), participles (*living* things) and nouns (*safety* measures). Postmodifiers include relative clauses (*people who live near a nuclear facility*), ing-clauses (*countries using nuclear energy*), ed-clauses (*problems associated with coal and oil*), to-infinitive clauses (*material to build a nuclear weapon*), prepositional phrases (*the cost of electricity*), noun-phrases in apposition (*a boiling water reactor (BWR)*), and complement clauses (*the fact that nuclear technology threatens global peace*). Noun phrases with a modifier are rare in conversation but close to 60% of noun phrases in academic prose have a pre- or postmodifier (Biber et al., 1999, p. 578).

An examination by Biber and Gray (2011) of noun modification in academic prose, newspapers, novels and drama found that five grammatical devices (attributive adjectives, premodifying nouns, postmodifying prepositional phrases, appositive noun phrases and nominalisations) have greatly increased in frequency in academic prose written in the last 200 years. This suggests that the use of these phrasal features is growing in academic prose, making them increasingly important for student writers to acquire.

Biber and Gray (2011, p. 235) note that expansion in use of noun modifiers is accompanied by expansion in meaning. They illustrate this with their examination of head nouns premodified by nouns and postmodified by prepositional phrases. Use of premodifying nouns is especially high in certain genres, such as science research articles. This wide variety of meaning relations between head nouns and their premodifying nouns is likely to add difficulty to both writing and reading academic prose. This is because a noun can combine with a range of different nouns in different meaning relations. Wisniewski (1996, p. 434) provides an example of this complexity in *corn oil* (oil *made from* corn), *baby oil* (oil *to rub on* babies) and *lamp oil* (oil *for use in* lamps). In addition, merely because a particular form (e.g. *rail cars*) with a particular meaning relation (location: cars on rails) is used in one instance, does not mean that learners can extend this to predict usage (e.g. *road cars∗*).

Prepositional phrases are of interest because they are the most common postmodifiers in twentieth century academic prose. Although *of*-phrases are the most common prepositional phrases across both spoken and written registers (Biber et al., 1999, p. 635), Biber and Gray (2011, p. 241) show that use of other prepositional phrases combined has grown to become as frequent in this genre as *of*-phrases are. This expansion in use has also been accompanied by an expansion in the meanings that are expressed by these prepositional phrases. This increasing use reflects their importance for academic writers and we speculate that this expansion may contribute to difficulty in using them.

With regard to the function of extended noun groups, Halliday (1993) discusses how a nominal rather than clausal expression of meaning makes text denser. Biber and Gray (2010, p. 19) view the purpose of such compressed phrasal expression as economy; it also allows for faster reading by experienced knowledgeable readers. Halliday and Martin (1993) also note the value of concentrating meaning into nominal groups as being firstly that information expressed as a clause at first can be turned into a nominal group and function as an element in a subsequent clause. A second function of nominal expression of meaning noted by Halliday and Martin (1993) is that it enables knowledge to be reconstrued as being largely about things/nouns (and thus able to be frozen in time and examined) rather than as a tension between things and actions, as clausal expression construes meaning. This nominal construction of knowledge is clearly an advantage in academic prose.

Studies of L1 and L2 writers have shown that development in children is from sentence fragments to simple sentences (Ishikawa, 1995), from sentences to clausal coordination, and from coordination to subordination (Cooper, 1976). In the later school years and at university, the trend is towards greater conciseness, with complexity increasingly constructed at the phrasal rather than the clausal level (see, for example, Ferris, 1994; Grant & Ginther, 2000). Wolfe-Quintero et al. (1998, p. 72) note that more advanced writers tend to use more reduced forms. Examples of these reduced forms include: prepositional phrases or adjectives rather than an adjective clause; a participle rather than an adverbial clause; and a gerund or infinitive rather than nominal clause. Similarly Halliday (1993) notes that writing, while clausally simpler than speech, favours complex embedded nominal groups.