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Teaching Academic Writing in Content-Based Classes

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Written discourse is an important part of content-based classes because a significant portion of a student's grade is based on written assignments. However, many teachers of content-based classes do not teach their students how to write. Sometimes this is because all the class time is needed to teach the content effectively; other times it is because the teacher feels that the students' proficiency in English is high enough that they do not need to be taught how to write. In this paper, 32 compositions from high proficiency students enrolled in a content-based class are examined to see what issues these students are having with academic writing. Although the research showed that the students had a general understanding of the academic writing genre, it also showed that these students still struggle with using the correct register and vocabulary for the subject they are studying.

作文による談話（written discourse）は、コンテンツベース授業の重要な一部になる。なぜなら、生徒に対する評価の重要な部分は、彼らの筆記課題に基づいて行われるからである。しかしながら、コンテンツベース授業を教える教師の多くは、書き方を学生に教えていない。それは一つには、コンテンツを効果的に教えるためには、全ての授業時間を割くことが必要になるからである。また、教師が、生徒たちの英語の上達度が十分に高く、書く方法について教わる必要がないと感じていることも理由になっている。この論考は、コンテンツベース授業を受けている上達度の高い生徒による32本の作文を取り上げて、彼らがアカデミック・ライティングに関してどのような問題を抱えているのかを考察している。研究では、学生たちがアカデミック・ライティングに対する一般的な理解を有している一方で、彼らが学んでいる教科のための正しいレジスター（言語使用域）や語彙を使うことに苦心している点も示されている。

Written discourse holds a central place within the academic context, and students' ability to "prepare papers that meet reader expectations (with regards to rhetorical patterns) has a definite value within an academic environment" (Kroll, 2006, p. 429).

Because of this, academic writing is a key component of most university level English language courses. However, despite the time spent studying how to write in English, many students still struggle with this skill. This is because to write well academically, students need to understand and be able to produce the genres that are used in an academic context (Hyland, 2004). This means that students must not only learn how to construct an essay but that they must also "learn to craft their writing in community-specific ways" (Hyland, 2013, p. 241). This is especially true in content-based classes where the genre can often be very specific to the subject being studied (Hyland, 2004). It is important that students in content-based classes are able to write in the accepted genre for the subject being taught because in these classes the written mode is the most common way of recording students' knowledge for assessment purposes (Whittaker, Llinares, & McCabe, 2011). Unfortunately, there is often little focus on writing in these classes, as the teacher chooses to focus on the content of the course rather than the language the course is being taught in (Dalton-Puffer, 2007). This is problematic for students' academic writing skills because nonnative speakers (NNS) often require more scaffolding to master the academic genres they may not have been exposed to in their L1 (Hyland, 2015).

One of the problems with content-based classes is that some of the sound pedagogical practices teachers employ in other language classrooms, such as leveling texts and scaffolding the tasks required of students, are not always followed in content-based classrooms (Tarnopolsky, 2013). This is partially due to the teachers' desire to impart as much information as they can about the topic that they are teaching, which is very often a subject that the teacher enjoys or has a fair amount of knowledge about and is excited about teaching (Crandall & Kaufman, 2002). This issue is compounded by the fact that many students taking content-based classes are higher proficiency students who teachers may feel would not benefit from what they see as basic language instruction. Both assumptions are erroneous, and even very fluent English speakers can struggle with the skill of academic writing (Hinkel, 2004).

Although knowledge of the topic itself is important, students need to be taught the language skills necessary to understand and communicate their ideas about the subjects they are being taught (Flowerdew & Miller, 2005). This is especially true when a large part of the students' grades often rest on their being able to present their ideas clearly in written form. For example, in the course discussed in this paper, 70% of the final grade was calculated from written assignments done either at home or in class and submitted for a grade (the remaining 30% was made up of short academic presentations and class participation). Furthermore, general language abilities do not always translate into the ability to do well on specific academic skills, something that is especially true with regards to academic writing, for which even proficient students need to be taught how to be good writers (Grabe & Kaplan, 1996; Hyland, 2004). The preconception teachers have (that their students' general language abilities are a good indicator of their ability to write well in English) often causes teachers to design classes that do not meet their students' English language needs, especially with regards to academic writing. This study was an attempt to address this deficit and provide both researchers and educators with a better understanding of how Japanese students write in English when they are asked to write about content as opposed to when they are writing as part of an academic writing class. It is hoped that this will help teachers to understand what type of scaffolding students enrolled in content-based classes need to be able to write effectively.

Background

Contrastive rhetoric is a field in which researchers try to explain the rhetorical problems students often experience when writing in a second language by examining the differences that exist between the students L1 and L2 (Jun, 2008). Contrastive rhetoric (or intercultural rhetoric, as it is often called) has had an influence on a variety of fields including English for special purposes (ESP), literacy studies, and content and language integrated learning (CLIL; Connor, 2011). This is an important area in the field of second language writing because many teachers still struggle to teach their students how to write a good argumentative essay in English or to produce good logical arguments in support of their ideas. In Japan, this often serves to reinforce the idea that Japanese writers have trouble understanding the rhetorical patterns of English, an idea that was supported by earlier researchers in the field (Hinds, 1980; Kaplan, 1966). However, this view of rhetoric has since been shown to be an incomplete picture of what is going on. Most researchers now agree that students are able to write well if they are taught how to write and that most of the problems that students have with regards to academic writing stem from their inexperience as writers rather than from linguistic or cultural factors (Connor, 2010; Kohro, 2009; Rinnert, Kobayashi, & Katayama, 2015).

To be able to teach their students how to write in English, teachers need to have their students look beyond sentence level grammar and focus on how their ideas are organized in their writing assignments (Clark, 2011). Rhetoric, and writing in general, should be seen as a subset of the wider academic context that forms the writers' perceptions regarding audience, purpose, organizational structure, and modes of thinking (Ghanbari, 2014). This is especially important in the content-based classroom where each subject being taught often has its own subset of genres, lexical items, and conventions that are an integral part of participating in that subject's discourse community (Hyland, 2004). It is, therefore, important that content-based teachers spend time going over specific language skills like writing with their students (Coyle, 2007).

Aims of the Research

The aim of this research was to investigate the rhetorical choices students make when writing about a subject they are studying as part of a content-based course, as opposed to writing about a more general topic for an academic writing class. Using the method of analysis that was developed by researchers in the field of intercultural rhetoric for analyzing the rhetorical structures of students' compositions (see, for example, Kubota, 1998; Miyake, 2007; Rinnert, et al., 2015), the researcher examined the rhetorical, lexical, and stylistic choices that students make when writing in a content-based course. In doing so, the study was aimed at finding out what rhetorical choices students are making and the consequences of these choices in terms of how they affect the appropriateness of the students' writing in the subject that they are studying. The study was descriptive in nature and had two goals:

- to see how high proficiency students enrolled in a content-based class organize their ideas on a macro-rhetorical level and
- to see if the register and lexical choices made by students are appropriate for the genre they are writing in.

Methodology

The study took place at a private university in Japan. The students who took part in the study were 2nd-year students enrolled in a 4-year undergraduate program. In each of their first four semesters, students enrolled in this program took one listening course, one speaking course, one reading course, and one writing course, each comprising 12 to 14 lessons of 90 minutes each. Upon entering the program, students were separated into a lower or higher stream based on their TOEFL scores. Students with TOEFL scores

above 450 were placed into the higher stream, which focused on providing students with instruction and practice in academic English. In the 2nd year of the program, all the higher stream students were required to enroll in two content-based classes that were taught entirely in English. This meant that all of the students involved in this study would have already completed a year of academic English courses, including writing. The students who participated in this research were all enrolled in a class entitled *An Introduction to Philosophy*. The course focused on the subject of philosophy and, although the materials were adapted to be more easily accessible to nonnative English speakers, the students were not expected to receive explicit language instruction as part of the course.

Students who participated were asked to submit two samples of their writing on a topic related to the content they were studying. No instructions were given regarding essay structure or means of supporting ideas. One sample was to be written in Japanese and one in English. In this paper only the English language compositions are discussed. The students were given three topic choices for each composition. Both samples were written in class; one was done during the 6th week and one during the 7th week of the 15-week course. There were 34 students enrolled in two sections of the class.

After the samples were collected, they were entered into a computer and put into an Excel workbook. Once in the spreadsheet, individual compositions were coded for four different rhetorical structures based on an analysis adapted from the one used by Kubota (1998). The compositions were coded for the following features: (a) whether the composition followed a paragraph structure, (b) the location of the main idea, (c) the presence or absence of support for the main idea, and (d) internal coherence of the composition. The coding was done by the researcher.

First, the compositions were coded based on whether the students had written their compositions in paragraph form. Compositions in which the student had started a new line for each sentence were coded as having a *sentence* structure, and those that began each sentence after the previous sentence were coded as having a *paragraph* structure. Next, the location of the topic sentence was identified and marked in each of the compositions. The compositions were then coded into one of the following five groups based on the categories used by Kubota (1998): (a) *initial*, the topic sentence fell within the first two sentences of the composition; (b) *middle*, the topic sentence was in the middle section; (c) *final*, the topic sentence fell within the last two sentences of the composition; (d) *initial + final,* the topic sentence was given in both the initial and final sections; and (e) *obscure*, there was no clear topic sentence. None of the compositions were deemed to be in the *middle* or *initial + final* groups.

The sentences that provided either factual or experiential support for the ideas being presented were then marked. Sentences were considered to give support when they either provided a fact the student had learned in the class or gave an example that explained why the claims the student was making in that composition were true. Based on the support provided by students, compositions were coded as either (a) *provided support*, those compositions that had at least one sentence that offered factual or experiential support for the ideas given in the composition; or (b) *no support*. Finally, sentences that were either off topic or repeated an idea already given were so marked. Compositions that had over 20% of the sentences in the composition marked as either *off topic* or *repeated an idea* were coded as lacking internal coherence.

Results

Thirty-three compositions were submitted by the class (one student was absent). Of those 33, one of the students wrote about all three of the topic choices in the composition and was consequently excluded from this analysis. This left 32 compositions that were analyzed (see Table 1). The average composition was 14 sentences long and the average sentence length was 13 words.

Table 1. Overall Statistics of the Compositions Submitted (N = 32)

Total words	Number of words		Number of sentences		Sentence length	
	M	*SD*	*M*	*SD*	*M*	*SD*
5743	179.47	37.45	13.75	3.19	13.07	2.22

The majority of the students were able to use the appropriate rhetorical structures for all but one of the rhetorical categories that were analyzed (see Table 2). One area of importance for contrastive rhetoric is the position of the topic sentence. In 87.5% of the compositions, the topic sentence was in the initial position, which is the most appropriate place for most genres of academic writing. Of the four compositions that did not have a clear initial topic sentence, one had the topic sentence in the final position, and three were coded as *obscure*, or lacking a clear topic sentence. Furthermore, all the compositions made use of factual or experiential support for the ideas the students were presenting. Thirty-one compositions presented experiential evidence to support their ideas, and 21 gave factual evidence, usually taken from the materials students had been studying in the class.

Table 2. Grading the Compositions on the Four Rhetorical Categories (*N* = 32)

Essay structure	Initial topic sentence	Provides support	Internal coherence
96.88%	87.5%	100%	28.13%

The one area that the majority of the students struggled with was internal coherence (see Table 3). Only 28.13% of the compositions had at least 80% of the sentences in the composition marked as being *on topic*. Furthermore, only one of the 32 compositions had no off-topic sentences.

Table 3. Internal Coherence of the Compositions (*N* = 32)

Composition length		On topic		Off topic		Percentage on topic	
M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
13.75	3.19	10.44	2.86	3.31	1.49	75.96%	9.40

Discussion

Overall the students in this class produced well-written compositions that followed the expected rhetorical structures of an English language writing assignment. All but four of the 32 students had a clear initial topic sentence in their compositions. Furthermore, all the students knew that they needed to provide either experiential or factual evidence to support the claims that they were making. This shows that they were able to grasp the general conventions of this genre.

However, it is evident that students were still struggling to write a good composition in English. Almost three quarters of the class's written assignments lacked internal coherence as defined by having less than 20% of the sentences in the composition as being either off topic or a repetition of an idea given previously in the composition. Furthermore, although the overall macro-level rhetorical structures were appropriate for the academic writing genre, the students had more problems with the sentence-level rhetorical features of the writing assignment. This was especially evident in two areas. The first of these was the register of the writing. Although the students had the ability to write in paragraph form, the tone of the compositions was conversational rather than academic in nature. Students often made use of sentences that would not usually be considered appropriate for academic writing, for example, "I will tell you why the location of Greece was important for philosophy." The compositions also lacked grammatical features such

as nominal groups that have been shown to mark appropriate academic register (Whittaker et al., 2011). Overall the compositions did not display the type of register that readers of this type of writing (philosophical writing) would expect.

The other area that gave the students problems with sentence-level rhetorical features was the lexical choices they made. An analysis made using Lextutor (http://www.lextutor.ca) showed that of the 5295 tokens (448 tokens were proper nouns such as *Socrates* or *Greece* and were removed from the analysis) that were used in the 32 compositions, 91.61% came from the K1 word band (the first 1000 most frequent words from the General Service List) and only 3.53% of the words were from the Academic Word List. Furthermore, only 2.13% of the words were considered to be off list. Among these off-list words is where we would expect to find the philosophical terms that the students had studied in class. Although the compositions did include some of these words (e.g., *philosophy*, *goods*, and *democratic*) students did not use any of the more complicated philosophical terms, such as *rationalism* or *empiricism*, even though they had gone over these words in class.

Overall, it looked as if the students were able to understand how to write in English and were trying to apply their academic writing skills to the compositions that they were being asked to write for class. However, the students were still having problems using the appropriate register and vocabulary for a philosophy class. Additional scaffolding with regards to the differences between the registers in academic writing and informal writing as well as more support with the vocabulary they were learning in the class would have helped the students to do a better job on these compositions.

Conclusion

In the future, it would be helpful to look at how compositions of students in a content-based class compare to those of students of similar proficiency in a general English class. It would also be useful to look at how students in a content-based class write when they are asked to write on a more general topic and compare that to compositions submitted on the topic being studied.

This research showed that the students in this class were able to understand the basics of academic writing. However, it also illustrated a need for further instruction about how to write correctly for the subject being taught. Teachers need to remember that even advanced students have problems with the genres of academic writing and that these problems can often be compounded when they are asked to write for a specific subject. Because of this, teachers need to provide students with language support throughout the writing process in content-based classes; this is especially true for vocabulary. Teachers

of content-based classes should not teach students the topic-specific vocabulary without making sure that the students know how to use that vocabulary in context.

This type of research is important because teachers of content-based classes may neglect to teach their students the language skills that they need to succeed in the subject being taught. This may be because they are focused too much on the content area of the class, or it may be because they feel the students in their class already have the language skills required for them to succeed academically. The current research shows that this is not always the case and that there are some specific areas of academic writing that students still need to have scaffolded by the teacher for them to be able to write in a way that is appropriate for the subject that they are studying. Additional training and a better recognition of the language needs of their students may make it possible for teachers to begin to incorporate more structured language-based instruction into their content-based classes. It is hoped that this paper has helped to illustrate this necessity and has shown teachers some potential areas that they can focus on in the classroom to help their students become more proficient English language writers.

Bio Data

Gavin Brooks received his master of applied linguistics from the University of New England with a focus on the stages of language acquisition. He has taught English in Japan, Indonesia, Colombia, and Ecuador. For the last 11 years he has been teaching in Japan and currently works as an associate professor at Doshisha University's Faculty of Global Communications. <gavinbrooks@gmail.com>

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