A longitudinal multidimensional analysis of EAP writing: Determining EAP course effectiveness

Peter Crosthwaite

University of Hong, Room 6.38, Centre for Applied English Studies, Run Run Shaw Tower, Pokfulam, Hong Kong Special Administrative Region

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ABSTRACT

While universities devote great effort to initial EAP instruction, many question the effectiveness of such instruction on student production. The present study seeks to determine whether EAP instruction results in a longitudinal linguistic variation in the direction of the established norms of an academic register, which by extension, would provide a quantifiable linguistic measure of EAP course effectiveness. This paper adopts a multidimensional analysis (Biber, 1988) of a longitudinal corpus of written EAP essays and reports totalling 213,408 words, collected from freshman Chinese undergraduate students at a university in Hong Kong. The data was collected over a semester's EAP training at three data points (pre-EAP training, immediate post-training and final written examination). The results of the multidimensional analysis exhibit considerable variation between data points in the direction of academic discourse across all five dimensions analysed, including a drop in the use of first person pronouns and the mechanical use of discourse connectives, alongside an increased emphasis on nominalisation and more careful, hedged, presentation of stance. The findings suggest a warmly positive effect of EAP instruction on learner production after only a single semester. A number of pedagogical opportunities for the data are also outlined including the benefits of such analysis for written corrective feedback and future analysis of discipline-specific L2 discourse.

1. Introduction — the EAP context in Hong Kong

As English is the dominant language in Hong Kong (HK) tertiary settings, university students must quickly adopt the communicative skills required to participate in an academic environment. Universities devote great effort to providing training in English for academic purposes (EAP) to bridge the gap between secondary and tertiary expectations of academic discourse before adopting the discipline-specific nuances of particular subject areas (e.g. Hyland, 2000; Hyland & Hamp-Lyons, 2002), marking the development of academic literacy up to graduation and beyond. Where English is the medium of instruction (as in HK), the success (or failure) of EAP training is as crucial to a student's eventual progress as is training in subject-content knowledge. However, in HK, differences in local and international standards for EAP (i.e. the HK secondary school exam [HK-DSE] versus international tests such as IELTS®), a shift from English to Chinese as the medium of instruction in HK secondary schools, as well as a shift from a 3-year to 4-year undergraduate curriculum (resulting in one year less of secondary education), have prompted many HK universities to revisit their EAP provision. Students have been shown to lack

the linguistic means to fully participate in tertiary education (Bruce & Hamp-Lyons, 2015) and to struggle to understand technical vocabulary, listen to lectures, write in an appropriate style and conform to the conventions of academic discourse (Evans & Morrison, 2011).

Despite these issues, expectations regarding the effectiveness of initial EAP programmes remain 'unrealistic' (Bruce & Hamp-Lyons, 2015), and both teachers and students in HK and beyond express dissatisfaction with the effectiveness of EAP training (e.g. Abdolrezapour & Tavakoli, 2013). EAP course effectiveness is typically measured by test scores and student evaluations of course content and teacher performance. However, such measures are both summative and subjective in nature, and while face validity is an important factor when determining the authenticity of EAP courses (meaning both students and their institutions take them seriously, Fulcher, 1999), students are untrained to offer informed opinions on course effectiveness and teacher performance, and in-house tests may lack content/construct validity and reliability. Moreover, individual EAP teachers generally teach individual groups of students for a single semester, and so continual tracking of performance from initial EAP training into discipline-specific provision is lacking. In short, current measures of EAP effectiveness, at least in the HK context, do not take into account the *actual linguistic data* produced *over time* by students, tracking their development from pre- to post-training. It is thus necessary to collect and analyse data that chart which aspects of EAP training are effective and which remain problematic over a student's university life. In this regard, a corpus-based approach to measuring EAP course effectiveness is thus timely and advantageous.

2. 'Multiple affordances' of corpus-based research for EAP: multidimensional analysis

The use of native language (L1) corpora (and their second language [L2] counterparts *learner corpora*) in English language teaching is now described as a 'marriage' rather than a 'fling' (Gabrielatos, 2005), and both native language and learner corpora are considered essential tools driving innovation in English language research, pedagogy, assessment and publishing (Hyland & Wong, 2013). In particular, the 'multiple affordances' (Leno-Szymanowski and Boulton, 2015) of language corpora-driven research on EAP have 'increased dramatically' over the past ten years (Csomay, 2015) in terms of materials development (e.g. Alexander, 2007; Chuang & Nesi, 2006, 2007; Jones & Durrant, 2010), analysis of academic genre and register (Biber, 1988, 1995; Flowerdew, 2006; Gardner & Nesi, 2012; Hyland & Milton, 1997; Hyland & Tse, 2007), contrastive interlanguage analysis of the processes behind L2 acquisition (Crosthwaite, 2016a,b; Granger, 1996, 2015), dictionaries and reference grammars (e.g. Biber, Johansson, Leech, Conrad, & Finegan, 1999), data-driven learning via corpus-based in-class activity (e.g. Charles, 2007; Cotos, 2014; Johns, 1991) and the revision of EAP writing (Quinn, 2015; Tono, Satake, & Miura, 2014).

In particular, the work of Doug Biber and his colleagues represents a fundamental corpus-based understanding of the practice, process and product of EAP in the form of quantitative multidimensional analyses of linguistic variation in register and genre. Biber's (1988) framework exploring variation across speech and writing made explicit the situational, functional nature of discourse, the impact of said function on linguistic form, and the connection between variation, situation and language use. Biber et al. (2004), Biber (2006) and Biber and Conrad (2009) have all performed multivariate statistical studies investigating the linguistic features found in tertiary settings. In particular, Biber (1988) established a set of 'dimensions' of the variation of the normalised frequencies of particular linguistic features, along which a particular set of text types

Table 1
Summary of Biber's (1988, 1989) dimensions and text types, adapted from Nini (2015:6–8).

Dimension[a]	Description	Associated text types (high/low score)
1- Involved vs. Informational production	High scores — Affective/interactional (many verbs, pronouns)	High = Intimate interpersonal interaction, informational interaction
	Low scores — Informationally dense (many nouns, adjectives)	Low = Scientific exposition, learned exposition, general narrative exposition
2 - Narrative vs. Non-Narrative Concerns	High scores — Narrative text (many past tenses, third person pronouns)	High = Imaginative narrative, general narrative exposition
3 — Explicit vs. Situation dependent reference.	High scores — context-independent, e.g. academic prose (many nominalisations)	High = Scientific exposition, learned exposition
	Low-scores — context-dependent, e.g. sports broadcast (many adverbs)	Low = Intimate interpersonal interaction, informational interaction, imaginative narrative, situated reportage
4 - Overt Expression of Persuasion	High scores — Author's point of view is explicitly marked, contains hedging and boosting of stance (many modal verbs)	High = Involved persuasion
		Low = Situated reportage
5 -Abstract vs. Non-Abstract Information	High scores — text is highly technical, abstract or formal, e.g. scientific discourse (many passive clauses and conjuncts)	High = Scientific exposition, learned exposition
		Low = Intimate interpersonal interaction, Informational interaction

[a] There is a 6th Dimension in Biber (1988), 'On-Line Informational Elaboration', but this is not featured in Nini's (2015) MAT tagger's graphical output and will not be referred to again in this paper.