Writing Across the Curriculum in ELT Training Courses: A Proposal Using Data-Driven Learning in Disciplinary Assignments

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The process toward academic literacy aims at developing academic reading and writing together with higher academic competences of increasing relevance for undergraduate students as future teachers and researchers. Such a process is even more complex in ELT vocational courses where non-English speaking trainees study English as a system while they are in the process of becoming proficient users of this foreign language. This paper shares our action research experience with undergraduate non-native students at an English teacher training program in Argentina. From the Writing Across the Curriculum (WAC) approach, the implementation of data-driven learning (DDL) assignments has proved to contribute to their process of enculturation and the promotion of subject learning while fostering the development of disciplinary thinking.

Undergraduates in ELT training courses in non-English speaking countries such as Argentina face a complex challenge: while in the process of becoming proficient EFL users, students are also trained to belong to a professional/discourse community (Swales, 1990) that requires them to develop specific disciplinary knowledge skills and thinking patterns in the study of this foreign language. The process known as academic literacy goes beyond the development of academic reading and writing as linguistic macro-skills. It also engages trainees in the development of higher academic competences of increasing relevance for their future careers: more complex and reflective literacy skills related to academic enculturation (Bazerman et al., 2005; Carlino, 2013; Young & Leinhardt, 1998), such as critical thinking, data administration, and the correlated research skills.

From the Writing Across the Curriculum (WAC) approach, which, while promoting discipline-related writing instruction, acknowledges the complexity of the academic literacy process (Bazerman & Prior, 2003; Bazerman & Russell, 2003; Bazerman et al., 2005), this article advocates for the implementation of professional-like data-driven learning (DDL) assignments at ELT training programs. Understood as the study of large corpora containing authentic language samples to be analyzed using concordancing software (Hadley, 2002), DDL tasks require students to explore the occurrence of different lexi-co-grammatical items in context, analyzing the genuine, natural use of the language as seen in digital and digitized texts. The application of pedagogical research corpus assignments in ELT training courses at the university level has proven to provide enhanced teaching strategies, which, given their potential for bringing students into intellectual engagement and critical thinking in the English language, are bound to foster disciplinary knowledge while introducing students to their future research culture (Cheng, Warren, & Xun-feng, 2003; Comelles et al., 2013; Garner, 2013; Tono, Satake, & Miura, 2014; Tsai, 2011).

This paper shares our action research experience with undergraduate non-native students at an English teacher training program in Argentina. Over the past two years, the implementation of DDL research assignments as part of the students’ writing instruction has contributed to increasing the trainees’ understanding and subject learning while promoting their involvement and the development of disciplinary thinking.

Academic Literacy and Writing Across the Curriculum (WAC)

Academic literacy in undergraduate courses has progressively been considered more than the development of reading and writing academic genre texts, and it is currently understood as an integral part of the process of becoming a competent member of the disciplinary/professional community in the field of studies undertaken: a process of enculturation into the academic world (Bazerman, 2005; Carlino, 2013; Chalmers & Fuller, 2012; Chanock, 2007; Foster & Russell, 2002; Hjortshoj, 2009; Lea & Street, 1998; Prior & Bilbro, 2012; Russell, 1990; Turner, 2004). Complex as this process already is for undergraduates who pursue their studies in their mother tongue, achieving academic literacy in ELT vocational courses in non-English speaking countries is even more challenging. Students are trained not only to become proficient EFL users, but also to belong to a scientific discourse community that requires them to develop specific disciplinary knowledge skills and thinking patterns in the fields of English language studies and other related disciplines.

In this scenario, WAC has provided an empowering teaching/learning approach, which promotes the development of academic reading and writing as
professional practices, as well as powerful epistemological tools for constructing disciplinary knowledge. This means reading and writing as the means to gain and hold on to transform, and communicate knowledge (Bazerman et al., 2005; Carlino, 2013; Jones, Turner, & Street, 1999; Prior & Bilbro, 2012; Young & Leinhardt, 1998).

WAC has operated a paradigmatic change in the development of academic literacy, mainly through various approaches to the advancement of theory and research in writing pedagogy (Bazerman et al., 2005). Aware of the fact that most writing assignments at this level are based on the materials that students read, the research agenda of one of these approaches has been the relationship between reading and writing, as well as the way in which the development of these macro-skills condition each other (Flower et al., 1990; Fulwiler & Young, 1982). Another approach focuses on student-centered engagement with disciplinary content, which is to be achieved through writing instruction (Fishman & McCarthy, 1996; Freedman, Adam & Smart, 1994). Yet another research agenda within WAC, known as the “rhetoric of inquiry” (McLeod & Maimon, 2000; Russell, 1994), focuses on the close relationship between reading and writing skills and the research thought patterns for the development of knowledge in the different fields. Although these approaches emphasize different aspects of the process of academic literacy, they cannot be considered independent fields; they often work together in WAC programs and writing teaching practices (Bazerman et al., 2005).

As a programmatic and pedagogical movement, the central aim of WAC is to change reading and writing teaching practices in the classroom, mainly by raising disciplinary teachers’ awareness of the close and defining relationship between reading, writing, and disciplinary content on the one hand, and research thought and learning patterns in different fields on the other. This knowledge aims at enabling and encouraging disciplinary teachers to improve writing assignments in their courses (Bazerman et al., 2005; Prior, 2013; Russell, 1990, 1994). The WAC approach promotes the implementation of professional-like, meaningful assignments in the classroom, thus fostering the process of enculturation (McLeod & Maimon, 2000) and the development of advanced literacy skills in institutional environments.

**DDL in the EFL Classroom**

The implementation of simple research assignments applying DDL can help students gain and consolidate critical thinking and knowledge in language studies, both about the English language as a system and about English as a foreign language in different disciplines. Pioneered in the classroom by Tribble and Jones (1997), Corpus Linguistics has contributed to the EFL teaching and learning process by providing a large number of genuine natural texts in a way that makes it possible to capture and easily observe linguistic phenomena in digital and digitized corpora in co-textual environments. Römer (2006) identifies two approaches to the use of corpora in ELT: direct and indirect applications. On the one hand, direct applications are carried out by linguists and researchers for the development of teaching materials (Mussetta & Vartalitis, 2013). On the other hand, indirect applications allow students in the classroom to study language. As an example of this indirect application, DDL has proved to have a great potential for language teaching and learning (Aston, 2001; Braun, 2005; Burnard & McEnery, 2000; Johns, 2002; Sinclair, 2003; Singer, 2016; Tribble, 2015; Tribble & Jones, 1997). Profiting from the advances in ICTs, digital and digitized corpus-based pedagogy promotes a constructivist/inductive approach to language learning (Flowerdew, 2015), which also fosters critical thinking and an emerging but significant research culture as the defining aspect of the target professional community.

DDL is an original framework for comparing definitional and contextual treatments: a computer-based study of language that relies on samples of language use in its natural contexts. This method makes use of great collections of oral and/or written texts that contain millions of words in corpora gathered according to specific research criteria. The digital and digitized corpora can be electronically scanned, allowing for both quantitative and qualitative analysis. That is to say, they lend themselves to be studied in terms of frequency counts of different linguistic phenomena, as well as in relation to the interpretation of the numerous associations.

The possibility of observing the use of language in a great number of texts, not only at a micro level, but also at a macro level within and throughout a variety of samples as well as throughout various texts, registers, and disciplines, constitutes a powerful learning and research tool for undergraduate ELT trainees. These corpora represent an important empirical reference to the descriptions and analysis that EFL course books and traditional grammar texts provide about the use of the language. With the help of concordancing software, students find numerous examples in digital and digitized corpora to illustrate the prescriptive descriptions of the organized nature of language as provided by traditional grammar textbooks. Moreover, they may also find cases that contrast with and/or sometimes contradict those descriptions. Most of all, this computer-based linguistic analysis has simplified the research process since the computer fulfills the task of the statistical data treatment and allows for quick and effective verifications of working hypotheses.

In this type of research assignments, DDL can “challenge the traditional paradigms regarding the
Indeed, teachers assume the role of facilitators, promoting both the students’ autonomy in their learning process (Bernardini, 2004) and the development of academic literacy in their ELT undergraduate courses.

The Tools

One of the software tools used in our classes for conducting data-driven language analysis is the Compleat Lexical Tutor (CLT), available at http://www.lextutor.ca, a free website developed by Tom Cobb from the University of Quebec. This website contains a vast range of resources for teaching, learning and doing research on vocabulary and grammar. Linked to entries in the WordNet dictionary, the CLT has corpus and text-based concordancers in different languages (at http://www.lextutor.ca/conc/) that allow users to scan various corpora in order to look at instances of language use in natural contexts. The available corpora in English, constantly enlarged and updated, include the Brown and British National Corpus (BNC) in both spoken and written forms, and an Academic General corpus of six million words (at http://www.lextutor.ca/conc/eng/). The highly operational interface offered by CLT makes this website for data-driven teaching and learning a user-friendly tool. The user can find specific information on the available corpora, fragments of the source texts that comprise the corpus in use, and links to other resources, such as the WordReference dictionary. Learners enter keywords and can customize the search, sorting the keyword to the left or to the right. Options include adding a second associated word for generating more specific results, and the concordanced output will show the keyword as it has been used in real contexts. The tool, which features a standardized or relative frequency count per million words, offers students the means to search for frequent collocates and to verify their own use of concordances for frequent words in different contexts.

Another software used in our classes to scan corpora for corpora research assignments is the set of basic tools offered by the software to read PDF documents. One of these features is the popular advanced search function, which allows the user to search a word or expression across a single PDF document or any number of them saved in one folder. This function is case sensitive, and it allows for the choice of searching family words.

Implementation of the DDL Research Assignments

In our action research, the DDL research tasks are assigned to undergraduate students in the second and fourth years of a four-year teacher training program in Argentina in two annual subjects: the Language class and the Literature class. While second-year trainees hold a B2 level of linguistic competence according to the Common European Framework Framework of Reference for Languages (CEFR) (Council of Europe, 2001), fourth-year students have already achieved a C1+ level of competence. The following sections outline examples of the implementation of various DDL research assignments in the Language class in second year and the Literature class in fourth year.

DDL Research Assignments in the English Language Class

One of the pedagogical applications using the corpus concordancer on Tom Cobb’s website for our second-year students in the English Language class is a research assignment aiming at both consolidating their grammar knowledge of reporting verbs and raising their awareness of the use of these verbal forms in academic genre texts (see Appendix A Assignment # 1). In this practice, students are presented with a list of reporting verbs whose grammar structure, clause patterns, and use have been previously studied and discussed. The trainees must do research using the online concordancer to verify the frequency with which these verbal forms are used in different contexts. Following, students compare and contrast the prescriptive rules in grammar textbooks and/or dictionaries with the actual use of the language in its natural environment. After peer discussion under teacher supervision, trainees are asked to submit a brief written report answering the questions posed in the assignment.

Another task involves exploring the use of verb patterns with infinitive forms with the aim of consolidating the grammar content and the meta-language students need in order to refer to the system of the language (see Appendix A Assignment # 2). The assignment includes a couple of verbs that are typically followed by infinitive forms. Students are first asked to verify and compare the frequency of these verbs in two different corpora. Next, the qualitative analysis consists in identifying the infinitive form that typically follows these verbs. Students answer questions on the structure of these patterns and on whether their findings coincide with the explanations provided by the grammar reference in the dictionary. Finally, they are asked to submit a brief report with their findings.

DDL Research Assignments in the Literature Class

In the context of the implementation of DDL research assignments with our fourth-year students in the Literature class, the advanced search function on PDF readers is used to raise students’ awareness about the use of the language in the discipline of literary criticism, such as the particular occurrence of certain
collocations and structures that are specific to the field. Given the lack of corpora comprising digital and digitized academic texts in the area of literary studies, the first task our students need to fulfill is the collaborative building of tailored corpora to be later scanned. For this purpose, they are asked to conduct an online search in the university digital library in order to collect glossaries of literary terms, textbooks on literary writing, and literary journals, which must be downloaded in a pdf format. Three general folders are to be generated: one for the glossaries, one for the textbooks, and one for the journals. Students are then required to classify the latter thematically in order to make future search tasks more efficient. There must be a different folder for each of the categories selected: for example, Modernist fiction, contemporary poetry, postcolonial studies, and so on. A single folder must also be created to include all the files together.

Once the tailored corpora are ready, the students are able to conduct different DDL research assignments by means of the advanced search function with the purpose of developing their competence as users of the language in the context of the discipline. For example, they are asked to check the occurrence of particular expressions to see with what frequency they are typically used by experts in the field, in order to contrast their usual lexis choice with that of those whose productions are published in the discipline (see Appendix B Assignment # 1). Next, the task involves the deeper analysis of those expressions with the highest occurrence in order to further their study of the structures they usually occur in, the words they typically collocate with, and so on (see Appendix B Assignment # 2).

Benefits of the Proposal

After two years of implementing DDL research assignments in our classrooms, we have observed how our students have profited from them in numerous ways. They have been introduced to research practices that they will consolidate in their future professional lives, and this has contributed to their process of enculturation, increasing our trainees’ content learning while promoting the development of disciplinary thinking. Besides, they have become more confident in the use of technologies for educational purposes. In this regard, the choice of user-friendly software has allowed them to carry out the DDL tasks without being required considerable computer skills or much background knowledge in statistics. In fact, the mere result of the frequency counts of a keyword in different corpora already constitutes valuable information about the use of lexical items in natural contexts.

Towards a more qualitative analysis, comparing and contrasting the prescriptive rules given in grammar texts or dictionaries with the actual use of the language for the different meanings of the language items under analysis has also helped raise students’ awareness of the relationship between prescriptive descriptions of lexicogrammatical structures and the actual use of the language. Moreover, the decisions students need to make when customizing their search before running the concordancer, such as associated words to the left or to the right of the keyword according to the description of the clause pattern, already promotes critical thinking about the language as a dynamic system. Customizing the search of the keyword in order to retrieve examples of the verbs in their different tenses, for example, has also fostered meta-language acquisition.

The task involving the generation of their own tailored corpora in the literature class has also been beneficial in many ways. It has provided the students with their own resource, which would not have been available otherwise. More importantly, it has familiarized them with the scope and target of the different academic publications, as well as with the criteria for selection in terms of indexation, peer review systems, and the like, thus fostering the development of the academic skill of data administration. The decision making process at the time of generating the folders for the corpora—involving a basic knowledge of literary genres, movements, and approaches—has also contributed to the development of an increasing awareness in the literary field.

Indeed, tasks of this kind have made our students active protagonists of their own learning, as they are encouraged to carry out their own search practices once the tasks have been systematized. DDL conceives teachers as “directors or coordinators” (Singer, 2016, p. 158), aiming at exposing students to genuine texts as directly as possible, which, in the context of teacher training, fosters professional enculturation and the advancement of both linguistic and academic competences. In this respect, our proposal in its versatility lends itself to being applied to native speakers as well. It can not only foster their acquisition of a more professional, polished language, but also contribute to their process of enculturation through academic literacy.

Conclusion

So far, DDL assignments have only been implemented in two different classes in our teacher training program for the last two years. Our action research project still needs to be developed in time and applied extensively to other subjects in the program in order to systematize the practices we advocate for, as well as to consolidate their potential benefits. Furthermore, the actual impact of the implementation of DDL assignments in the classroom might only become evident in the long term, and even after graduation.
since DDL is only one more pedagogical aid in a very complex process.

Nevertheless, from a constructivist approach, the implementation of simple but meaningful professional-like research assignments of an inductive nature in pedagogical corpus applications in our ELT training program—such as the examples in this paper—has proved to be fruitful. On the one hand, it has allowed for enhanced teaching/learning strategies that promote critical thinking while developing and consolidating content knowledge about the system of the language in direct connection to the use of the language in specific contexts. On the other hand, it has fostered the development of our trainees’ academic skills that are essential in higher education and the target research culture. Going beyond the development of academic reading and writing as isolated macro skills in higher education, the process of academic literacy engages trainees in the development of professional competences. DDL holds the potential to be an empowering tool within the WAC approach in EFL teacher training programs.

References


Braun, S. (2005). From pedagogically relevant corpora to authentic language learning contents. ReCALL, 17, 47-64. doi: 10.1017/S0958344005000510


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Appendix A

Assignments in the English Language Class

Assignment # 1: Reporting verbs revisited

In this practice, we will analyze the use of reporting verbs in digital/digitized genuine texts.

1. Run the CLT (http://www.lextutor.ca/conc/eng/) with the reporting verbs in the box using the Academic General corpus, and, with the help of the online dictionary, answer the questions below.

   offer – refuse – agree – admit – regret – deny

   a. Are these reporting verbs frequently used in academic texts?
   b. What are the most frequent clause patterns featuring these reporting verbs for the meanings described in the dictionary?
   c. Does the explanation provided by the grammar reference in the dictionary coincide with the results of your search?
   d. Provide examples to illustrate each case.

2. Submit a brief report with your findings.

Assignment # 2: Similar but different: begin and start

1. Run the CLT (http://www.lextutor.ca/conc/eng/) with the verbs begin and start, using two different corpora of your choice. With the help of the online dictionary, answer the following questions.

   a. What is the frequency of these two verbs in the different corpora?
   b. What form of the infinitive (to inf. or ing) are they typically followed by in the results of your corpus search? Is this pattern related to whether the verbs that follow them are state or action verbs? Or is this related to the tense these verbs are used in when constructing the clause?
   c. Does the explanation provided by the grammar reference in the dictionary coincide with the results of your search?

2. Submit a brief report with your findings.
Appendix B

Assignments in the Literature Class

Assignment # 1: Occurrence and collocations of certain expressions and structures in literary criticism

1. Open the advanced search function on a PDF document. Check the occurrence of piece of writing in the Literary Criticism Corpus. How many times is it used? Is it a recurrent expression in this field?
2. Scan the same corpus for the words poem and novel. How many occurrences are yielded? What does this tell you about the specificity of the register in the field of literary criticism?
3. Review your own essays to extract recurrent expressions and structures you typically use (e.g. the verbs express and depict, or passive constructions like it can be said that). Following, scan the Literary Criticism corpus again to see how often they occur, and in what cases. Reflect about the differences between the way you use them and how they are used in professional contexts.

Assignment # 2: Tone as a typical analytic term in literary criticism: meaning and use

1. When writing a literary essay, sometimes you need to make sure that you refer to particular literary devices in an appropriate way, and a monolingual dictionary cannot help you much. Scan the Glossaries of Literary Terms corpus to compare and contrast the entries offered on the term tone. What features are considered in the different definitions? In your opinion, which is the most complete or appropriate definition? After considering the different entries on the term, can you think of a definition of tone of your own?
2. Now that you have a better understanding of the concept of tone, you can explore the way to use the term in your essay. The collocations dictionary might be too general in scope, and provide only few examples. Thus, scan the Literary Criticism corpus for the word tone and answer the following questions:
   a. Is the sentence structure “The tone of the … is + ADJ (eg. sad, ironic) recurrent?
   b. What about the use of adjectives in the attributive position (ADJ. + tone)? Is it more frequent than the first case?
   c. What structures is tone typically inserted in?
   d. What adjectives are most recurrently used to refer to tone?
   e. What other ways are there to refer to tone?