

# Understanding and Crossing Disciplinary Boundaries: Pedagogical Insights from an Interdisciplinary Graduate-level EAP Course Sequence

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## Abstract

Over the past thirty years, the popularity of interdisciplinary approaches to academic study has grown. At the same time, there is a growing consensus that English for academic purposes (EAP) courses should move away from teaching “general” study skills and instead teach discipline-specific academic literacies. For instructors of graduate-level EAP courses, these seemingly contradictory trends can pose challenges for curriculum design and instruction.

This chapter presents an interdisciplinary pedagogical model for a two-course EAP sequence taught at a newly formed Sino-foreign joint venture university. While both EAP courses are designed to help students develop interdisciplinary awareness, they do so in different ways depending on whether the focus is on academic oral or written communication skills. Faculty and student feedback on the course sequence is discussed, leading to several recommendations that could be easily adapted for various teaching contexts and other student populations.

Keywords: academic oral communication skills; academic writing; curriculum design; English for academic purposes (EAP); interdisciplinary; Sino-foreign university

Over recent decades, the popularity of interdisciplinarity approaches to academic study has grown (Chandrasoma, 2010) while at the same time, there is also a growing consensus that English for Academic Purposes (EAP) courses should move away from teaching “general” study skills and towards discipline specific academic literacies (Murray, 2016). However, for graduate-level EAP contexts, where students need to adequately engage within specific academic discourse communities, these seemingly contradictory trends can pose challenges for curriculum design and instruction. Yet, Hyland and Shaw (2020) note four main principles of EAP: authenticity, groundedness, relevance and interdisciplinarity, the latter of which emphasizes the strength of how EAP as a discipline applies several theories and methods to specific registers. The interdisciplinary nature of EAP as a field has thus led practitioners to view positions of the specific/general EAP debate no longer as a dichotomy but rather as ends of a continuum. However, context is crucial when determining the level of specificity for EAP instruction. For example, for undergraduate students, who often enroll in EAP courses before declaring majors, perhaps more general provisions are appropriate. In contrast, for graduate students, who are working within a specific discipline with potentially higher communicative expectations, perhaps more discipline specificity is required. Irrespective of level of study, students are currently exposed to and expected to grapple with bodies of work that are far more interdisciplinary than previous traditional mono-disciplinary contexts (Chandrasoma, 2010) and as such, interdisciplinary approaches to EAP are required.

As this chapter will present an interdisciplinary approach to EAP for a context involving several graduate level disciplines, it is worth first considering how different disciplines are viewed within the literature. Becher (1989) uses a typology to organize disciplines according to their paradigmatic and theoretical orientation (hard or soft) and knowledge application (pure or applied) with Kellert (2008, p. 72) highlighting the ‘disciplinary prestige’ held by academics within natural science disciplines. In contrast, and linking to the topic of this chapter, Flowerdew (2019, pp. 52-3) provides an excellent explanation as to why the discipline of EAP often holds a weak position in terms of university power relations. Furthermore, Trowler (2019, p. 101) expands upon Becher’s (1989) typology by terming ‘hard-pure’ disciplines, such as physics, where research is often conducted collaboratively in large teams with common research practices and protocols, as ‘urban’ and ‘highly populated’ requiring much interpersonal interaction. In contrast, Trowler (2019, p. 101) terms ‘soft-pure’ disciplines, such as sociology, as ‘rural’ and ‘sparsely populated’, where individual research is more common and the aim is to create new knowledge rather than build upon previous knowledge.

Such interdisciplinary differences are not only observed in the research practices and academic language (Shulman, 2002) used by members of these academic communities, or as Becher (1989) calls them ‘academic tribes’. As Trowler (2019, pp. 101-102) points out, such differences are also noticeable in the teaching and learning that occurs within the classroom. As such, these ‘regimes’, as coined by Trowler (2019), are likely to be impressed upon students during their studies. For example, students of ‘hard-pure’ disciplines are likely to be exposed to more teacher-centered approaches and focus on working through tasks with specific answers. This is likely in contrast to students of ‘soft-pure’ disciplines who may be exposed to more inductive, student-centered approaches where critical thinking is required and multiple possible answers available. Such learning experiences and subsequent learning habit formation may have implications for EAP instruction of learners from different disciplines and is something EAP instructors should be aware of. Furthermore, graduate students taking EAP courses, and who are still exploring their discipline, may associate the ‘disciplinary prestige’ mentioned by Kellert (2008, p. 72) to English language ability and previous educational experience. For example within the context of the EAP course sequence to be presented in this chapter, it is often the case that Environmental Policy graduate students will enter graduate school with a higher English language proficiency and more experience of writing academic English than students from other disciplines and therefore, may be perceived to have higher academic prestige.

Kellert (2008, p. 36-39) uses metaphor to define disciplinarity, and of particular interest to this chapter, is the metaphor *disciplines as languages*, with Bauer (1990) suggesting that different disciplines use different grammars and lexis. Furthermore, Hyland and Shaw (2020, p. 21) report that different disciplines draw on different lexical, grammatical and rhetorical resources to form specialized knowledge. This is highly relevant to interdisciplinary EAP pedagogy and instruction as these “different ways of talking” (Shulman, 2002, p. vii) need to be understood by members of different disciplines before successful collaboration can take place, which as Richards and Choi (2017) state is at the heart of interdisciplinarity. Furthermore, as Hyland (2018) rightly points out, the role of EAP instruction should be to familiarize students with the relevant communicative conventions required by apprentice members of a target discourse community. This links to current trends for EAP instruction to move away from more general and centralized English instruction and towards more specialized, discipline specific instruction of academic

literacies (Murray, 2016). However, this notion is perhaps counterintuitive for EAP programs that aim to promote the kind of interdisciplinarity described by Richards and Choi (2017). Furthermore, Flowerdew (2019) warns that due to neoliberalism and other competitive forces, EAP units may become viewed as cost centers requiring more general course offerings that can be applied to students across various disciplines without specialization.

Consequently, a balance needs to be struck between ensuring students receive EAP instruction that adequately prepares them to successfully enter and engage with their disciplinary discourse community, while at the same time providing an offering that is available to students of different disciplines and that promotes collaboration across such disciplines. In order to achieve this, students from different disciplines may benefit from being integrated in the same EAP classroom so that they can experience different ways of thinking and raise their awareness of their own discipline and its boundaries. EAP courses that are open to students across all disciplines and are designed to support students' academic English language development provide the ideal space for such cross discipline integration, understanding and pollination. To support EAP practitioners who may need help navigating along the general-specific continuum, this chapter presents a pedagogical model for an interdisciplinary graduate EAP course sequence. Specifically, this EAP course sequence adopts two contrasting approaches to interdisciplinarity depending on the target language skill being taught.

## **Context**

The graduate EAP course sequence to be presented in this chapter is delivered at Duke Kunshan University, a newly formed English-medium, Sino-foreign, joint-venture university. This research and liberal-arts oriented university aims to provide an interdisciplinary undergraduate and graduate curriculum to an international student body. The university currently offers graduate programmes in computer engineering, international environmental policy, global health and medical physics, with most graduate students spending the second year of their respective two-year programmes at Duke University, US. With this context in mind, the EAP course sequence to be presented is broadly intended to help graduate students succeed in their research and/or professionally focused graduate school programmes as well as during their time studying abroad.

Upon enrolment, all students within the four graduate programmes take academic writing and speaking placement tests to determine their eligibility for enrolment on EAP courses. As the vast majority of graduate students at Duke Kunshan University are second language English users with a large majority being of Confucian Heritage, most students do enroll on the EAP courses based on their placement test results. Furthermore, the value that students see in taking EAP courses is evidenced by the fact that those who 'test-out' regularly request to take the EAP courses. As faculty in the university's Language and Culture Center, my colleagues and I are responsible for placement testing, curriculum design, assessment, and teaching of the two graduate EAP courses. What follows is an overview, with support from the literature, of how my colleagues and I have designed the EAP course curriculum in a specific sequence to incorporate both interdisciplinarity and discipline specificity. This overview is followed by student course evaluation feedback and faculty reflections that have been used to propose several key

recommendations for EAP practitioners seeking to develop interdisciplinarity in their own EAP courses.

### **Phase one: Graduate academic communication skills course (GACS)**

#### Introduction

The first part of the two-course EAP sequence is a compulsory, first semester, credit/no credit graduate academic communication skills course (GACS). Classes meet twice per week for 75 minutes for 14 weeks. To encourage interdisciplinarity and in particular “communication and collaboration across disciplines” (Jacobs & Frickel, 2009, p. 43), classes comprise students from across all four of the different graduate programs previously introduced. The primary course objectives aim to develop students’ English oral academic presentation and discussion skills which have both been shown to cause international East Asian students anxiety (Kim, 2006; Woodrow, 2006). To do this, GACS follows Ibabe and Jauregizar’s (2010) recommendation to incorporate regular self-assessment into the curriculum. This is further supported by Nicol and Macfarlane-Dick (2006) who promote utilizing formative assessment strategies that provide learners opportunities for self and peer assessment. Based on this, the GACS pedagogy exploits formative opportunities for students to receive, reflect, and act upon detailed qualitative tutor, self, and peer feedback following a learner-focused new paradigm approach to feedback (Winstone & Carless, 2020). Furthermore, video recordings of students’ oral performances are used to promote reflection, which have been shown to improve oral presentation performance (Ritchie, 2016) without increasing student anxiety (Bourhis & Allen, 1998; Zheng, Wang, & Chai, 2021).

#### Interdisciplinary approach

The GACS pedagogy is built around three theoretical principles; performative habit building, reflection, and interdisciplinary audience awareness (Davies, Carter and Campbell, 2022). It is this latter principle that will form the focus of this chapter. At this Sino-foreign joint venture university, interdisciplinarity is at the core of the curriculum and students are encouraged to research collaboratively beyond their programmes. As such, the graduate students need to effectively communicate data, ideas, and concepts both within and across disciplines, and to wider public audiences, thus enabling them to successfully work on key current societal challenges as outlined by the National Science Foundation (n.d., para. 1). As a result, the GACS curriculum builds interdisciplinary audience awareness for times when students are required to communicate to diverse academic audiences. In order to achieve this, the curriculum incorporates Borrego and Newswander’s (2010) four elements of interdisciplinary scholarship, particularly “integration,” “communication and translation across interdisciplinary boundaries,” and “critical awareness” (pp. 66-69). To promote integration, GACS integrates classes as recommended by Newell and Luckie (2019), allowing students from different graduate programs to provide peer feedback, collaborate on academic projects, and discuss issues that “necessitate interdisciplinary approaches” (Newell & Luckie, 2019, p. 10).

Providing cross-disciplinary peer feedback also allows students to identify areas of common ground in their discipline as well as cognates that have different usages. Furthermore, as students

from different disciplines are often unfamiliar with the ideas and concepts presented by their peers, they are willing to question the validity of such unfamiliar content. Consequently, academic discussions as well as presentation question-and-answer sessions allow students to cultivate a critical lens of the scholarship within their own field. However, as Choi and Richards (2017, p. 79) rightly point out, cross disciplinary communication and understanding requires significant effort that goes beyond the simple translation of unfamiliar vocabulary. For example, Strober (2019), in her work on *interdisciplinary conversation*, likens it to communicating with members of another culture. As such, the GACS course provides opportunities for learners to develop cross disciplinary communication skills as both academic oral discussion participants and academic presenters/audience members.

## Oral assignments

### *In-class discussions*

Based on Kim's (2006) and Woodrow's (2006) findings that academic discussions cause East Asian International students anxiety, and insights from second language English speaker conversation analyses (Kaur, 2012; Kirkpatrick, 2007), the GACS curriculum covers a range of strategies for agreeing, disagreeing, paraphrasing, clarifying and requesting information in academic oral discussions. These skills are then put into practice in three 30-minute assessed academic discussions throughout the course each focused around different journal articles on an academic oral communication topic. Furthermore, teams of multidisciplinary student facilitators collaborate to prepare discussion questions, mediate and manage each discussion. These interdisciplinary academic discussions provide a platform for students to present, question and evaluate different approaches and ways of thinking both within and beyond their discipline. For example, they provide exposure to the "different ways of talking" across disciplines (Shulman, 2002, p. vii) at an early stage of students' graduate programs. Importantly, all discussions are recorded and circulated to students who write personal reflections on their performance to facilitate reflection (Ibabe & Jauregizar, 2010) and improved subsequent performance (Ritchie, 2016). Tutor, self and peer feedback is then generated in the next session during a reflective follow-up discussion where the same recordings are used to stimulate recall (Kennedy, 2017). This aspect of the pedagogy has recently been optimized through the use of an application called *Equity Maps* that records, tracks and analyzes individual and group discussion contributions and overall discussion equity. This provides additional visual and auditory feedback data, enhancing stimulated recall for richer reflective follow-up discussions.

### *Presentations*

GACS is centered around five 3-5-minute low-stakes formative presentations that focus on building skills related to field-specific genres, including professional introductions, describing a data visual, explaining a process, explaining a concept, and imitating the intonation and prosodic features of a dialogue. Furthermore, all academic mini presentations aim to develop students' adherence to professional question-and-answer procedures. Overall, these presentations are designed to help students present field specific concepts and data to audiences from varied academic disciplines. The presentations also serve to prepare learners for both their continued course work in their respective interdisciplinary fields of study as well as academic and

professional contexts beyond graduation. The rationale for students presenting topics related to their discipline is twofold. Firstly, as this is the start of their journey as graduate students and as many are new to their field, these students need to first develop a firm grounding in their individual disciplines in order to take part in interdisciplinary activities (Flowerdew & Costley, 2017). Secondly, by regularly presenting such discipline specific concepts to non-specialized audiences, students are able to explore the boundaries of their discipline and raise their own awareness of how the various disciplines represented in the classroom have “different ways of talking” (Shulman, 2002, p. vii). Choi and Richards (2019, p. 263) also note the importance of raising participants’ awareness of terminological differences but state it is more valuable to address the complex issue of conceptual differences. This helps justify the inclusion of the concept genre mini presentation and why it is placed towards the end of the curriculum, where students are more likely to have developed the linguistic resources to be able to discuss conceptual differences in field-specific terminology.

Preparing for each mini presentation follows a similar two-week process of language input, performance, and reflection. Furthermore, as it has been shown to improve presentation performance (Ritchie, 2016), each presentation is video recorded so that after class, students can watch their own recordings and the presentations of classmates to complete self and peer-evaluations and set specific improvement goals for subsequent presentations. This reflective process helps overcome reported issues of limited feedback uptake as highlighted by Northcott, (2019, p. 224) and aligns with current new paradigm learning-focused approaches to feedback (Winstone & Carless, 2020). Following this process, students meet with their instructor one-on-one and discuss their performance to facilitate teacher and peer dialogue about learning (Nicol & Macfarlane-Dick, 2006). In addition to the presentations themselves, students also learn question and answer procedures following curriculum developed for the Purdue University Oral English Proficiency Program (OEPP). As the semester progresses, students are encouraged to engage with the audience during Q & A in order to better explore the boundaries of their discipline in terms of what has and has not been understood and to actively engage in *interdisciplinary conversation* (Strober, 2019).

GACS culminates with the annual Graduate Student Colloquium where students collaborate in pairs based on shared research interests to present to the wider university community during interdisciplinary panel sessions that are also moderated by students. This high-stakes presentation is intentionally placed at the end of the course to provide a tangible goal to work towards and increase learner motivation, via positive washback (Green, 2013), to engage with the input and repetitive process of mini presentation preparation, performance and reflection. Students also collaborate and negotiate with peers across disciplines to develop suitable and engaging interdisciplinary presentation titles, abstracts and panel themes to encourage attendance to their session. These academic tasks facilitate in class discussion and promote interdisciplinarity as students work across disciplines to form suitable and coherent panel themes based on shared research interests and themes across graduate programs. Additionally, working with written title and abstract genres towards the end of the academic oral course acts as a transitional bridge to the upcoming second phase academic writing course which will now be discussed.

## **Phase two: Graduate academic writing course**

## Introduction

The second part of the two-course EAP sequence is a compulsory, second semester, credit/no credit graduate academic writing course. Classes continue to meet twice per week for 75 minutes for 14 weeks. In this course, students build academic and professional writing skills through a field-specific examination of the literacy practices that are common to their specific graduate school programs and are offered writing practice in genres in or closely related to those disciplines. Additionally, students learn useful organizational structures, improve their ability to write clear and concise texts, and increase the range of ideation strategies in the prewriting phase. Individualized instruction enables students to identify their strengths and limitations and make improvements in their writing. Overall, the base assumption of this academic writing course is that successful academic writing begins with audience awareness – a concept that students should already be familiar with from the previous phase one academic oral course. In line with the phase one GACS course, the academic writing course also builds regular metacognitive reflection into the curriculum through frequent self and peer evaluation (Ibabe & Jauregizar, 2010; Nicol & Macfarlane-Dick, 2006).

## Discipline-Specific Approach

In contrast to the phase one GACS course, that focuses heavily on developing students' ability to successfully engage in *interdisciplinary conversation* (Strober, 2019), the academic writing course intentionally draws students' attention to the specific requirements of writing within their discipline. This is because within the majority of university contexts, students attend academic writing classes in order to learn how to write so that they can participate in their disciplines and demonstrate to readers in those disciplines what they have learned (Hyland, 2016, p. 180). Furthermore, as mentioned previously, Flowerdew and Costley (2017) argue that apprentice scholars need to first develop a firm grounding in their individual disciplines before they can take part in interdisciplinary activities. Consequently, for the academic writing course, students are grouped separately into classes based on their graduate program in order to facilitate this discipline specific approach to academic writing.

To demonstrate the different norms of disciplinary writing practices, Hyland and Jiang (2019, p. 46) developed and analyzed a corpora to represent disciplinary distribution and change, over a 50 year period, of argument functions found in research articles across disciplines. In general, they found that academic writing is becoming more informational and less involved or interactional. However, this change was noticed far more in soft knowledge fields than in harder disciplines. Based on such empirical observations, no one size fits all approach to academic writing is suitable for students across different disciplines. Rather, learners need to be made aware of the specific norms of their discipline. Therefore, having already explored cross disciplinary boundaries, interdisciplinary communication strategies and collaboration within the phase one GACS course, the phase two academic writing course takes a different approach.

Learners are encouraged to explore patterns of academic language within their discipline via Data-driven learning (Johns, 1991). Using Swales and Feak's (2012) *Academic Writing for Graduate Students* and Caplan's (2019) *Grammar Choices for Graduate and Professional*

*Writers* as the core texts for the course, an inductive semi-analytical approach is taken where learners are encouraged to actively use corpora (for example, the Corpus of Contemporary American English and the Michigan Corpus of Upper-level Student Papers) and to also build their own mini corpora from research articles in their field and analyze the language data they collect for common features. Students then discuss and compare their individual findings in teams after class and report back their group findings during the following class. Such data-driven learning encourages language acquisition as it promotes ‘*noticing*’ (Schmidt, 1990) of gaps in learners’ interlanguage, especially relating to academic collocations and phrasing within their discipline. It also plays an important role in raising students’ awareness of the discipline-specific features of the academic genres they are exploring within their field and has also been shown to support graduate students’ thesis writing (Wong, 2019).

## Written assignments

### *Interview research project*

The first half of the academic writing course focuses on a collaborative group research interview project where students conduct primary research and present their findings by writing an academic research paper. Although collaboration between EAP and subject specialists has been shown to be beneficial in terms of course design (Hyland, 2016, p. 180) and feedback practices (Northcott, 2019), input from subject specialists for this academic writing course is obtained via the interview research project assignment itself. To encourage teacher and peer dialogue about learning (Nicol & Macfarlane-Dick, 2006) and to give students the opportunity to learn directly from the writing experiences of their graduate program faculty, several student teams each interview one faculty member from their graduate program about their academic and professional writing experience. Teams then type up and share their interview notes with all students on their graduate program, so that there is a larger data set, from a wider sample of faculty respondents, to use for the final analysis and write up.

As the questions and data are all specific to expert writers within students’ discipline, the project findings and the process of writing up are naturally directed towards field specific concepts and writing practices. Importantly, the interviews provide field-specific input to students in the early stages of their academic writing course that I personally would find difficult to provide as an EAP practitioner. However, after several cycles of this assignment, the input from subject specialists, data analysis and final student research papers all contribute towards raising my own awareness of the specific academic literacies of my students’ various disciplines which is recommended by Murray (2016). As a result, the continued support from graduate program faculty in terms of their time and input with this assignment is a crucial element of the ongoing course design and development process.

### *Literature review*

The second written assignment takes the form of a condensed literature review. For this assignment, students must individually select and read nine academic research articles from their discipline related to one specific topic of interest. After completing a literature review grid including the salient details for each article, students then synthesize all nine articles in a concise



and cohesive academic text of 450-500 words carefully following the moves of Swales' (1990) Creating a Research Space (CARS) model. By reading and synthesizing nine articles, students have the opportunity to compare the results from their previously written research paper to these samples which further encourages 'noticing' (Schmidt, 2000) and provides further exposure to the specific writing practices within their discipline. Students also have the chance to confirm if the assumptions made about writing in their discipline, based on their ongoing analyses and development of corpora, and completed group interview projects, are correct or require further refinement.

### *Genre analysis and portfolio of academic/professional texts*

The final written assignment takes the form of a genre analysis and portfolio of academic and/or professional texts. For this assignment, students must select five genres of academic or professional text that they have a personal interest in developing. Students then analyze the key rhetorical and lexico-grammatical features of each genre based on their chosen sample using a genre analysis grid according to audience, moves, content, layout, language, organization, grammar, and style. For context, commonly selected genres are abstracts, job application cover letters, professional emails, research articles, and response papers. Students then select three specific genres to focus on and independently source five strong samples of each to develop a corpus of 15 documents. Using these models, students expand upon their original genre analysis by identifying the obligatory and optional features of each genre according to their corpus. Then they are given optional contexts to produce one original, high quality final written text for each genre (or students can produce texts based on authentic personal contexts). For example, for the job application cover letter genre, medical physics students respond to a medical imaging job advertisement at a local hospital whereas computer engineering students respond to an internship advertisement at Microsoft.

The rationale behind this assignment is to ensure it is student-centered and related to students' personal, academic, and professional interests to encourage autonomy and independent language learning in the hope that students can continue to use these skills once they complete the course. For instance, by guiding students through the process of gathering a corpus of high quality samples and analyzing the common features, students should be able to do this independently with various genres of academic and professional text after graduation. The idea behind utilizing a portfolio for this assignment, where students collate samples, first drafts, final productions and a written reflection, follows Hyland's (2016, p. 221) argument that writing portfolios can be integrative, meaningful, motivating, reflexive, and formative.

### **Student feedback on the EAP course sequence**

Based on data triangulated between anonymous centralised student course evaluations, final written course reflections, and discussions during final one-on-one student conferences, students reported several benefits of this EAP course sequence.

GACS student feedback

In relation to the phase one academic oral communication course, students' confidence and competence in academic presentations and other speaking tasks noticeably improved. For example, one student commented, "I learned to feel more comfortable and less nervous in front of others on the stage." Another reported "the presentation part are so useful that I think I can do a good presentation even on a conference." Additionally, students reported benefiting from the opportunity to discuss their performances with their professor during conferences. One student commented that "one-and-one meeting is really helpful for me to get the feedback of my strength or weakness from the professor. From this conversation, I know exactly what areas I have to work on to make improvement." Another stated that "Conferences with instructor is the most helpful part to me. I always learn a lot from it."

Students also value the repetitive and reflective nature of regularly performing, re-watching, and self/peer evaluating. Student feedback suggests that this process helped them raise awareness of their specific strengths and weaknesses which they subsequently used to improve performance. For instance, one student reported, "I love the video recording. I can review them to understand my weak skills in my presentations." Another student echoed this sentiment, stating that "watching the presentation video of ourselves helps a lot." A third student described how she transferred these self-evaluative tools to other courses and areas of learning. She reflected that this course was the first time she had been asked to reflect on her learning, and she modified the self-evaluation tasks to use in her other graduate classes.

#### Academic writing student feedback

For the phase two academic writing course, students greatly appreciated having the opportunity to discuss disciplinary academic writing practices with their graduate program professors. To demonstrate this, one student commented "Before this course, I had never had such experiences to talk with the professors in ECE [Electronic Computer Engineering] areas and learn from their experiences and suggestions." The benefits of teamwork and collaborative writing in preparation for professional writing after graduation were also noted. For example, one student reported "In the future, I would also cooperate with my colleagues on some articles or documents. Then I could apply the strategy of the collaboration and teamwork to my work." This sentiment was echoed by another student who wrote "The discussion with the group members about the questions and collaboration is also thought-provoking. I think my partners really raise good questions which make me reflect on my own writing."

Students also highlighted the usefulness of Swales' (1990) CARS model in developing their academic writing and reading. One student reported "with the CARS Model, I could decompose my article into some small pieces of moves. I could finish each move with its different features easily. The decomposition made the writing become easy to learn and try." Another student reflected:

"The CARS model is really a good helper for me because I tried this model in my report writing process this semester and it really accelerated my pace of writing. Far from the writing itself, it provides me an analysis tool to separate information in a quick way. I think I can read literature much more efficiently by using this model to extract the information."

Further benefits were reported that related to the process of conducting a genre analysis to support students' production of professional and academic texts. For example, one student reported "From the samples and the materials, I learned the standard formats of the documents and I also got familiar with the frequently used expressions in different genres which greatly improved my accumulation of the language." Another student reflected that "Most importantly, genre analysis makes me think a lot about the purpose of writing. After this course, a concept has been repeated and stressed that the purpose and target audience is the most important thing during the writing process."

### **EAP faculty reflections**

Based upon post-teaching reflective discussions amongst the three graduate EAP teaching faculty (including myself), suggestions for increasing interdisciplinarity through course design will now be discussed. Firstly, despite the phase one academic oral course's objective to promote interdisciplinary communication, on reflection, the majority of students chose to present research with peers from within their discipline for the graduate student colloquium (GSC). The rationale behind allowing students to select their own teams was to promote learner autonomy and increase task authenticity by encouraging learners to explore mutual research topics of interest with peers to find collaborators, much like the real-world collaborative research process. However, in order to achieve what Choi and Richards (2017, p. 5) view as the key to interdisciplinarity, i.e. collaborative research meetings amongst members of different disciplines, perhaps this element of the assessment design could be optimized by making multidisciplinary student teams a formal requirement for the final GSC presentations.

Furthermore, although the phase two academic writing course aims to develop students' awareness of discipline specific genres and norms within their field by grouping students according to their graduate program, perhaps current trends suggest a more interdisciplinary collaborative approach to writing is needed. For example, Hyland and Jiang (2019, p. 14) point out that collaboration is now the norm in academic publishing and as publication is the aim of many graduate students, perhaps a more interdisciplinary collaborative writing project, where students work across programs, would be more reflective of actual current publication processes. To further support this point, it has been shown that multi-disciplinary collaboration can lead to productivity gains in publication (Skilton, 2009).

### **Implications**

Based upon the student and faculty reflections and feedback presented above, this chapter will now present some key implications for readers who may wish to consider implementing a similar EAP course sequence. Firstly, in relation to the phase two academic writing course, as Hyland and Hamp-Lyons (2002) rightly point out, it is not always logistically possible to provide specialized EAP courses for students of several different disciplines and this all depends on contextual resourcing provisions. For example, at this university, we graduate EAP faculty are fortunate as there are only four graduate programs. This therefore limits the number of disciplines that need to be separated. Moreover, EAP class sizes are capped at twelve students, making it more feasible to separate students according to program.

Furthermore, there are perhaps limits to how much the language specialist EAP instructor can promote disciplinary specific development. For example, it may be challenging for an academic writing instructor to provide students with substantial feedback relating to field specific content. However, graduate students need and prefer feedback relating to both content and language (Radecki & Swales, 1988). To address this, Northcott (2019) presents a model where written feedback responsibilities are shared between EAP writing tutors, who focus on areas pertaining to language, and discipline specialists, who focus on areas pertaining to content. This collaborative feedback model may be worth considering to ensure that accurate and useful feedback is provided on students' discipline-specific content. However, adopting such a model could prove logistically challenging as it requires strong collaboration between EAP and content specialists which may not always be possible. Nonetheless, increased collaboration between EAP and discipline specialists can ensure that EAP courses teach students the most appropriate genres and academic tasks for the field (see Hyland, 2016, p. 180 for an excellent example from an English for Clinical Pharmacy course).

Based on the pedagogical insights gained from the EAP course sequence presented, this chapter will conclude with a series of recommendations for developing interdisciplinarity in graduate level EAP courses:

1. Where possible, adopt a mixed approach to interdisciplinary EAP instruction and, if resources permit, provide separate courses for academic oral and academic writing skills. The academic oral course should precede the writing course and have an interdisciplinary focus, with the subsequent academic writing course having a more discipline-specific focus.
2. Integrate students from different disciplines (Newell & Luckie, 2019) within the phase one oral course so that they can explore the boundaries of their discipline and collaborate and communicate with members of other disciplinary discourse communities through academic oral presentations and academic oral discussions.
3. If resources permit, incorporate a university-wide graduate student research colloquium into the oral course as the final summative assessment. This provides a meaningful, authentic, and tangible goal to work towards, promoting positive washback (Green, 2013). It also allows students to collaborate across disciplines on key academic tasks and as the event is open to the wider university community, encourages them to communicate discipline-specific concepts clearly to a non-specialist general audience.
4. For the phase one academic oral courses, video record student presentation and discussion performances to stimulate recall, facilitate meaningful metacognitive reflection (Ibabe & Jauregizar, 2010), facilitate cross discipline peer feedback, and improve subsequent performance (Ritchie, 2016).
5. Collaborate with field-specific graduate faculty on course input and if it is not feasible to collaborate on co-creating curriculum (Hyland, 2016, p. 180) or share written feedback responsibilities (Northcott, 2019), then try to involve them in student research projects to obtain valuable input and data related to discipline-specific genres and academic literacies that can then be used to develop the EAP curriculum.
6. For the phase two academic writing course, try to develop a data-driven learning approach (Johns, 1991) and encourage students to use and develop their own corpora based on discipline-specific academic texts.

7. For both academic oral and writing courses, encourage and provide regular opportunities for metacognitive reflection through self and peer review (Ibabe & Jauregizar, 2010) and teacher and peer dialogue about learning (Nicol & Macfarlane-Dick, 2006) through individual conferences with students.
8. For both academic oral and writing courses, deemphasize letter grades and emphasize formative and reflective feedback which has been shown to reduce performance anxiety (Horwitz et al., 1986; Zhang & Ardasheva, 2019) and improve Second Language Acquisition (Carless et al., 2011).

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