An Approach to Teaching Academic Writing to International Graduate Students in Colleges of Engineering

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Introduction

Communication skills used by all engineers include writing, reading, speaking, and listening. Whereas reading and listening focus on comprehension, writing and speaking are forms of expression. Engineers employ technical writing with the goals of being accurate, brief, clear, and easy to understand. Engineers use many forms of written communication: on the job, they compose technical memoranda, project reports, and proposals for new business; while in graduate programs, they may assist professors with technical reports and publishable articles, while individually writing their thesis or dissertation. Written English has many conventions intended to impose order on the chaotic English language. While the graduate student may eventually encounter a “style manual” at his employer, international graduate students who are still learning to write technical English require a more active, rather than passive, learning method. This paper presents a case study of one approach to teaching English academic writing skills to international engineering graduate students.

Faculty and scholars alike have recognized the field of second language writing as being an increasingly critical part of the higher education system within the United States. The high percentage of writing courses offered to students from non-English-speaking backgrounds at institutions of higher education serves as evidence of this growing interest. Yet, once these second language students reach the graduate level, many faculty still face the profound—and time consuming—challenge of not only correcting the writing of their international students, but also elevating their written language to a level acceptable in graduate studies. As is argued in this paper, the origin of the previously mentioned pedagogical challenge faced by graduate faculty is three-fold: the majority of second language writing curricula at higher education institutions do not emphasize the advanced, technical, and discipline-specific composition skills nor the elevated vocabulary indispensable to international graduate students to successfully navigate the academic and scholarly research environment; many supervisors, committee members, and graduate faculty often lack the time to thoroughly and adequately provide feedback on language use to international graduate students, thus relegating the academic discourse
socialization process solely into the hands of the international student; furthermore, graduate student development programs at institutions, such as graduate writing centers, are seldom staffed with specialists trained in the field of second language writing (and pedagogy).

This paper examines the creation of a discipline-specific academic writing course for international graduate students in engineering programs through the collaboration of a college of engineering and an Intensive English Program (IEP) faculty member specializing in international student composition at the graduate level. The course is designed to facilitate, through metadiscursive support, the socialization of international students in the University of Mississippi graduate engineering programs into written discursive practices of their communities.

Theoretical Background

Central to this discursive challenge that many international graduate students face upon entrance into graduate programs is the notion that students must be socialized, or enculturated, into the oral and written discourse of their respective discourse community. This idea of discourse socialization is cleverly viewed by Casanave [1] as a set of “writing games” for which students must learn the rules—or learn how to adapt the rules—in order to participate in their discourse communities. Too often it is assumed and expected that international students will already be fully apprenticed into the target discursive practices of their field. While many students who enter into U.S. institutions of Higher Education may take a number of academic writing courses in their undergraduate career by means of an Intensive English Program or other English Language Program, many of these courses do not place emphasis on the advanced, technical, and field-specific writing skills needed to successfully navigate the academic and scholarly environment. Indeed, these courses typically focus on genres of essay writing (e.g., expository, descriptive, narrative, argumentative) instead of scientific, disciplinary genres that are crucial in the process of developing theses and dissertations as well as in the process of expanding future academic careers (including publications). This issue is magnified when looking at the two current English proficiency tests that dominate the American university admissions process. While the Test of English as a Foreign Language (TOEFL) and the International English Language Testing System (IELTS) do
test for academic writing proficiency, they do not explicitly test for the elevated discursive practices and technical writing within the graduate school context. Thus, while an international student may be deemed proficient in academic writing based on standardized test scores, these scores do not necessarily correlate with future student success at composing the disciplinary genres that are required of them in their field.

To address this steep linguistic learning curve that international students face upon entrance into graduate programs, many second language writers seek academic writing support from (1) graduate faculty or (2) institutional services, such as graduate writing centers. As supervisors and committee members typically oversee numerous graduate students and their dissertation proposals, the time-consuming task of vetting all papers and providing explicit, quality feedback is largely unachievable. While students may then seek assistance within university writing centers, previous research on writing centers and other institutional services offered to international graduate students has largely criticized and critiqued the ability of writing centers to effectively assist international students (Myers [2]; Nakamaru, [3]; Rafoth, [4]). Not only are writing center staff and tutors seldom trained in the field of second language writing pedagogy, the writing center approach to giving feedback (non-directive and without proofreading) to students may not provide the more explicit and direct assistance that many international students need and request. Furthermore, many writing centers within U.S. universities tend to categorize graduate students “as an all-encompassing group despite the fact that it includes a diverse range of writers with different skills and abilities, including international students from very different linguistic, rhetorical, and educational backgrounds” Okuda and Anderson, [5, p.4]. Based on the evidence above, it seems worthy for institutions to consider alternative services that address the specific writing needs of international graduate students. A case study of one approach to address the high-stakes, discipline-specific demands of academic writing at the graduate level are presented below.

Course Offering at University of Mississippi (UM)

IE 500: Academic Writing for International Graduate Students is designed to assist international students in graduate engineering programs with the navigation of academic writing at the
The course is instructed by a faculty member within the UM Intensive English Program. At the outset of each semester, faculty from within the UM College of Engineering brief the instructor on issues they are experiencing in regards to the written discourse of international graduate students enrolled in their respective departments. Students enrolled in the class take on the role of researchers as they explore articles in their field and identify lexical, syntactic, structural, and rhetorical practices. Students also identify and analyze conventions of publications in their field through text analysis, observations, interviews, and other verbal exchanges. Finally, students will learn how to approach academic writing at the graduate level, with emphasis being placed on how to organize and produce texts which meet local conventions while creating a space for themselves. The objectives of the course include:

1. Students become aware of expectations of other researchers and journal editors in their field;
2. Students learn to read articles for content, text structure, and language use;
3. Students will develop grammatical accuracy and stylistic variety through contextualized review of problematic areas of grammar;
4. Students will identify and document conventions of publications in their fields;
5. Students will develop familiarity with the established forms and writing conventions of journals in which they will publish their
   a. Thesis or dissertation results, and
   b. Future research.

Course Materials

The required materials for the course include a student-developed corpus of 10-15 published research articles from their discipline and research specialty for analysis to determine important characteristics of writing within their respective disciplines. Students enrolled in the course are also prompted to bring to class a piece of writing that they are currently working on (e.g., research articles, reports, dissertation) so that as students identify and code these characteristics of written discourse within their discipline, they can apply their findings to their own research. As a supplementary text, students are encouraged to purchase the following textbook: Swales & Feak, *Academic Writing for Graduate Students: Essential Tasks and Skills (3rd ed.), University of Michigan Press*. Certain sections of the course text are employed for reading and writing assignments, with other sections being made available to students for future reference as researchers. Finally, throughout the semester, students also make use of various online resources,
such as the Corpus of Contemporary American English (COCA), the largest corpus of English, to further analyze conventions of scholarly, academic writing.

Course Writing Guides

While some attributes of academic writing remain constant across disciplines, others vary to meet standards and expectations of specific fields. One of the main goals of the course is to help graduate students develop familiarity with the established forms and writing conventions within their field. Thus, throughout the semester, graduate students examine texts from their respective discipline to explore how to write for their field. Through these assignments, students create their own field-specific writing guide. This guide not only aids in any major writing assignments for the course, but can also be utilized as a reference tool for other writing projects during their degree.

- Organization & Development of Ideas
- Format & Documentation Practices
- Language, Style, & Vocabulary

Course Grammar Logs

Writing must be properly constructed to achieve its purpose. Thus, no matter how excellent the organization and style of a piece of writing, grammatical accuracy is essential to the success of a writing effort. To aid international graduate students in achieving grammatical accuracy in their writing, each student creates and keeps a grammar log throughout the course of a semester. In this log, students record and track grammatical mistakes that they have made in their formal written assignments in the course or within other graduate courses. Often, writers discover that they repeatedly make similar types of mistakes, and keeping a grammar log will enable students to identify the types of grammatical errors that are made frequently so that they may learn how to avoid such mistakes in the future.

Course Assessment and Course Portfolio
A pre- and post-assessment of alterations made to written discursive practices—including grammatical, organizational, and stylistic conventions covered throughout the course—is given to students to assess their development and understanding of technical writing employed in their respective fields. Furthermore, at the end of the semester, students submit a complete portfolio of all major assignments for the class. This portfolio includes all grammar logs as well as five pages of writing based on the information gained from completing the writing guides.

Conclusion

There is a long history of articles similar to this one attempting to identify the ways in which international students, particularly at the graduate level, successfully navigate and become socialized into the academic discourse (both oral and written) of their respective communities of practice and how institutions of higher education are supporting, or hindering, the successful socialization of these students. It can be concluded from the large enrollment numbers and continued success of the course, along with measurable improvements to the written discourse of students, that there remains a strong need for academic discourse socialization support. Further research into this area of inquiry is needed, as Duff [6] argues, “The successful socialization of both nonnative and native writers worldwide has, it seems, become a higher-stakes enterprise as assessments for scholarships, grants, degrees, and jobs require more strategic and visible output with greater perceived impact than ever before. Therefore, schools, universities, and other sites for socialization into academic discourse and into academic discourse communities need to increase the metadiscursive support made available to students and instructors to enhance the quality of language and literacy socialization in their midst and to accommodate and support newcomers—from all language backgrounds—within these discourse communities more satisfactorily and seamlessly as well (pp. 186-187)”. Indeed, the implications of these findings for changes in support programs, institutional policies, and pedagogical practices can offer the field a more thorough perspective into the intricate and dynamic nature of academic discourse socialization and how institutions of higher education can better serve international graduate students.

References


