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A Field-Wide Examination of Cross-Listed Courses in Technical Professional Communication

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by

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Abstract

This study assesses cross-listed courses (courses with a mix of undergraduate and graduate students) to uncover current pedagogical and programmatic trends at a field-wide level. The applied mixed-methods study provides important foundational insights into an under researched area in Technical and Professional Communication (TPC). Research questions include: What courses are cross-listed? How does offering these courses affect writing programs and writing program administration? Through the use of three types of data: (1) course data from institutional documents, (2) interview data from program administrators and/or faculty, and (3) pedagogical materials (syllabi and assignment sheets) from the courses supplied by administrators or faculty, this study uncovers practical results that provide the field an understanding of the current pedagogical approaches to teaching cross-listed courses. First, collecting data online determines the type and number of cross-listed courses offered across the field. Second, interviewing program administrators and faculty reveals motivation and insight behind how and why programs offer cross-listed courses. Third, collecting syllabi and assignment sheets uncovers variations between course goals and assignments for the two student populations. The implications call for a more sustainable and ethical approach to programmatic and pedagogical issues including transparency of student learning. Additionally, this study uncovers a need for more clarity between degree levels and programmatic training in doctoral programs.

Chapter 1: Introduction

After a decade working in publishing, including several years as a managing editor at a company specializing in industry trade reports, I embarked on a master's degree in rhetoric and writing studies. I quickly saw how my background in writing and editing would transfer into academia. I began teaching composition and discovering interests as a teacher and scholar. As part of my master's program, I took editing and non-profit writing courses that contained a mix of graduate and undergraduate students. As mostly production-based courses, class time was dedicated to writing and revising documents according to generic conventions. Even though the editing course failed to challenge me as a seasoned editor, the non-profit writing course was useful because it focused on integrating larger rhetorical moves (strategies and appeals) into the development of a grant proposal.

Many years later during a conversation with my dissertation chair, I recalled my experiences in my master's program, as we discussed designing a study based on cross-listed courses (college courses with a mix of graduate and undergraduate students). The connection to my past experiences as a student initially caught my interest, but this project also allowed me to connect my recent exposure to and growing interest in programmatic work. As part of my doctoral program, I worked as the program assistant for the University of South Florida's undergraduate major and service courses—allowing me to observe the job duties of a program administrator that included managing ongoing moving pieces, projects, and teams. These duties were similar to my work as a managing editor, as I negotiated and handled various moving parts of a company, including written communication, document development, and

staffing/supervision. Thus, it was a natural progression for my work experience to drive my interest in program administration.

As we began to discuss a dissertation project based on programmatic research, I was enthusiastic to align it with current technical and professional communication (TPC) trends. I was interested in the growing work on sustainability (Johnson, 2004; Melonçon, 2019; Fleckenstein et al., 2013) and various ethical approaches (virtue ethics, professionalism, situational ethics, etc.) in TPC. In addition, recent work in the field that has moved away from classroom research and single institution studies to better analyze trends by looking at institutions across the field. The alignment with field-wide research was a natural progression for me, specifically, because my industry experience was based on overseeing reports that collected and analyzed data to produce nationwide trends of real estate financing and development. Thus, my background provided a strong foundation to transfer my analytical skills of assessing field-wide trends as a practitioner to working as a researcher in academia. Adding a sustainability and ethical approach to a field-wide assessment allowed this project to enter important programmatic perspective conversations. As such, my project provided multiple opportunities for varied engagement from my experience as a student, as a program administrator assistant, and as a scholar.

When it became clear that I intended to embark on a dissertation based on field-wide programmatic research, I returned to my experience with cross-listed courses (college courses with a mix of graduate and undergraduate students) to start mapping out a possible project. From my experience as a student, I concluded that, at least from my perspective, there were not clear differences between the course outcomes, assignments, or assessment for graduate and undergraduate students. Understandably, as a graduate student, programmatic decisions from

course development either hidden or simply not understood. Due to the lack of clear and varied expectations for both student populations, I wondered if these cross-listed courses adequately challenged both student populations.

To demystify the student experience, the creation of my project on cross-listed courses emerged from three main inquires—establishing a field-wide overview, uncovering motivations and staffing, and determining differences in course outcomes, assignments, and assessment. Commonly called cross-listed courses (defined below), these courses are frequently utilized in TPC. However, the lack of clarity for the two groups of students points to a larger problem within programmatic and pedagogical thinking when considering their usage within larger TPC programs. These are shown through the following questions:

- What is the role of courses that are meant to serve both graduate students and undergraduate students?
- What are the sustainable and ethical ramifications for student learning and programmatic objectives of these types of courses?

After defining cross-listed courses, I expand on this definition and discuss the lack of existing scholarship specific to cross-listed courses while connecting the project to other existing conversations in the field. To align with not only my research interests, but also recent trends in programmatic research, this study pushes away from single-classroom research (comprising of detailed examples based on one instructor's interactions in a single course) and single-institutional case studies (see Bridgeford, Kitalong, & Williamson, 2014; Tillery & Nagelhout, 2015) to instead match data-driven, field-wide research. The foundational goal of the project is to uncover current pedagogical strategies and programmatic purposes for cross-listed courses at a field-wide level.

Even though cross-listed courses are the main topic of my study, it became clear my study was using cross-listed courses as the example with the larger study built around engaging in sustainable and ethical research. To better explain my sustainable approach, it is helpful to look at Johnson's (2004) call for "deep sustainability," which advocated for conscious growth in relation to size and resources. The usage of a type of course (e.g. cross-listed courses) affects how programs are built and maintained and how courses are integrated and developed. My work on cross-listed courses exposes sustainability issues around staffing and enrollment, which answers this call for a more intentional approach to sustainability. Additionally, Melonçon's body of programmatic work (see Melonçon, 2021) makes the argument that TPC needs a field-wide view of programmatic perspective and pedagogical practices to assist with building, expanding, and sustaining programs. In response to Melonçon (2021), my programmatic and pedagogical implications strive to provide sustainable and ethical suggestions to administrators. By better understanding cross-listed courses, TPC can better integrate a sustainable approach to programmatic perspective (labor, enrollment, growth, etc.) and an ethical responsibility to students (distinct course experiences, clear and transparent polices, clarity on degree levels in terms of competencies, etc.).

In addition to answering the call for sustainability, my project also adds an ethical dimension. My research methods employ *phronēsis* as an applied yet ethical framework. TPC has an ethical responsibility to offer distinct course experiences to undergraduate and graduate students through clear policies and guidance. However, as my results show, separation of outcomes and assignments is not commonplace for cross-listed courses. Without clear separation, degree level is not clear to or understood by faculty, students, alumni, or future

employers. For these reasons, my project uses ethical and sustainable frameworks to examine these issues as a field-wide perspective.

The use of cross-listed courses affects sustainable development at the program level, as they are particularly used due to staffing and enrollment, but also uncover ethical concerns in that undergraduate and graduate students attend the same course. Without any research or data on cross-listed courses, it was unclear if the two student populations receive distinct experiences appropriate for their degree level. In this way, my study uses the information on cross-listed courses as an example or microcosm to make larger claims about how the field views degree levels (bachelor's vs. master's). Additionally, my study enters conversations around sustainable and ethical program guidance, theory-to-practice application, and graduate student training.

Continuous Programmatic Improvement

With my project's sustainability and ethical framework established, I moved on to designing the actual study. As proposed by Melonçon (2021), the field of TPC has a need for programmatic research in relation to program administration and program assessment. My project answers this call by examining cross-listed courses to make larger connections to sustainability and ethical programmatic concerns, including program development/maintenance, course development, course integration, equitable and transparent student facing policies, degree levels, and PhD student training. My study's implications, then, offer suggestions for program administrators and faculty to better meet the needs of their programs and students by using cross-listed courses as an example.

To situate my study around sustainability, my methods were inspired by using a continuous improvement model—a flexible structure to analyze the many moving parts of

programmatic research. Commonly used in workplaces, Schreiber and Melonçon (2019) put forth the idea of an adapted continuous improvement models in TPC as a framework for centralizing information and research across committees or departments. Continuous improvement models work well for programmatic research in TPC because they feature a flexible and iterative framework that encourages program administrators to reflect on their own program and contextualize that reflection with information from other programs. As Schreiber and Melonçon (2019) stressed, "Programs need data from other programs to help them contextualize their own data" (p. 257). In academia, continuous improvement models allow program administrators to approach programmatic work sustainably, meaning program size, faculty, and student enrollment are carefully decided for long-term and steady growth.

My project evaluates sustainable and ethical programmatic issues such as labor and student enrollment in relation to cross-listed courses. For example, cross-listed courses offer a benefit to building sustainable programs, in that they offer a class experience that responds to enrollment and staffing constraints. I was inspired by Schreiber and Melonçon's (2019) continuous improvement model called GRAM (Gather-Read-Analyze-Make), as a framework to contextualize data and expose trends for decisions at a more localized level. The GRAM model was developed to be both holistic and sustainable because it allows administrators to adapt based on the changing parameters of new problem and situations.

Cross-listed Courses

From a research perspective, the type of course I described taking as a master's student is even more troubling because it is difficult to find a common definition. To begin, I would like to acknowledge alternate meanings for the terms "cross-listed" and "dual," as these understandings

provide completely different, yet acceptable, usage in higher education. First, take for example the term "cross-listed." This term is commonly used to refer to a course that is offered in two distinct departments as part of a trans- or inter-disciplinary offering. For example, some institutions offer a single course, but with separate listings in two distinct departments: Women and Gender Studies (WGS 4200) and English Department (ENG 4200). This strategy of cross-listing between departments is often used to reach more students. The key differentiator here is that WGS 4200 and ENG 4200 are offered the same level (4200), whereas my study looks at cross-listed offered to both graduate (often at a 5000 level to show it's between a bachelor's and master's degree) and undergraduate students. Second, take for example the term "dual." In writing studies, particularly composition, there is a large body of work about dual-credit courses in which high school students simultaneously earn high school and post-secondary credit (Waits, Setzer, & Lewis, 2005). As I work through my own terminology, the types of courses I discuss may be called "dual," but they do not earn dual credit. They can only be used for one degree program. The key differentiator between dual credit courses and the discussion that follows is that different levels of students may be taking the same course, but no student is using the course to fulfill two requirements. As seen, due to the varied usage of the terms, cross-listed and dual, the complexity of the terminology evokes the need for my project to carefully explain my usage.

As seen above, terminology (to represent courses offered to both undergraduate and graduate students) varies across higher education and institutions. Dual-listed, co-listed, u/g, crossover, and paired courses are synonyms used, depending on the institution. Despite the variations of terminology, usage, and course guidance, these courses continue to be offered year after year. In addition to the confusion of the terminology, the field lacks clarity as to how cross-

listed courses work institutionally. Due to the complete absence of research on these courses in TPC, there is no guidance to offer usage recommendations.

Despite the lack of research, these courses are used in many fields, yet to what extent varies. Another way to gain insight and information on cross-listed courses can be achieved by examining institutional documentation. Terminology and policies vary widely across universities. For example, St. Louis University's Policy on Cross-Listing and Dual-Listing Courses states that "Cross-listing is a method of listing a single course under two or more subject codes" (SLU). Similarly, California State University San Marcos states its "policy governs the mechanism for offering undergraduate and graduate courses as dual-listed courses" (also known as paired or co-listed courses) (CSUSM). However, it's interesting that official documents vary widely from simply defining the term to offering guidelines for usage and, in some cases, course assignments. Iowa State University's policy "discourage[s] their use by subjecting such courses to more rigorous approval processes" (IASTATE). These institutional guidelines and policy documents, particularly when they are pervasive, show that cross-listed courses are not an unusual phenomenon. The combination of wide use and minimal research justifies the need for cross-listed courses to be studied.

Other disciplines in higher education have discussed the phenomenon of cross-listed courses that I experienced—courses with a mix of undergraduate and graduate students. However, even in other disciplines, these courses usually appear as an ancillary aspect of the research. Put another way, scholars have included cross-listed courses in larger studies, but often as part of classroom research (one instructor's experience with a single course). For example, in the computer science discipline, Coppit's (2006) classroom research mentioned cross-listed courses in relation to a course study where graduate students acted as "managers" for the

undergraduate population to simulate workplace dynamics. However, the article failed to discuss how and why these courses were offered, instead limiting the inclusion of cross-listed courses to implications of student dynamics. By omitting this important foundational work, the author's implications from one course offer little transferable information to other types of cross-listed courses. Further, scholars in education have discussed the practice of cross-listed courses in online education through classroom research studies (Brown, 2012; Lucas & Murdock, 2014), yet, similar to Coppit (2006) stopped before offering discussion on how or why cross-listed courses are used. These examples of classroom research fail to provide comparable results and implications that could be used more broadly in education or help guide decisions and practices in other fields.

While the majority of scholarship available in other fields is limited to classroom research, one example in the criminal justice field provided an overview by looking at the use of these courses across the field. By conducting a survey, Cordner, Dammer and Horvath (2000) examined course content, structure, and instructor trends and found 16% of comparative/international criminal justice courses were offered to both undergraduate and graduate students. However, their use of surveys as the primary method of data collection is somewhat problematic since surveys rely on the motivation of the participants to self-report, it's unlikely that surveys offer an actual field-wide view. Although this study provides an overview of the usage of cross-listed courses, it lacks discussion looking at how or why these types of courses are offered. Even with minimal research on these types of courses in other fields, there is absolutely no research that assesses how and why these courses are used. My study strives to better understand how a type of course is used to make larger claims on how types of courses affect sustainable and ethical programmatic perspective.

As such, my study uses *cross-listed* to refer to courses with a mix of undergraduate and graduate students. Cross-listed courses are offered to two student populations taking the same course for different level degrees (bachelor's and master's). Often 4000- or 5000-level topics courses, cross-listed courses have one location, one instructor, and one class time. This research study examines the frequency of cross-listed courses in TPC, and uncovers pedagogical variations in learning outcomes and assignments based on education level (i.e., difference between undergraduate and graduate).

Chapter Summaries

Chapter 2, the Literature Review, provides a survey of recent scholarship addressing ongoing conversations in field-wide programmatic research. Due to the lack of research on cross-listed courses, this chapter is focused on related conversations that are complementary to the topic of cross-listed courses in TPC. It begins with an overview of ethics in TPC before moving into related scholarship to show there is a history in TPC concerned with pedagogical and programmatic concerns. From there, I examine utilizing a continuous model for programmatic improvement and then bridge the continuous improvement model with recent programmatic work to establish the need to move to field-wide examinations. The next section evaluates field-wide research studies in TPC related to the service course and types of courses, which demonstrates how examinations of a courses can raise important questions about programs and/or the connection of programs, courses, and the future direction of the field. The final section signals the need for research that can start to address the issue of pedagogical practices and outcomes of different levels of courses and the abilities of graduates by examining existing research on skills and competencies within curricula.

Chapter 3, Methodology and Methods, provides a discussion of the methodological framing and specific methods used to perform this project. My research study design employs a multi-institutional or field-wide approach to research. Borrowing an applied research framework from psychology, I incorporated a praxis-based or *phronētic* approach. My applied, empirical mixed-methods study is intended to provide important foundational insights into an under-researched area in TPC: cross-listed courses across the U.S. in TPC degree programs. This chapter explains the use of three types of similar and complementary datasets, including (1) course data from institutional documents and online course catalogs, (2) interview data from program administrators and/or faculty, and (3) pedagogical materials (syllabi and assignment sheets) from the courses supplied by administrators or faculty. In addition to explaining my methodological orientation, methods, and research questions, Chapter 3 details my study design, including my data collection, sampling plan, and methods of analysis. The chapter concludes by detailing the limitations of my study.

Chapter 4, Results and Discussion, describes the results of my data collection. Specifically, this chapter reports meaningful data points from my three datasets. Situating the project around ongoing conversations in the field, this chapter has three main sections: data collected online, interviews, and course materials. Each section includes relevant examples from my data collection, interview respondents, and/or course materials. The online data collection focuses on the number of programs with cross-listed courses, the number of cross-listed programs per program, cross-listed courses by title, and cross-listed courses by core course categories. The decision to compare cross-listed courses to commonly required core courses, as established by Melonçon and Henschel's (2013), grounds my work in ongoing conversations. The next section details interview responses, exposing usage and motivation of cross-listed

courses within programs, student learning outcomes, assignment variations, student assessment, and teaching experience, challenges, and approaches. The final section looks at course materials, including syllabi, assignment descriptions, and learning outcomes. The chapter concludes by offering larger claims by tying together the three datasets.

Chapter 5, Implications, systematically reviews the usage of cross-listed courses to provide suggestions for improvement. It is then broken into three main sections: programmatic/pedagogical, degree levels, doctorial training. The programmatic section provides program and course level suggestions for improving cross-listed courses based on an ethical and sustainable framework for learning outcomes and assignment variation, while the pedagogical section discusses teaching approaches. Additionally, my discussion shows how the study opens questions about curricular development effective practices. That is, how can programs make changes to cross-listed programs to provide sustainable and ethical experiences for both student groups. To provide a more clear and transparent experience for undergraduate and graduate students, my study provides examples of ways to vary outcomes, assignments, and teaching approaches.

The second section in Chapter 5 examines degree levels. The data uncovered information on pedagogical approaches to address the ethical needs of graduate and undergraduate students. As posited by Storms (1984), "courses at the graduate level typically require more work…more sophisticated concepts…than undergraduate degrees" (p. 17). Master's programs should be more work and examine more sophisticated concepts and theories than undergraduate programs, yet cross-listed courses blur this distinction. Thus, this project addressed Storms' (1984) notion by quantifying the differences and similarities for undergraduate and graduate students in cross-listed courses. My study found a lack of formal guidelines and assessment for the different

populations in cross-list courses, which conflates the differences between a bachelor's and master's degree. Specifically, core knowledge, learning outcomes, and levels of proficiency (Davis, 2001, p. 143) arise as aspects of addressing the needs of education regarding degree level. While Davis (2001) suggested professional societies should lead these endeavors, it's clear that nearly 20 years later the field has failed to wrestle with educational needs in this way. Representing the difference of degree levels to outside stakeholders should be a priority within TPC. By compiling course goals and outcomes for the two student populations, this project may also uncover pedagogical practices that can point to specific variations in education levels.

The final section in Chapter 5 examines data from my interviews that asked faculty about how they learned about program and course development. Most of my respondents learned on the job with little to no formal training. This section suggests that modifying PhD and graduate education to include programmatic training could lead to more sustainable and ethical program and course development.

My conclusion, Chapter 6, promotes an example of an ethical and sustainable implications that came out of my research. Through my sustainable and ethical framework, this chapter explicates the theory and production divide in TPC courses. I propose the concept of inventional capacity as an alternative to better describe theory and practice within programs and to gain a deeper understanding of why a return to theory and practice can help programs move toward ethical sustainability. Chapter 6 concludes with an explanation of future research.

Conclusion

Overall, my project approaches programmatic research by employing a framework based on sustainability and ethics. Through this framework, cross-listed courses serve as a microcosmic

application of a continuous improvement model that affords the field a way to see issues within a specific course while also pointing to larger concerns. This research provides specific ways to improve the usage of cross-listed courses at the program level. Although cross-listed courses contribute to a sustainable response to staffing and enrollment issues, my study unveils a lack of attention to ethical concerns around student experiences, transparent policies, and degree levels.

In addition to the program-level or microcosmic implications around cross-listed course usage specifically, examining a particular type of course exposes sustainability and ethical concerns at a macrocosm level. Although many lone TPC administrators and faculty may be making small contributions to building sustainable and ethical programs, there is a lack of attention in the scholarship. Ethical consideration of student learning should be paramount in the field; however, when examined through cross-listed courses, there is a lack of attention given to program and course development based on an ethical approach to student learning. Better understanding of a type of course, such as cross-listed courses, can bolster the field's approach to sustainability. The next chapter provides an overview of ethical research in TPC before detailing related programmatic conversations in the field.

Chapter 2: Review of Related Literature

As a main goal of my study, I advocate for an intentional application of ethics and sustainability to programmatic perspective, using cross-listed courses as the example. My study calls for a reflective approach to program development and maintenance that is based on building programs that are sustainable (in relation to resources, staff, enrollment, student job prospects, etc.) and ethical (in relation student competencies, transparent and clear policies, explanation of degree levels, etc.). While much of this work is likely happening to various degrees across the field, the scholarship on sustainability is scant (Johnson, 2004; Melonçon, 2019; Fleckenstein et al., 2013). Additionally, my study builds on sustainability scholarship by adding an ethical orientation. In this way, I promote a sustainable and ethical approach to programmatic perspective by analyzing the ways in which a type of course (e.g., cross-listed courses) affect and are integrated into programs. Analyzing a type of course, such as cross-listed courses, establishes important insight into how programs are built and maintained across the field. This literature review examines and combines related scholarship on programmatic and pedagogical concerns to show TPC's engagement with programmatic areas of research.

Even though my study's main framework is tied to sustainability and ethics, cross-listed courses represent the subject of study, meaning my literature review begins by examining cross-listed courses. From my initial search, it was clear that there a lack of research on cross-listed courses; therefore, I approached my literature review quite systematically to be certain I did not miss relevant scholarship. To thoroughly examine all possible related scholarship, my literature search is comprised of the several steps. The search included: (1) searching various terms for

cross-listed courses (dual-listed, co-listed, crossover, stacked, and paired courses) in TPC journals (*Journal of Business and Technical Communication, Technical Communication Quarterly, Journal of Technical Writing and Communication, Business & Professional Communication Quarterly,* and *Technical Communication*) and related writing disciplines. Commonly viewed as the top journals in TPC, my journal selection was based on the types of research published and also on their longevity in the field. For example, *Technical Communication* began in 1954 (as Technical Writing Review, later to become Technical Communication in 1967), *Journal of Technical Writing and Communication* was founded in 1971, *Journal of Business and Technical Communication* in 1987, and *Technical Communication Quarterly* in 1992. (2) Carefully reading abstracts from every issue of *Programmatic Perspectives*. Although *Programmatic Perspectives* was only started in 2009, it serves as the journal for the Council for Programs in Technical and Scientific Communication (CPTSC) and specializes in research dedicated to programmatic and pedagogical studies. (3) Thoroughly scanning the past 20 years of conference topics from CPTSC to look for related presentations. As the oldest writing program organization in the U.S., CPTSC's conference abstracts would indicate issues of concern to faculty and administrators even if they did not move the conversation to a peer-reviewed article.

At the conclusion of this extensive literature search, I could locate no existing research on cross-listed courses. Without any research on cross-listed courses in TPC, rhetoric, or writing studies, this chapter examines related conversations to establish the need for a more deliberate approach to programmatic perspective and pedagogical practices through sustainability and ethics.

This chapter is broken into the following sections:

1. Examination of ethical scholarship in TPC, including virtue ethics, professionalism, and situational ethics.
2. Review of the field's emergence because it is necessary to show there is a history of scholarship in TPC concerned with pedagogical and programmatic concerns.
3. Examination of utilizing a continuous model for programmatic improvement as an approach to research.
4. Connection of continuous improvement models with recent programmatic work to establish the need for more field-wide examinations.
5. Evaluation of field-wide research studies in TPC related to the service course and other specific courses, which raises important questions about programs and/or the connection of programs, courses, and the future direction of the field.
6. Call for research that can begin to address the issue of pedagogical practices and outcomes of different levels of courses and the abilities of graduates by examining existing research on skills and competencies within curricula.

Even though the research outlined here is not specific to cross-listed courses (the primary example in my dissertation), this review highlights the areas of existing scholarship that will impact the way that I analyze my data and construct implications. Cross-listed courses reside in an interesting location programmatically that opens questions about pedagogy, skills, and programmatic goals.

Ethics in TPC

My study is grounded in an ethical and sustainable framework, with a goal of uncovering implications and suggestions for the field based on my analysis of cross-listed courses. TPC has

a responsibility to focus on employing ethics in research and programmatic perspective. The need for ethical programmatic perspective can be seen in the example of cross-listed courses; the degree level and distinction are conflated due to the combination of undergraduate and graduate students in the same course. This type of course is highly problematic and unethical if students are not given distinct experiences and levels of instruction. To better explain my claim, I first need to clarify my position on ethics. Rather than aligning with a single ethical perspective (deontological, utilitarianism, virtue ethics, situational ethics, ethics of care, etc.), I use ethics as a guiding framework or set of principles (Jennings, 1999) that accounts for equitable and just treatment across relationships (Bennett, 2010) and from various perspectives (Duska, 2014). Framing ethics more precisely allows me to connect to the variety of work on ethics in TPC, including virtue ethics, professionalism, and situational ethics, to incite an equitable framing that closely considers contexts and various points of view.

To articulate my ethical framing more fully, I offer the following overview of the current trends of ethics in TPC scholarship. To begin, recent scholars in writing studies have been interested in virtue ethics. In ancient Greece and Rome, ethics and rhetoric were inherently linked. According to Duffy (2017), "virtue ethics is the idea that virtues are the traits, attitudes, and dispositions of character that we associate with a good person" (235). Due to its solid foundation in classical rhetoric, virtue ethics has gained attention as of late—even spawning a special issue of *Rhetoric Review* in 2018. Quintilian's call for "a good man speaking well" was linked to rhetorical training through an ancient curriculum-type program (called the *progymnasmata*, see Fleming, 2003) where students practiced moral and ethical decision making while learning rhetoric. For example, the first exercises asked young students to write fables, which simultaneously exposes children to engaging with short lessons of right versus wrong

(Kennedy, 2003). Even though virtue ethics has strong ties to rhetoric, virtue ethics is limiting in that the emphasis on right and wrong is rigid, missing contemplation of the unique contexts of a situation. Consequently, virtue ethics is unable to account for the grey areas exposed by the unique conditions based on the contexts and multiple perspectives in modern problems. In particular, my study on cross-listed courses needs to examine the grey area or lack of distinction that arises from undergraduates and graduates in the same course. My project incorporates virtue ethics as a moral viewpoint, but also includes other ethical approaches to better account for the specific context of cross-listed courses that are not inherently good or evil. Each unique aspect of a program deserves proper reflection and consideration in relation to ethical orientation.

In addition to virtue ethics, some TPC scholars have promoted ethics based on codes of conduct and professionalism. After analyzing ethical frames (e.g., virtue, utilitarianism, duty, and categorical imperative), codes of conduct, and laws, Jennings' (1999) advocated the usage of codes of conduct in the classroom. Codes of conducts are typically used to provide guidance on various theoretical situations, which can be limited and difficult to apply more generally. Buchholz (1989) warned against generally written codes, arguing that "loosely phrased code articles, like poison, seep through the entire fabric of the document, rendering the whole code, if not useless, at best suspect, and at worst laughable" (p. 68). Even though codes of conduct are meant to be widely applicable, Buchholz believed they often lacked the ability to be used for a real situation. Codes of conduct contribute to my ethical orientation in that the uncover that ethics need to be applicable to various situations; however, the codes of ethics run the risk of being too specific or too general (Buchholz, 1989).

Other scholars have promoted more general approaches to ethics by focusing on professionalism. For example, Ballentine's (2008) cross-curricular design for engineering

communication began with connecting ethics, accountability, and professionalism. Additionally, Kienzler (2001) argued for teaching ethics by using critical thinking and pedagogical aspects of questioning assumptions, seeking multiplicity of voices and alternatives, making connections, and fostering active involvement. She offered, "The critical thinking environment focuses not only on a right answer or document but on an extensive collection of ethical procedures for both instructors and students. It adds ethics to audience, context, and purpose as a basic part of rhetorical analysis for all communication" (p. 336). Through integrating ethics with audience, purpose, and design as part of rhetorical analysis, it challenges students to make ethical decisions for each unique writing situation. The combination of professionalism, context (in this case, audience, purpose, design) and critical thinking represent an approach to ethics that works well in the classroom, but also as an approach that would work well for research. The idea of ethics in relation to context is the takeaway. Building on this tactic, my ethical orientation focuses on the context of the various sustainable aspects (enrollment, labor) and student learning metrics (outcomes, assignments) to offer an assessment based on how these aspects affect and influence the issue of cross-listed courses.

A professional approach to ethics that incorporates critical thinking around the context also falls in line with situational ethics. According to Fletcher (1996), situational ethics assert that nothing is inherently good or evil; human well-being and happiness are paramount; a right answer should be good, not simply the lesser evil; and a right answer may include a seemingly immoral act, if the result is good. Rather than opting for codes of conduct or more general approaches to professionalism, situational ethics tasks individuals with ethical decision making based on the given aspects of a scenario. In this way, situational ethics encourages people to use morals as a general guide, not as absolute rules to follow. Each situation requires a fresh

interpretation and should not be directly based on a past situation. Melonçon et al. (2021) argued, "[b]y its definition, situational ethics is intimately tied to the context in which the act or circumstance requires an ethical decision, very often beyond a moral standard" (p. 432). The changing parameters of context of each situation alter the ethical response. In the pursuit of assessing the ethical ramifications of cross-listed courses programmatically, situational ethics offers a reminder to intimately and deliberatively focus on the context to reach an ethical perception.

Through integrating aspects from virtue ethics (moral and equitable treatment), professionalism (critical thinking), and situational ethics (evaluating the changing contexts), my ethical framework works well for programmatic research. The combination of sustainability and ethics situates my research in relation to recent programmatic research. With my ethical framing clarified, the next section examines the development of TPC to demonstrate and connect early conversations around programs and courses to an ethical framework.

Emergence of a Field

Looking at early TPC scholarship can help us understand the relationship between programmatic perspective, sustainability, and ethics. Early studies in TPC establish the field's early interest in assessing pedagogical and programmatic concerns, but the field was in a growing stage and not yet concerned with the ideas of sustainability. However, the early studies hint at an ethical orientation in that the field was concerned with understanding course offerings based on student and program contexts. While these early studies do not specifically reference an ethical emphasis on program development, I contend that the field's interest in developing programs and courses out of a need for student learning is an ethical move. When based on

improving student learning, early studies likely involved understanding the contexts of the situation through a situational ethics orientation. In addition, the development of the field exposes how early studies were concerned with programmatic perspective, which exposes the way in which courses were designed and integrated into programs. When applied programmatically, sustainability research relies on understanding how programs and courses were created.

According to Connors (1982), the field became "self aware" in the early 1920s and partly due to the 1923 "publication of the first 'modern' technical writing textbook" called *English for Engineers* (p. 335). As evident here, the field grew out of a need for practical writing skills for engineers. In fact, writing for engineers was similar to an early version of "the service course," which is actually not one course, but several "introductory courses for nonmajors delivered primarily as a service to other departments and programs on campus" (Melonçon and England, 2011, p. 398). In this way, the service course—particularly, writing for engineers—served as the inciting incident to spark the need for the field. As the need for writing courses for non-English majors picked up steam, it exposed TPC as an underserved area in college education. From here, the field responded to the demand for writing courses, which is an ethical response in that academics adapted offerings to meet student needs.

The field's growth was stifled during the depression and WWII, but was renewed with the post-war boom (Connors, 1982) and from soldiers returning with G.I. Bills (Staples, 1999). By the 1970s the field found "a solid core of committed technical writing professionals…and a growing number of teachers who considered technical communication their primary area of interest and expertise (p. 347). Furthermore, "For the majority teaching outside the few technical communication programs, the technical communication service course remained a necessary but

thankless burden" (Staples, 1999, p. 157). The founding of the Association of Teachers of Technical Writing (ATTW) in 1973 and the Council for Programs in Technical and Scientific Communication (CPTSC) in 1974 paved the way for the discipline to grow and gain scholarly recognition. One of CPTSC's initial goals was to examine programs and the service course—a dual identity that needed more programmatic research. The formation of professional organizations (e.g. ATTW and CPTSC) provides a marker in time that signified the field has united to consider programmatic and pedagogical research.

Programmatic and pedagogical work has been a key component of scholarly research in TPC since CPTSC was founded to unite faculty, administrators, and researchers. While "programmatic" and "pedagogical" are commonly used terms in higher education, context and usage may vary. As such, the following definitions indicate my usage of the terminology in relation to my project. Pedagogically focused research includes a study designed to understand or improve "[c]lassroom teaching approaches at the course level; [c]lassroom teaching and student learning practice at the course level; and [p]rogrammatic approaches related to courses, curricula or TPC program administration" (Melonçon, Rosselot-Merritt, and St.Amant, 2020, p. 93). Programmatic research focuses on "[c]hanges or information that can affect more than one class; change (or information) at the program or curriculum level" (Melonçon, Rosselot-Merritt, and St.Amant, 2020, p. 99). Said another way, pedagogical research ranges from course-level teaching and practices to curricular work, whereas programmatic research is focused on program administrative and program-level concerns. TPC relies on programmatic and pedagogical research to move toward a sustainable field that considers the issues of resources, labor, enrollment, student job placement, etc. Additionally, the use of cross-listed courses is also tied to

these sustainability issues, as well as ethical issues that come from combining two student populations with a singular course experience.

Following the emergence of professional organizations, the field began to see programmatic research that identified and addressed challenges that come with a growing area of study. For example, scholars began assessing the size and offerings across the field by collecting data on the number and size of TPC programs in the U.S.—all the while challenged by the restraints of research in a pre-digital society. In order to build programs, scholars had to contemplate programmatic goals and courses, which was in part answered by conversations with outside stakeholders around the types of jobs students took upon graduation. In early assessments, Pearsall, Sullivan, and McDowell (1981) identified 28 programs but were only able to collect information on 18 schools, while Cunningham & Harris (1994) found 181 schools reported an undergraduate writing program (but this included all types of writing programs beyond just TPC programs). Meanwhile during this period, scholars also began looking at the types of degrees offered. Storms (1984) evaluated two-year, four-year, and master's degree programs to determined that "program objectives and requirements may differ considerably" (p. 14). Storms was one of the first scholars to not only quantify the number of programs across the field, but also to engage with the variations between different level degrees. As proposed by Storms, the distinction of degree levels was an early sign of TPC's interest in sustainability and ethical responsibility. His interest in defining degree levels directly relates to cross-listed courses; when undergraduate and graduate students take the same course, the distinction between degrees is blurred. More generally, early studies on program size and offerings established TPC as a distinct field in need of assessment.

The field's initial interest in compiling data to assist scholars as programs developed throughout the U.S. was of value to the field. This type of research directly relates and informs my study as I expose the attention given to degree levels as it relates to cross-listed courses. In fact, my study is important as the size of the field has increased significantly to 562 total TPC programs, which includes undergraduate degree, graduate degrees, and certificates. More specifically, there are 185 undergraduate bachelor's programs, 100 master's programs, and 43 doctoral programs (Melonçon, 2012). The expansion of the field directly creates the need for more research that examines not only the growth itself, but also the field's ethical responsivity to creating sustainable programs that focus on student interests. Understanding cross-listed courses directly contributes to developing sustainable programs that evaluate contexts ethically. The next section proposes a sustainable model to programmatic research that takes ethical context into consideration.

Continuous Programmatic Improvement

The field's growth has led to a need for programmatic research in relation to program administration and program assessment, but more specifically a call for an ethical approach to research. My project answers this call by examining cross-listed courses to make larger connections to programmatic perspective with a goal of framing the research around ethical context and maintainable decisions. This section details a reflexive and reflective approach to pursing sustainable and ethical program work. As such, I structured my process around an iterative assessment model that focuses on a flexible structure to analyze the many moving parts of programmatic research.

To build a study based on ethical awareness, sustainability, and context, I modeled my approach after a continuous improvement model. Continuous improvement models give PAs a tool to be reflective about what their programs are doing locally and, also, as part of the field. Both views are necessary to ensure sustainability for students and for the field. Scholars have begun porting over continuous improvement models that are often seen in industry workplaces. For example, Schreiber and Melonçon (2019) argued for the field to adapt continuous improvement models, which provide a flexible structure for an iterative approach to program assessment, while deterring from assessment models based on student learning or institutional mandates (p. 255). Continuous improvement models are used "to organize several iterative processes and practices in conversation with each other, promoting alignment without sacrificing important deliberation" (Schreiber and Melonçon, 2019, p. 258). In this way, continuous improvement models provide a framework for centralizing information and research across committees or departments, but more importantly, this model takes many accounts for the various moving context-related aspects of programmatic perspective. As previous established, my ethical approach involves assessing context in relation to cross-listed courses, which can be better implemented through a continuous improvement model. The study of cross-listed courses, specifically, relies on contexts from across the field to make implications for local and field-wide improvement.

As a key aspect of a sustainable and ethical approach to programmatic perspective, continuous improvement models allow TPC PAs to reflect on their own program, as well as other programs. As Schreiber and Melonçon (2019) stressed, "Programs need data from other programs to help them contextualize their own data" (p. 257). When applied to higher education, continuous improvement models can streamline and generate "conversations across programs to

achieve a field-wide perspective" (p. 258). The importance of contextualizing data through comparison of similar programs and field-wide results offers a better model for long-term sustainability because administrators can gather and compare data before instituting changes. Schreiber and Melonçon (2019) introduced a continuous improvement model called GRAM (Gather-Read-Analyze-Make), which they developed as a flexible and adaptable framework for programmatic assessment. The GRAM model to program administration and program assessment is holistic and sustainable because it continually adapts based on the changing set of parameters gathered by administrators. In this way, GRAM serves as an ethical approach focused on context to collect and organize data on one topic. Using GRAM, cross-listed course information can be systematically and carefully, collected, sorted, and analyzed.

When used in programmatic research, GRAM organizes the ethical and context related aspects of sustainability. In this way, continuous improvement works well for a variety of program-related research projects, like my work on cross-listed courses. Schreiber and Melonçon's (2019) explain the GRAM model in relation to program administration—showing how it creates a circular process for administrators to follow for an ongoing and iterative programmatic assessment. The first step, Gather, refers to "the process of gathering together existing data about the program or exposing the lack of existing programmatic information and data" (Schreiber and Melonçon, 2019, p. 262). While gathering materials, administrators also should be working toward creating a curriculum map of program outcomes and courses, a map of theoretical and practical skills from current courses, and an evaluation of the programs place within the institutional culture (Schreiber and Melonçon, 2019, p. 263). While some of these items may already exist, it's imperative that administrators recognize the relationship of courses, outcomes, skills, and culture, as pieces of programmatic sustainability. Upon gathering materials,

the next step, Read, involves reading and interpreting all relevant "processes and practices at the course, program, department, college, or institutional level that may impact the development or revision of the program" (Schreiber and Melonçon, 2019, p. 264). The Analysis step involves making connections between the research. For example, alumni input can impact the program, pedagogy, and industry, so looking at how the various pieces interact is important. Analysis also includes becoming familiar with institutional procedures such as adding/updating courses, recruiting, marketing, etc. During the final stage, Make, administrators will decide if change is needed and how to implement it. This iterative approach for research works especially well for ethical projects with a variety of contexts.

The use of a continuous improvement model provides a foundation to approach a topic where there is no prior research for comparison. The utilization of GRAM allows me to collect and contextualized field-wide data to help direct TPC program administrators with programmatic improvement decisions at the departmental level. Up until now, cross-listed courses have been completely overlooked and invisible in scholarly conversations.

Field-Wide Research

An important part employing a continuous improvement model relies on contextualizing data other schools and programs. In response to the need for data from other schools, field-wide or multi-institutional research offers an opportunity to find and relate research with more evidence-based results. The pursuit of evidence-based research results from a field-wide study provides guidance for sustainable and ethical program development. For example, through analyzing the variations in outcomes, assignments, and teaching approaches in cross-listed courses, my study can provide suggestions for improvement to institutions to apply at the local

level, as well as calls for the field to make changes at a global level. My suggestions or implications specifically address the unethical aspects of combining undergraduate and graduate students into cross-listed courses.

At the local level, PAs can utilize field-wide research to examine similar programs (or a set of programs) and course offers (or a type of course) when working toward a sustainable program development and maintenance. In this way, multi-institutional research represents a starting point or foundation for basic requirements. From there, PAs can use a continuous improvement model to ensure their program algins with courses and requirements across the field, while looking for ways to enhance and integrate additional creative and unique program features. My work on cross-listed courses further solidifies this cycle—my work strives to propose results that can lead to ethical and sustainable guidance at the local level. For example, my study endorses distinct experiences for undergraduate and graduate students through varying outcomes and assignments. In this way, my work guides local decisions for an ethical approach to varying student experience, while considering the program's sustainable options of staffing and enrollment. Hence, field-wide research is necessary for individual PAs to have enough information from the field to contextualize local decisions.

Historically, TPC showed interest in field-wide data (Pearsall, Sullivan, and McDowell, 1981; Cunningham & Harris, 1994; Storms, 1984), but that interest waned by the late 1990s. Most of the programmatic research over the past 30 years has been limited to single-institution studies. Focused on a specific program, often to recognize an interesting feature or accomplishment (see Beard, 2010; Brady, Hayenga, & Ren, 2012), single-institution studies frequently called attention to a seemingly creative or innovative aspect of a single program. Not particularly useful in terms of implications for the field, single-institution studies often fail to

provide transferable results; what worked at one school may or may not work at another. Single-institution studies have been ongoing since the field began, for example, McDowell, Schuelke, and Chung (1980) evaluated the undergraduate technical communication major at the University of Minnesota, St. Paul. The study used a questionnaire to gather data from technical communication graduates, potential employers, and members of the Society for Technical Communication. The results suggested that writing courses "are very important and should be required for all technical communications majors" (McDowell, Schuelke, & Chung, 1980, p. 199). It was one of the first studies to collect data to support the value of writing courses, but lacked generalizable results. Single-program studies are thus limited in that they may serve as a model ideal, but lack enough data to infer trends in the field, which are necessary in guiding programmatic work.

A recent example from my own experience may better illustrate the value of field-wide data. It's helpful to remember that not all faculty are especially experienced at or interested in ongoing programmatic development and assessment. As Schreiber and Melonçon (2019) pointed out, "the field asks too much of assessment practices when TPC [program administrators] and faculty expect them to do the programmatic work for which they were not designed" (p. 255). I recently created an upper-division editing course for the undergraduate TPC major at my institution. My course design and assignments aligned with field-wide trends as reported in Melonçon's (2019) assessment of editing courses. Shortly after creating the course, I was asked to sit in on discussions with faculty and continuing instructors as part of a committee to guide the development an online standardized version of the course. Thanks to my experiences building a class from field-wide research, I was able to contribute and explain how my proposed projects, outcomes, and assignments align with actual practice across the U.S. The faculty and instructors

had experience teaching the course, but were not up-to-date on trends in the field. Even though I was the least experienced person of the group in terms of academic tenure and teaching, my contributions were well-received. In this way, my emerging experience with field-wide programmatic work established a niche and way to contribute to conversations with advanced scholars. From this experience using Melonçon's (2019) editing piece as guidance for course creation, I utilized multi-institutional research at the program level. In this way, my work on cross-listed courses strives to also provide localized guidance to administrators on course decisions.

In academia, we often rely on program faculty in small committees to drive course assessment. This intersection of program and course assessment is where field-wide research can offer practical guidance for established and emerging scholars to unite. With this momentum from my recent experience with course development, my project was designed to offer a field-wide view of cross-listed courses with implications related to programmatic and curricular assessment. My study aligns with this trend and also situates itself within the space of other data-driven and replicable studies. By compiling and analyzing common practices across the field, researchers can make stronger arguments focused on providing usable and practical results to guide curricular decisions. Field-wide studies provide TPC administrators with data, but also implications on how to improve individual courses and programs. By presenting data, assessment, and analysis, field-wide studies offer concrete evidence to guide and strengthen decisions at the individual institutional level.

Recently, scholars have begun using field-wide data in relation to the service course and types of courses. Examining specific types of courses, including the service course, exposes trends and shows the field's interest in course assessment, program assessment, and labor. The

next section starts by examines recent scholarship around the service course before analyzing research on types of TPC courses. Research on types of courses solidifies a foundation for my study. As a type of course, cross-listed courses exist in relation to other courses within a program.

Pedagogy and Specific TPC Courses

Even with no direct research on cross-listed courses, my study was designed to align with recent trends in TPC scholarship, which of course, includes the service course. Programmatic research on the service course has been a constant in ongoing scholarly conversation in TPC. The examination of the service course in this section bridges a connection of field-wide research and specific courses, while also displaying the field's shift from single-institution to field-wide studies. The service course is vital because it often represents a non-English major's only experience to practice the type of writing they will encounter in the workplace (Melonçon & England, 2011). Originally based on late 19th-century courses in writing for engineers (Kynell, 1999; Cook, 2002), some iteration of the service course can be found at most institutions of higher education across the Carnegie Classifications of Higher Education. As a link between historic and current programmatic work, the service course represents a group of introductory writing courses for non-majors delivered and taught by TPC or English departments (Melonçon and England, 2011). Knieval (2007) contended, "the service course remains a crucial curricular site, significant to the long-term health, credibility, and viability of the field" (p. 89). Early scholarship on the service course explored the boundaries of this type of interdisciplinary course, in that the needs of both the department that houses the course and the department it serves must be considered (Dubinsky, 1998, Sullivan & Porter, 1993).

Examination of the service course has to conversations on labor. As a key factor of sustainability, labor affects how programs are built and maintained. For example, the service course is often passed off by tenured faculty to contingent labor (Mechenbier, Wilson, & Melonçon, 2020; Melonçon, 2014; Melonçon & England, 2011; Kimball, 2017) to leave faculty open to teach courses within the major. Melonçon and England (2011) found that 83% of service course were taught by contingent faculty (p. 405). Labor remains an issue in the field and potentially affects the usage of cross-listed courses. As a positive benefit of cross-listed course—mixed student populations in a single section only require one instructor. In relation to labor, cross-listed courses contribute to programmatic sustainability; however, it's unclear if this mixture of students is ethical. As a main theme of my study, I explore the ways in which cross-listed courses are both sustainable but also unethical.

In addition to the robust, expanding body of literature around on the service course and labor, TPC scholarship has recently begun looking at content areas more holistically, indicating the field's ongoing emphasis on pedagogical and programmatic practice. Studies based on a content areas or specific types of courses establish that the field is interested moving toward programmatic studies and empirical research, though the move to field-wide work has not entirely caught up. Recent research has focused on content management and content strategy (Bridgeford, 2020; Getto et al., 2019; Gonzales et al., 2016); these works, while emphasizing an important topic in TPC pedagogy, are still often limited to singular case studies or singular institutional lenses. Furthermore, research traditions on content areas offer sustainable guidance and implications for improving a type of programmatic research.

Another example of content areas can be seen in the field's interest in the role of internships from a programmatic perspective. Bourelle (2014), Bloch (2011) and Hirst (2016)

evaluate internships through the lens of their programs and offer implications for other TPC programs based on their analysis. Bourelle (2014) argued for "linked courses," in which an instructor facilitates both a service-learning TPC course and the students' subsequent internships (p. 173). In 2011, Bloch examined a sampling of internship reports (which included feedback from the employer and student) spanning 25 years at a single university. Hirst (2016) wrote about his experience running an academe-industry internship program while at the University of Tennessee. Each internship study was limited to a single institution, but went beyond a single classroom study to assess internships from a programmatic perspective at their specific institution. This emphasis on understanding and assessing programmatic features is ongoing and illustrates scholarly interest in programmatic and pedagogical assessment; however, there are several important research questions better addressed with field-wide data. My study joins the tradition of examining a content area more holistically, and it also provides an example of field-wide studies that offer evidence-based ways to make localized decisions.

When looking at a particular topic across TPC, the field is better situated to make suggestions for improvement. A few attempts have been made to integrate data from more than one institution. For example, Christensen, Gibson, & Vernon (2010) evaluate cognate, or out of department, courses in PhD programs. By examining 22 programs that offer a Ph.D., Christensen, Gibson & Vernon's study is useful for program administrators of PhD programs because it provides important information about a key aspect of doctoral education from a broader perspective than a singular institution. Their suggestions of best practices allow TPC program administrators the opportunities to make evidence-based decisions. In this way, the study aligns with the GRAM continuous improvement model, as it gathers data from many institutions to offer larger suggestions to the field. More recently at the undergraduate level,

Chong (2016) examined usability courses by looking at associated materials such as textbooks and syllabi. She concluded that materials lacked sustained attention to usability. Chong's study attempted to move beyond a single institution; however, her dataset was still limited, as she included only two courses and two textbooks. For that reason, Chong's methodological approach lacked enough data to be considered a field-wide study, but marks a moment where scholars are beginning to see the value of studies that extend beyond singular institutions. This attempt toward integrating data from more than one institution leads to evidence-based and sustainable results. My work on cross-listed courses joins this tradition, but ideally by offering usable results to better serve the ethical parameters of student-focused program development.

Melonçon's body of programmatic work (see Melonçon, forthcoming, 2021) makes the argument that TPC needs a field-wide view of programmatic perspective and pedagogical practices. Recently, several studies have taken up this call by looking at specific courses. The move toward field-wide studies allows scholars to assess individual types of courses and programs, while also discussing implications for the field. For example, by researching the capstone course from a field-wide perspective, Melonçon and Schreiber (2018) evaluated 76 degree programs in the U.S. and found that 72% (n=55) offered a capstone course (p. 4). The authors then assessed course descriptions, projects, and portfolio requirements in order to identify opportunities for programmatic improvement from a field-wide perspective. Melonçon and Schreiber (2018) found that the "development and refinement of capstones" can "serve as vehicles for programmatic sustainability" (p. 12). Said another way, by studying a particular course, the authors addressed issues with long-term practicality and vitality of TPC programs.

In addition, Melonçon (2019) looked at editing courses offered across the field to compile an overview of the usage and requirements of editing courses. In many ways, this piece serves as

an exemplar of field-wide programmatic research, as it evaluated the number of undergraduate and graduate programs that require an editing course, compiled the various titles used for the course, and the major assignments. Melonçon (2019) found that the three most common assignment types could be categorized as "quizzes and exams, style exercises, and comprehensive and/or client-based projects" (p. 177). Upon determining that visual editing and cultural-aspects in editing rarely included as part of editing major projects, Melonçon (2019) offers best-practice suggestions for program administrators. Thus, by going beyond simply assembling field-wide trends, the study also critiqued positive and negative aspects of how the field is teaching editing. This type of work creates usable implications to help guide future course design and assessment. Through field-wide examination of a single course or a type of course, scholars drive important work on the need for programs to be sustainable long term. My work on cross-listed courses was designed to join the research on types of courses by offering not only an assessment of usage, but also suggestions for improvement.

As the field moves toward research that assesses types of courses, TPC also needs to consider the differences in degree levels to ensure courses offer ethical experiences and instruction based on degree level. This call drives my project, as cross-listed courses combine undergraduate and graduate students, which in turn affects the program's sustainability and ethical responsibility to create distinct experiences. As such, the next section looks at degree levels and student competencies.

Education Levels

In addition to analyzing a type of course programmatically, more work needs to be done on examining the differences in the pedagogical approaches and levels of learning between

graduate and undergraduate students. My project directly relates to degree levels because cross-listed courses combine undergrad and graduate students in joint courses. Research in TPC and writing studies, more generally, have only minimally engaged in the differences of degree levels. Davis (2001) called attention to the lack of consistency and minimal capabilities of TPC graduates. He called for the field to develop a "consensus on core knowledge, learning outcomes, and levels of proficiency" (Davis, 2001, p. 143). The differences of education for undergrad and graduate students in cross-listed courses remains unknown. As one of my research questions, I am interested to learn if institutions require varied course objectives, assignments, and assessment for the two student populations. My data will help unveil the difference, if any, in the level of education in terms of skills and competencies in cross-listed courses and programs more generally.

Historically, the field has shown interest, albeit minimally, in the clarity between degree levels in TPC (Keene, 1997; Melonçon, 2019). Keene (1997) investigated degree types and, in some ways, picked up the conversation introduced by Storms (1984) regarding lack of distinction between bachelor's and master's degrees. He contended that "We need to pay attention to the differences in among our levels of instruction…How might a technical editing course on the graduate level be different rom on the undergraduate level?...a number of programs…are wrestling with this notion of levels" (Keene, 1997, p. 195). Cross-listed courses are inherently linked to this conversation, as they are offered to undergraduate and graduate students and essentially conflate the degree levels. My project sets out to detail the differences of course outcomes, projects, and assessment in cross-listed courses, in an effort to expose the larger issues surrounding the field's lack of clarity and differences to degree levels. This section first looks at

the scant scholarship on degree levels before turning to expected or perceived skills and competencies of new graduates.

Cross-listed courses directly contribute to the murky distinction in education levels, as there is a lack of research examining the requirements for students of each degree level. Without clarity on degree levels, programs cannot offer sustainable and ethical programmatic perspective. Keene (1997) warned that we need to pay attention and wrestle with the level of instruction for undergraduate and graduate students. Picked up by Melonçon (2019), cross-listed courses and their use in "TPC programs seem to underscore that there is definitely a grey area in need of exploration around the distinctions between a graduate-level and undergraduate-level editing course. The materials from the crossover courses make few—if any—distinctions between the student outcomes" (p. 183). My project directly answers this call by Melonçon (2019) and Keene (1997) about concerns of undergraduate and graduate education distinctions by exposing the field-wide differences in course outcomes, assignments, and assessment between the two student populations. Furthermore, my project looks to use this data and questions around course assessment to gain momentum and to directly address the field's lack ethical consideration of cross-listed courses.

In addition to establishing clarity within the field and to the students for whom the courses are designed, outside stakeholders' (e.g., future employers) perception of the degree's value also drives the need for research on education levels. Melonçon (2019) stressed that programs need to evaluate master's degrees to assess the boarder aims and goals in relation to "expectations for different types of master's degrees (e.g., ones that are specifically geared to serve as something akin to a terminal professional degree like an MBA or those that are more focused on preparing students for a PhD program)" (Melonçon, 2019, p. 183). Melonçon (2019)

also contended that we look at the value of education between different graduate degrees. Programs have a responsibility to serve their students and outside stakeholders, such as employers; examining the course offerings for different types of master's students (those heading for a Ph.D, as well as those planning to enter the workforce) should also be considered from ethical and sustainable standpoints.

Although education levels have been largely overlooked in TPC and writing studies, there has been work done in the field of education. Balassiano, Rosentrater, and Marcketti (2014) conducted a pilot study on cross-listed courses across their university and uncovered that cross-listed courses (which the authors called paired courses) provide value to both undergraduate and graduate populations in certain pedagogical aspects such as team-based learning, peer teaching, or tutoring. The authors claimed, "The integrity of graduate education can be maintained in 'paired courses' when graduate students are assigned work that asks them to engage in larger scholarly conversations within the field, provides opportunities for practicing leadership or the mentoring of undergraduates, requires advanced level writing, and engages students in graduate-only extended class discussions" (Balassiano, Rosentrater, & Marcketti, 2014, p. 23). The authors' defined clear outcomes by challenging graduate students to participate in scholarly conversations and act as leaders in the mixed student population settings. Defining goals between student populations could improve student perceptions as well. Balassiano, Rosentrater, and Marcketti (2014) found that while students reacted positively to these courses, there were problems "when different student abilities are not taken into account" (p. 24), in that there were student concerns when undergraduates felt the expectations were too high and graduate students felt the material was too basic. Through the choice of assessing integrity, the authors infer value and level of education in cross-listed courses.

The lack of distinction between education levels also exposes another ethical issue—vagueness of expected skills and competencies of new graduates. Looking at skills and competencies in terms of course development and assessment opens up questions about the differences in degree level and warrants discussion of skills taught in cross-listed courses. Over the last decade, we have seen scholars compare course content to skills desired by employers. Henschel and Melonçon (2014) assessed the skills deemed important by both academics and practitioners in order to show how the skills can be applied in course development and assessment. The field has seen several approaches to skills/competency research, including assessments of job postings (Lauer & Brumberger 2016; Stanton, 2017; Spyridakis, 2015), qualitative studies with interviews and/or surveys (Kimball, 2015; Cyphert et al., 2019; Clokie & Fourie, 2016), and mixed-methods of data analysis, surveys and interviews (Brumberger & Lauer, 2016). Even though this research is not broken down to skills in relation to degree level, examining the desired skills is needed to situate the conversation in context.

An evaluation of skills by degree level is needed; however, research on skills does not distinguish results by degree level. Communication skills are consistently ranked highest among employers. Stanton (2017) performed a quasi-reproduction of a study by Lanier (2009) in order to examine 60 job postings that were titled "technical writer." Her results found that 82% of postings asked for "experience in technical communication" and 55% asked for communication skills (including oral, written and English language) (Stanton, 2017, p. 229). The next desired skills, included in 40% to 50% of ads, comprised general software knowledge, multitasking, and collaboration skills. In addition to prioritizing communication skills, many of these studies pointed to a need to teach problem-solving and critical thinking skills (Brumberger and Lauer, 2020; Kimball, 2015; Clokie & Fourie, 2016; Cyphert et al., 2019). For example, Moore and

Earnshaw (2020) advocated for technology literacies instruction, which intersects with other research in the field such as Hovde & Renguette (2017), rather than teaching students to use certain specific programs. They argued, "It is less important to teach every emerging software than it is to explain why and how technical communicators use it in the workplace, and how each software relates to one another, even terms of open sourcing and proprietary information, and complements technical communicators' sense of medium" (Moore & Earnshaw, 2020, p. 69). Programs and software are constantly changing—even updated versions of programs such as Microsoft Word or Adobe DC perform differently than past iterations. For that reason, students should gain experience to program through technology acquisition and technical literacies, rather than courses focused on teaching the software itself. Further research on skills and competencies is needed to understand the field's uncritical usage of cross-listed courses. To offer a distinct and appropriate student experience based on degree level, TPC needs to understand the current usage of these courses. As such, my study will uncover variations in experience based on degree level in relation to skills/competencies to assess if the treatment of students is ethical and sustainable.

Overall, the scholarship on skills and competencies provides several takeaways in relation to student learning. First, Stanton (2017) and Brumberger and Lauer (2020), among others, found that communication skills are paramount. Depending on the frame of the study, terminology of the specific communication skills varied, but communication focused skills would likely align with "basic skills" defined as "[t]he capacity to make informed decisions about usage, grammar, mechanics, styles, and graphic representations based on knowledge of readers and writing situations" (Henschel and Melonçon, 2014, p. 7). Second, many studies advocate for pedagogical implications that call for programs to focus on teaching problem-solving and critical-thinking skills (Brumberger and Lauer, 2020; Kimball, 2015; Clokie &

Fourie, 2016; Cyphert et al., 2019). This research establishes that skills are important pedagogically and programmatically, and more work is needed to understand how to implement and assess skills in our courses. Cross-listed courses complicate this issue and, if we take the time to understand cross-listed courses, we may gain more insights into value of bachelor's and master's programs.

While communication, problem-solving, and critical-thinking skills are established as desirable to employers, the field lacks clarity regarding the proficiency of these skills based on education level. That is, what is the difference in skill level between a recent graduates from bachelor's and master's programs? Cross-listed courses distort this distinction—undergraduate and graduate students take the same course and seemingly learn the same material. For that reason, my project includes interviews with faculty and the collection of syllabi and assignment descriptions to look for variation between the two groups. Even if there are differences in outcomes, assignments, and assessments for each student group, the students took the same course and will likely gain similar skills and competencies.

Conclusion

My study integrates a sustainable and ethical approach, uniting trends from programmatic and pedagogical research. In absence of literature on cross-listed courses in TPC, I developed a framework to connect curricular and programmatic research on related topics, including ethics in TPC, history of the field, multi-institutional research, types of courses, and degree levels. Purposely, my study uses an ethical framework that integrates virtue ethics, professionalism, and situational ethics. With this framework established, I integrate historical trends in TPC research to ground my study. Additionally, field-wide research is key to establishing metrics for

sustainable (staffing, enrollment, student job prospects), programmatic (deciding courses to offer), and curricular (designing course goals, outcomes, and projects) decisions. To emphasize ethics more clearly in the field, each of these categories of programmatic perspective need to account for and create a just and equitable experience that accounts for changing contexts and various perspectives. In addition, my study examines literature on degree levels and student competencies, further making connections of ethical and sustainable practices for programmatic research. Each of these areas bolsters the need for research based on iterative and systematic reflection, which leads to my use of a continuous improvement model. The focus on continuous improvement offers a guide for my research and also emphasizes the need for data from other programs to contextualize results.

In my next chapter, I explain my applied, empirical, mixed methods. Using three types of data: (1) actual course data from institutional documents, (2) interview data from program administrators and/or faculty, and (3) pedagogical materials (syllabi and assignment sheets) from the courses supplied by administrators or faculty—my project hinges on uncovering practical results that will provide the field an understanding of the current pedagogical approaches to teaches cross-listed courses.

Chapter 3: Methodology and Methods

Research Study Design

As discussed in the previous chapter, not all multi-institution or field-wide research is successful—specific attention must be given to the project's methodology and methods. Empirical and replicable research is important to the field of TPC, but we should also be approaching research with an eye toward improvement through mimicking successes and learning from mistakes.

As a framework for my overall project, the theme of sustainability also echoes through my research study design. A key to sustainable programs is continuous improvement that is driven by critical and ethical reflection and then action. TPC has an ethical reasonability to build sustainable programs. My project employs the concept of *phronēsis* to unite applied research, sustainability, and ethics into an effective methodology. This chapter begins by describing my methodology, which is guided by psychologist Tracy's (2013) connection of applied research and *phronēsis*. This chapter will delineate my study design: methodological orientation, research methods, research questions, data collection, and sampling plan.

Methodology

As an applied research project, my research questions—which were designed to help programs understand courses better—drove my decision to take a praxis-based or *phronētic* approach to research. *Phronētic* research is concerned with usefulness and application of knowledge, rather than a theoretical approach (Tracy, 2013). This type of practical research

begins with the researcher "identifying a particular issue, problem, or dilemma in the world and then proceed[ing] to systematically interpret the data in order to provide an analysis that sheds light on the issue and/or opens a path for possible social transformation" (Tracy, 2013, p.4). Tracy remarked that a *phronētic* research approach suggests that "qualitative data can be systematically gathered, organized, interpreted, analyzed, and communicated so as to address real world concerns" (p. 4). Essentially, the process of *phronētic* research starts when a researcher selects or identifies a problem/issue and then continues through the stages of data gathering, organizing, interpreting, analyzing, and applying. Applied in nature, *phronētic* research is concerned with practical issues or answering specific questions that have come out of a specific context.

TPC has long been interested in practical research. Early studies such as Pearsall, Sullivan, and McDowell (1981) and Cunningham & Harris (1994) investigated the number of TPC programs in the field. These studies started off with a practical issue and set forth on an applied research study. Many TPC studies employ an applied or practical approach to research because they are interested in assessing pedagogical or programmatic issues. Following Tracy's (2013) understanding of *phronētic* research, many researchers started with a problem then worked through the stages of gathering, organizing, interpreting, and analyzing the data, before offering implications as to how the results could be practically implemented in some way. For example, scholars have looked specifically at the service course to understand its overall goals (Read and Michaud, 2018; Arduser, 2018), contexts (St.Amant, 2018); and assignments (Francis, 2018). Another strand of prominent applied research has been programmatic and pedagogical research that is based on questions or concerns at a single institution (Fleckenstein et al., 2013;

Bloch, 2011; Hirst, 2016). What is explicitly missing from these two approaches is a clear concern with an ethical dimension to a programmatic perspective.

By ethics, I mean a guiding framework or set of principles (Jennings, 1999) that accounts for equitable and just treatment across relationships (Bennett, 2010) and from various perspectives (Duska, 2014). My understanding of ethics is purposely broad, avoiding aligning with one particular ethical approach. This expansive approach affords an opportunity to integrate and draw from various ethical approaches used by TPC scholars, including virtue ethics, professionalism, and situational ethics. Additionally, a flexible approach allows me to build on scholarship that advocates for ethical habits or an ethical facility as a move toward developing ethics in pedagogy.

While ethics are not frequently employed as a framework for applied TPC studies, programmatic and pedagogical matters are inherently ethical. For example, the field is preparing students as citizens with responsibilities to their communities, workplaces, etc. A deliberate and thoughtful integration of ethics into programmatic work ensures programs are addressing the needs of student learning and making the end, the telos, clear throughout. Colton and Holmes (2018) suggested "habits" (Greek term, *hexis*) such as justice, care, patience, and fairness overlap and can be used in ethical situations. Similarly, Fleming (2003) suggested that rhetorical training leads to a facility for to make better choices. As a framework, set of habits, or facility, an ethical approach to programmatic development leads to more conscious and intentional considerations of students, which in turn connects to programmatic sustainability.

TPC programs need to concern themselves with ethics at every level because it underscores the field's long-standing concern with preparing students for their workplace and

civic lives. Scholars have been quick to connect being rhetorical with being moral and a good citizen. A common example of the connection between rhetoric and citizenship can be found in the work of Quintilian. His declaration that an orator should be a "good man speaking well" is directly connected to being rhetorical and virtuous by "play[ing] his part as a citizen" and being "capable of meeting the demands of both public and private business" (p. 211). In antiquity, learning to be rhetorical was closely linked to the study of morals and values (Fleming, 2003, Gibson 2014, Duffy 2017).

The concept of virtue ethics has gained popularity in the last few years as a way to engage with rhetorical ethics. Duffy (2017) posited that "as teachers of writing we are *always already* engaged in the teaching of rhetorical ethics and that the teaching of writing necessarily and inevitably moves us into ethical reflections and decision-making" (230). Duffy's argument revolves around Aristotle's "virtues of character, such as kindness, self-control, and generosity" (234). Duffy declared "virtue ethics is the idea that virtues are the traits, attitudes, and dispositions of character that we associate with a good person" (235). While virtue ethics is uniquely positioned as a rhetorical concept, it is also somewhat limiting because it remains focused on the binary of right versus wrong.

Another, perhaps more appropriate, ethical orientation can be found in situational ethics. The guiding principles of situational ethics (Fletcher, 1996) suggest: nothing is inherently good or evil; human well-being and happiness are paramount; a right answer should be good, not simply the lesser evil; and a right answer may include a seemingly immoral act, if the final result is good. To practice situational ethics, individuals should approach ethical-decision making by using morals as a general guide, not as absolute rules to follow. Each situation requires a fresh interpretation and should not be directly based on a past situation. Melonçon et al. (2021)

referred to situational ethics as a "kairos-driven approach since it is in the moment that a problem presents itself that exigent ethical moves often become apparent" (p. 432). In addition, the authors connect embodiment—the material body of the researcher or participant—as a facet of situational ethics. They posited, "an embodied ethic is a necessary component of situational ethics that recognizes and reflects on the role of embodied participants at the instant of research practice" (p. 434). From this understanding, situational ethics provides an ethical framework that considers the situation, the timing, the moves or options based on the situation and timing, and the participants—all of which are important aspects of an ethical approach to programmatic sustainability.

Even though rhetorical studies have long been interested in ethics, applied or praxis-based TPC studies rarely engage with the rhetorical or ethical demission of *phronētic* research. As a rhetorical concept, *Phronēsis* is inherently ethical, and my study looks to draw that out. To move toward sustainability, TPC needs to start thinking of program development in ethical and sustainable ways. As an applied research method (concerned with usefulness and application of knowledge), *phronētic* research stems from the ancient Greek word, *phronēsis,* which can be found in the original Greek version of Aristotle's *Nicomachean Ethics*. Translated versions of Aristotle's *Ethics* typically choose to replace *phronēsis* with "prudence" (Loeb Classical Library Translation) or "practical wisdom" (Ross Translation, 2009). The ancients tied the concept of ethics to virtue and wisdom. In ancient Greece and Rome, ethics were taught in conjunction with rhetorical skills through an ancient set of exercises called the *progymnasmata*. Through rhetorical training, students were immersed in ethical scenarios. Thus, in conjunction with learning rhetorical composition skills, they also learned ethical decision-making skills.

Each of the aspects of situational ethics, the situation, timing, options, and participants, influence the outcome or action. Researchers in other fields paired *phronēsis* with research to enact ethical change or action. For example, Gordon (2002) remarked, "phronēsis, is concerned with action (e.g., making a sound legislative decision)" (p. 157). In addition, business and sustainability scholar Roos (2017) suggested that "practical wisdom comprises knowing how to strike balances between individual and collective interests, short-term and long-term perspectives as well as between adapting to and shaping the environment" (p. 120). Roos argued to employ *phronēsis* as an ethical framework to move toward sustainable choices as a common good and wise governance practice. Similarly, an action researcher, Eikeland (2006) contended that "*[p]hronesis* "is both ethical and intellectual" but it "does not try to manipulate, or merely persuade" (p. 34). These interpretations call out interpretations of *phronēsis* to action, ethics, and a common good.

Leaning on this connection of *phronēsis* and ethics, recent scholarship on qualitative methods has used *phronētic* research to represent projects concerned with practical contextual knowledge aimed toward social commentary, action, and transformation (Tracy, 2013, p. 4). In this way, my project employs *phronēsis* as a qualitative research approach to assess a particular phenomenon of TPC program s. Tracey (2013) added, "qualitative research is especially well suited for accessing tacit, taken-for-granted, intuitive understandings of a culture. Rather than merely *asking about* what people *say* they do, researching in context provides an opportunity to see and hear what people *actually* do" (p. 5, emphasis original). As a research methodology, *phronēsis* acts as a framework to gather practical contextual knowledge in an ethical and action-based approach.

The following examples help demonstrate ethical accountability PAs should consider in the pursuit of building sustainability in the field and in their individual programs.

- Undergrad job preparedness—Do the courses include material to prepare students for industry? For example, instead of teaching students how to use a single program such as Adobe InDesign, do courses focus on digital and technical literacy? Additionally, is research being done to assess job preparation?
- Course creation—Do the courses fit together, overlap, and support each other? In that, is course content integrated to connect material within the major courses to offer students a cohesive experience in the program?
- Undergrad program sizes—Is the field mindful of the number of technical communicators it produces? PAs should target a sustainable program growth rate, which takes labor and resources into account when recruiting students.
- Training grad students—Is the field providing graduate students with enough training to run a program as a PA? The field's overreliance on theory fails to consider the training needed in grad school for future faculty to build sustainable programs.
- The field's research agenda—Is the field evaluating and exploring core issues within programmatic development? Is enough research focused on the field's core issues?
- Academic job opportunities—Is the field over producing PhD students? TPC needs to be aware of the overproduction of English literature PhDs to avoid a similar fate of a saturated field.
- Professional development—Is the field concerned with ongoing training and support for contingent labor? Many contingent labor instructors do not have TPC content knowledge.

Each of the issues above is ethical in that faculty and PAs have a responsibility to address these concerns to bolster sustainability within the field. Methodologically, the *phronētic* approach with a clear ethical orientation allows me to ground my empirical, mixed method study, which I begin to describe in the next section

Research Questions and Methods

My *phronētic* approach aligns with the call for research study design. The notion that a *phronētic* approach is concerned with practical contextual knowledge is especially useful in empirical research. Said another way, *phronēsis* provides an approach for empirical research situations that are designed to study a question or investigate a topic. As proposed by Melonçon, Rosselot-Merritt and St.Amant (2020), research study design represents "a comprehensive plan that provides the rationale and justification for methodology, methods, and practices with an intense and transparent focus on ethics" (p. 108). The authors encourage "empirical research situations designed to study a question and design an experiment/situation focused on answering that question" (p. 110). My research picks up on calls in the field to engage in more rigorous research that pursues "multi-institutional research studies" so that "our pedagogical questions and answers could offer insights that go beyond local cases" (Melonçon, Rosselot-Merritt and St.Amant, 2020, p. 112). While there has been an increase in this type of research (Boettger and Lam, 2013; Carliner et al., 2011), more work is necessary to move toward sustainable (Meloncon & St.Amant, 2019) and durable research (St.Amant and Graham, 2019). Recent research that moves TPC toward sustainable, durable, and ethical research includes Christensen, Gibson, & Vernon (2010) evaluated cognate, or out of department, courses in PhD programs; Chong (2016) examined usability courses by looking at associated materials such as textbooks and syllabi;

Melonçon and Schreiber (2018) investigated the capstone course by evaluating 76 degree programs in the U.S.; and Melonçon (2019) looked at editing courses offered across the field to compile an overview of the usage and requirements of editing courses. When evaluated together, these examples establish a trend toward TPC multi-institution research studies that pick up the themes of applied, ethical, and sustainable research.

Inspired by Melonçon, Rosselot-Merritt and St.Amant (2020), my research study design began with my research question. Gathering textual information and combining that with interview data provided insights into what programs are doing both at the field-wide level and within contextualized local situations. In addition to collecting data on cross-listed courses online, I chose to interview faculty and program administrators to ask what they did, but also request course materials to see what their actual policies looked like in writing.

My applied, empirical mixed-methods study is intended to provide important foundational insights into an under-researched area in TPC: cross-listed courses across the U.S. in TPC degree programs.

Research Questions

- What courses are cross listed?
- Which of these are required courses? Which of these are core courses (see Melonçon and Henschel, 2013)?
- Are the student learning outcomes the same or different for the two student populations?
- Are the assignments descriptions and assignment requirements/expectations the same or different for the two student populations? If different, is this differentiation required by the department or university? Is it documented?

- Are the student populations assessed the same or differently? If different, are the assessment guidelines documented or assumed?
- How do course objectives and assignments affect the level of education for each distinct degree?

These research questions drove the research study design, and my approach to gathering data, but several other questions emerged as I began the interviews. It quickly became apparent that cross-listed courses are used but rarely discussed or altered. Thus, the following research questions were added during the interview stage.

- What are the differences between a bachelor's and master's degree? Subsequently, how do faculty and students describe this difference?
- When and how do faculty learn about program administration and course development?

Methods

Framed around a *phronētic* or applied methodology, my study was designed to integrate mixed methods to provide additional context and data. Thus, my project incorporates quantitative (information on number and type of cross-listed courses across the U.S.) and qualitative (information on learning outcomes, assignments, assessment, and scheduling collected from interviewees) data. In this sense, my research study is qualitative in scope by providing a justification for the institutions selected. In this way my research study design is "field oriented in nature and not concerned with statistical generalizability" (Guest, Bunce, & Johnson, 2006, p. 81).

Quantitative results include:

- How many programs use cross-listed courses?
- How many cross-listed courses are offered at each school?

- How many programs have requirements and/or guidelines for separation of undergraduate and graduate learning outcomes, assignments, and assessment in cross-listed courses?

Qualitative results include:

- How are cross-listed courses used and taught at various institutions?
- How are learning outcomes, assignments, and assessment handled by instructors?
- Do course materials offer additional insight?

As described above, my mixed-methods approach is both empirical and textual. As an empirical study, I gather information from online course catalogs, which is a reputable form of data collection. The textual component of this study comes from analyzing interview results and course materials.

My study uses three types of data: (1) course data from institutional documents and online course catalogs, (2) interview data from program administrators and/or faculty, and (3) pedagogical materials (syllabi and assignment sheets) from the courses supplied by administrators or faculty. Because my goal was to uncover practical results that provide the field an understanding of the current pedagogical approaches to teaches cross-listed courses, I chose a mixed-method approach to present data that combines textual information with interview data to provide insights at the local and field-wide levels.

Research Practice

Accessing data online through course catalogs allowed me to determine what universities offer cross-listed courses, the titles of the courses, and the number offered each semester at each institution. Next, contacting and interviewing program administrators and faculty reveals motivation and insight behind how and why programs choose to offer cross-listed courses. It also

provides insight into the differences in student learning outcomes, assignments, and assessment. Interviews allow me to inquire about staffing to find out what type of instructors typically teach cross-listed courses. Lastly, by collecting syllabi and assignment descriptions, I can more closely compare and analyze the variations between course goals and assignments for the two student populations.

In addition, my data collection considers credibility, transferability, and dependability of qualitative research (see Hughes & Hayhoe, 2008). Using several SAGE Encyclopedias of research methods, I offer definitions of each term and then place the concept in the context of my data. To begin, credibility "refers to the extent to which a research account is believable and appropriate, with particular reference to the level of agreement between participants and the researcher" (Mills, Durepos, & Wiebe, 2010, n.p.). Further, "important considerations in assessing the extent to which a case study or any other type of research study is trustworthy" (n.p.). My first dataset, a corpus of cross-listed courses, will be obtained from my data collection, thus limiting the self-reporting that can be found research solely based on interviews. As Hughes & Hayhoe (2008) established "observed behavior...has higher credibility than self-reports" (p. 79). Thus, collecting the materials myself makes the data more credible and replicable. My second dataset will be gathered through interviews—using questions to achieve a semi-structured approach. Finally, interview participants will be asked to provide assignment descriptions, which add further credibility to their self-reported responses.

In addition to using a triangulated approach to bolster credibility, this method also acknowledges concerns for transferability and dependability. "Transferability of a research finding is the extent to which it can be applied in other contexts and studies. It is thus equivalent to or a replacement for the terms generalizability and external validity" (Coghlan & Brydon-

Miller, 2014). Forming credibility through a corpus, interview responses, and assignment descriptions establishes transferability (Hughes & Hayhoe, 2008, p. 79). Purposely, my dataset and collected assignment descriptions represent actual data in the field, thus offering transferable results. Finally, "Dependability in a qualitative study recognizes that the research context is evolving and that it cannot be completely understood a priori as a singular moment in time" (Given, 2008). My approach to collect three complementary datasets strengthens the dependability of my results. As Hughes & Hayhoe (2008) offered, dependability refers to the "depth of engagement, diversity of perspectives and methods, and staying grounded in the data" (p. 80). My data collection will collect two years of course offerings to provide a usable depth and grounding. By looking at the most recent four semesters, my project will provide an up-to-date snapshot of the cross-listed offerings across the field, thus offering a thorough engagement.

My effort to establish credible datasets aligns with my overall methodology: to approach research in both practical and ethical ways. The combination of data collected—online, interviews, and textual materials—solidifies the credibility and dependability of my research. Again, this approach not only responds to the need for multi-institutional studies, but my methods of collection strengthen the project by blending the practical and ethical approach of reporting both what program administrators and faculty qualitative remarks with the empirical textual artifacts from their courses. In this way, the combination of interviews and textual material analysis allows me to connect back to my *phronētic* framework to produce practical and ethically reported results.

Sampling Plan

Here I use sampling plan in a modified definition. In an applied research study, sampling plan is defined as: Conducting an applied research project that involves primary data collection requires that the study team develop and implement a sampling plan that includes deciding how individuals or other units will be selected, carrying out the selection process, encouraging participation of those selected, and assessing the extent to which departures from the expectations set when planning the sampling process may affect the study findings (Henry, 2013, n.p.).

Rather than following this definition for sampling plans in survey research completely, I employ sampling plan to explain how the institutions interview participants I targeted were selected. While not statistically generalizable results in the traditional sense, my study was instead developed in line with qualitative research methods.

Institutions

Historically, TPC had three sets of self-enrolled program listings hosted by the following organizations: Association of Teachers of Technical Writing (ATTW); Council of Programs in Technical and Scientific Communication (CPTSC), and Society of Technical Communication (STC). The first two are academic organizations, while the latter is the largest professional organization of technical and professional communicators in the U.S. All three lists were incomplete and, since they were self-enrolled, the data was often out of date. In 2009, when Melonçon published her first field-wide programmatic work, she began a programmatic database, TechComm Programmatic Central, which was quasi-inter-related by both academics and practitioners. (For a full description of the process of quasi-inter-rater reliability, see Melonçon forthcoming). This database, TechComm Programmatic Central (Melonçon,

forthcoming), remains the most comprehensive list of TPC degree programs in the U.S. with more than 300 institutions and 650 degree programs.

From this database, I extracted the names of every institution that offers a master's degree in TPC (n=106). Next, I cross-referenced which institutions also offered an undergraduate degree program, resulting in a list of institutions that offer both a bachelor's and master's degree program. The institutions that offer both types of degrees are most likely to offer cross-listed courses. This approach to using a verified and recognized dataset enabled me to focus on a data gathering plan to further determine my sample of institutions who offer cross-listed courses.

To arrive at my sample, two more important decisions needed to be made. First, I chose to include institutions with both an undergraduate "degree program" (n=19) and an undergraduate "degree emphasis" (n=18). A "degree emphasis" means the degree is not in TPC—usually in a larger discipline—with an emphasis of TPC coursework (e.g., a degree in English with a concentration in professional writing) (Melonçon, 2014). Second, I eliminated schools with certificate programs (as opposed to degree or emphases) because certificates are not as understood outside of higher education (Melonçon, 2012) and have fewer defining features that mark them as a unified course of study (Melonçon, 2012 cf. Melonçon, 2009, Melonçon & Henschel, 2013). After these decisions, I was left with a sample of 37 institutions. This part of the modified sampling plan ensures that I have the compiled the strongest dataset possible because it is based on a verified list of TPC programs.

With the list of 37 schools established, the next step involved gathering my first dataset from the sample institutions' degree programs through the assemblage of a corpus of institutions and course titles. Two of my research questions will be answered in this step:

(1) how many institutions offer cross-listed courses

(2) what are the titles of the cross-listed courses

The data from institutions was collected by carefully navigating institutional websites to find mentions of cross-listed courses. As part of a two-step process, I located the course catalogs and schedule of courses at each institution. The course catalogs offered a description of courses for both undergraduate and graduate students. This provided the information to establish an initial list of courses. Because my corpus of cross-listed courses was obtained from information listed online, it limited self-reporting from the schools. As Hughes & Hayhoe (2008) established "observed behavior...has higher credibility than self-reports" (p. 79). During this step, my research determined that there was no clear indication of cross-listed courses at 13 schools. Additionally, I eliminated three schools for no longer having both a master's and bachelor's degree in TPC. Thus, based on the listings in each schools' online course catalog and schedule, I found evidence of cross-listed courses at 21 schools. During this step, my original sample was narrowed from 37 to 21.

Next, I examined course schedules to find course offerings for Fall 2018, Spring 2019, Fall 2019, and Spring 2020. Attempting to capture two years of data is important for two reasons. First, looking at the most recent four semesters ensure my project will get an up-to-date snapshot of the cross-listed offerings across the field, thus offering a thorough engagement. Because many programs run on two-year cycles and not all courses are offered every semester or even every year, looking at the past two years allows me to document the courses offered for the entirety of each program. Second, two years of data accounts for two cycles of incoming students to ensure that I have captured the sequence correctly. During this step in the process, I paid particular attention to the course numbers and course titles in an effort to identify courses that may be cross listed. When I found courses with the same (or similar) titles and numbers, I

checked to the instructor's name, course meeting time, and location. Typically, from recording the instructor, meeting time, and location, I could then accurately deduce if the courses were being cross listed. During this stage, it became clear that the course titles and numbers are usually, but not always, very similar for both listings. For example, one institution offers "proposal writing" (4450) and "advanced proposal writing" (5550). Both courses are offered at the same time (T/Th, 1230-145), same location, and with the same instructor, thus confirming they fit my criteria of cross listed.

My data was collected from May to September 2020. I was able to find the previous two years of course catalogs at roughly half of the schools, but I regret that this information was not available at every single institution. From my research collection, I found out that some schools only publish the previous one or two semesters of course schedules online that are available to the public. As a limitation that I had not foreseen when designing my research plan, not being able to pull two years of data from every school did not hinder my findings significantly. While my own data collection was important to my methodology to collect empirical data that was not self-reported, it was became apparent that if a school offers at least one cross-listed course, they have others. In this way, my data collection established what schools offer cross-listed courses and which do not. Additionally, this first collection of data acts as a grounding and baseline for the more advanced analysis performed during my interview stage.

To keep the schools and participants anonymous (IRB #00038267), the titles of the schools have been replaced by an identifier number and the institutions' size and research level based on the Carnegie Classification system.

The Carnegie Basic Classification states:

- "R1: Doctoral Universities – Very high research activity

- R2: Doctoral Universities – High research activity
- D/PU: Doctoral/Professional Universities
- M1: Master's Colleges and Universities – Larger programs
- M2: Master's Colleges and Universities – Medium programs
- M3: Master's Colleges and Universities – Smaller programs"

(https://carnegieclassifications.iu.edu/classification_descriptions/basic.php).

Table 1: Carnegie Classification of Institutions

Institution Identifier	Carnegie Classification	Number of Cross-listed Courses
1	Public, R1	6
2	Private, R1	4
3	Private, R1	4
4	Public, R1	3
5	Public, R1	2
6	Public, R1	2
7	Public, R1	2
8	Public, R1	2
9	Public, R1	1
10	Public, R2	4
11	Public, R2	2
12	Public, R2	2
13	Public, R2	1
14	Public, R2	1
15	Public, R2	1

Table 1: Carnegie Classification of Institutions (Continued)

16	Public, D/PU	1
17	Public, M1	14
18	Public, M1	2
19	Public, M1	2
20	Public, M1	1
21	Public, M3	1

Table 1 provides an overview of the schools in my sample and their Carnegie classifications, the sample of 21 schools consists of nine R1 schools, six R2 schools, one D/PU school, four M1 schools, and one M3 school.

Interviews

Interview Participants

Once my first dataset of online course listings was complete, I moved on to semi-structures interviews, a common method to gain specific insights and experiences of participants into the research questions. As opposed to the more commonly used data collection method of surveys, interviews are more targeted. The goal of the semi-structured interviews was to elicit qualitative data—providing a clearer overview of the ways in which cross-listed courses are handled at various institutions in a localized context. The choice to employ semi-structured interviews as my method provides a flexible framework to engage with faculty and program administrators in the field to get insights specific to local concerns and allow the researcher to get more in-depth answers from the people designing and teaching these courses. In addition, interviews with faculty teaching cross-listed courses further illuminate the relationship of cross-

listed courses within programs. By relationship, I am referring to how cross-listed courses fit into programs and how they are viewed and integrated into course offerings by faculty. This relationship is important because it offers insight as to why the field has adapted these courses and how the courses support the programs. More specifically, the relationship of cross-listed courses within programs further illuminates the larger framework of the sustainability implications of my study.

Next, I needed to identify an appropriate number of participants. Qualitative researchers have long debated guidelines for sample sizes. To determine an appropriate number of interview participants, I examined recent meta-research (research about research) in TPC. Based on a five-year systematic review, Melonçon and St.Amant (2019) found the average number of interview participants in TPC studies was 15 (p. 146). Interestingly, Melonçon and St.Amant (2019) established that most studies in TPC do not list saturation as part of methods or research study design. Saturation is a theoretical "phase of qualitative data analysis in which the researcher has continued sampling and analyzing data until no new data appear" (Lewis-Black, Bryman, & Liao, 2004, n.p.). Due to the applied nature of this study, saturation was not an important concept, as my goal was to collect information to address specific research questions. My study employed thematic analysis to organize and describe the trends from the participants in my results. During this stage, I looked for and found consensus among my participants. While not saturation, my results aligned into themes. For this reason, I set a goal for 10 to 15 respondents.

From completing the collection of the first dataset—online course listings from my sample of 37 schools—I found evidence that 21 offered cross-listed courses. I then used the list of 21 schools to select 27 faculty and administrators to contact through email. I emailed each person three times, which resulted in 14 interviews from faculty at eight institutions.

Table 2: Respondents in Relation to Institutions

Respondent Number	Institution Identifier	Carnegie Classification
R1	17	Public, M1
R2	17	Public, M1
R3	17	Public, M1
R4	20	Public, M1
R5	4	Public, R1
R6	19	Public, M1
R7	6	Public, R1
R8	6	Public, R1
R9	11	Public, R2
R10	11	Public, R2
R11	14	Public, R2
R12	10	Public, R2
R13	17	Public, M3
R14	19	Public, M1

Part of my sampling plan was to deliberatively target some respondents from the same institution because it provides more accountability to ensure the faculty members were following the same guidance. In other words, in some ways, contacting more than one participant from the same institution serves as a form of inter-rater reliability. As seen in Table 2, I had four respondents (R1, R2, R3, and R13) from a public M1 (identifier 17), two respondents (R7 and R8) from a public R1 (identifier 6), two respondents (R9 and R10) from a public R2 (identifier 11), and two respondents (R6 and R14) from a public M1 (identifier 19). The remaining four respondents represent sole respondents from their institution (R4, R5, R11 and R12). By

conducting interviews with more than respondent at an institution, I have data to show if policies are consistent based on the individuals' self reporting. This decision was made to integrate multiple perspectives to get a clearer view of the use of cross-listed courses, rather than to call attention to inconsistencies within programs. Said another way, differences in the way faculty at an institution view these courses exposes ethical and sustainable results. Programs need some level of consistency to offer varied experiences for both student populations (ethical consideration) and consistency throughout the program (sustainable consideration).

With my sample secure, I began conducting phone, video, and/or email interviews. My interview questions break down into three categories. The first set represent institutional inquires, the second set are pedagogically focused, and the final set are staffing related. After my first few interviews, I noticed a natural progression in the conversations toward the respondents' experience; thus, a final question was added to inquire about the person's background.

Table 3: Interview Questions

Category	Question
Institutional	1. Based on the information online, I found that X, Y, and Z courses are cross listed, is this correct? o Are there other cross-listed rhetoric or PTC courses in your dept.? o Are these courses normally (non-pandemic times) taught online, F2F, or both?
Institutional	2. I understand in most cases, cross-listing is done due to staffing and enrollment, was this behind your thinking as well?
Institutional	3. If so, have you recently reviewed or discussed cross-listed courses?
Pedagogy	4. How was your experience teaching cross-listed courses? o For example, how do you handle class discussions?
Pedagogy	5. What challenges do you find in teaching cross-listed courses as compared to teaching courses that are not cross-listed? o What have you done to respond to these challenges?

Table 3: Interview Questions (Continued)

Pedagogy	6. Do you change the coursework (assignments, readings, and projects) for student level (undergrad and grad)? o If so, what work do you typically add/augment for grad students? More readings? More projects? Using grad students as leaders or project managers? o If so, is the choice to add/augment work for grad students given to each instructor or is it a requirement by your department and/or the university?
Pedagogy	7. What is your approach to assessment of the two student groups? o Is there a differences in your assessment of undergrad and graduate students? o If so, what does that look like? o If not, why?
Pedagogy	8. Do you use different student outcomes for the two student groups? o If so, how did you make the determination? o If not, is it a program decision to offer one set of learning outcomes per class? Or are the instructors allowed to choose outcomes?
Staffing	9. What type(s) of instructors primarily teach these courses? i.e. Tenured or tenure-track professions, continuing instructors, visiting instructors, graduate students, adjuncts
Experience	10. Can you briefly describe your training or background as it relates to course construction and writing program goals? In other words, when did you learn about learning outcomes at the course or program level? Grad school? On the job?

Course materials

In addition to my first two datasets, online collected data and semi-structured interviews, I also collected course materials from my interview participants, including syllabi, assignments, and any other pedagogical materials, as supplemental data. The purpose of collecting this pedagogical and additional materials is to further support my investigation into pedagogical approaches in the classroom that may, or may not, support the two different classes of students in

these courses. In other words, I looked for traces of pedagogical differences for the graduate and undergraduate students or if no such traces exist to then potentially suggest that more specific language and practices should occur in these courses. These materials assist in evaluating if learning outcomes and/or assignment guidelines are the same or different for the two student populations. By analyzing the interview data with course materials, I hope to be able to gain a clearer picture and fuller understanding of current approaches to teaching cross-listed courses. Since my project is focused on an applied question, I have chosen a discourse analysis approach for the analysis of the interview transcripts and pedagogical materials to expose themes across institutions that will shed insights onto my research questions specific to understanding the current pedagogical practices of cross-listed courses in TPC.

Methods of Analysis

My multi-method analysis includes the following steps: (1) collect and code web-gathered information on cross-listed courses from course catalogs and course schedules, (2) conduct and code structured interviews, (3) collect and code additional documents, and (4) conduct a discourse analysis. As the definition and understanding of "discourse analysis" can vary, I am using it to mean "is used to describe a number of approaches to analyzing written and spoken language use beyond the technical pieces of language, such as words and sentences" (Miles, 2012, p. 367). As such, I looked closely at language to find themes and patterns in the written materials and interview transcripts. The project is primarily qualitative because I am interested in seeing if there is overlap in how people discuss cross-listed courses; however, the projects will include quantitative data regarding the number of courses offered at each institution.

1. Coding Web-Gathered Info

My first dataset is comprised of online listings of cross-listed courses. My data was stored in an Excel spreadsheet. I collected data from each institution in my sample (n=37). In this step, I eliminated three schools that no longer had both an MA and BA, and 13 schools that did not have clear cross-listed courses. My dataset was thus narrowed to 21 institutions. Once my data was collected from my updated sample (n=21), I performed several analyses.

My first data analysis included counting the number of cross-listed courses at each school. My method included two methods of counting for accuracy: I manually counted and checked my work with "sum" feature in Excel. In this step, I determined how many courses were collected from each school. I also organized the intuitions by the number of cross-listed courses I was able to find listed.

Placing the Cross-Listed Courses in Conversation

To situate my dataset, I default to Henschel and Melonçon's (2013) established list of "core courses" and Melonçon (2009) most frequently offered master's courses to focus on the most commonly required courses from a field-wide perspective. This study is important because it represents the only contemporary research on program and course offerings from a field-wide perspective; thus, it serves to ground my results in common course titles and course requirements. Recognized by Melonçon and Henschel (2013), core courses represent the eight most common courses required in TPC undergraduate degree programs from an assessment of 65 degree programs. From this examination, the authors identified eight courses commonly required in TPC programs, which "suggest[s] a commonality in U.S. curricula and indicate what courses TPC program administrators and faculty believe are necessary to earn a TPC degree" (p. 51). Focusing my study in relation to core courses has a number of advantages. First, it enables me to situate the study on previous research that establishes the most common required courses.

Second, using these established core courses provides set ways to categorize and organize my data. Third, it allows me to make inferences as to how cross-listed programs are integrated into programs—in that, the amount that programs rely on cross-listed courses for core courses exposes the reliance on this type of course.

In addition to the core course for undergraduates, graduate required courses should also be recognized. In a study evaluating master's degrees in TPC, Melonçon (2009) found the following six courses to be the most commonly required for a master's degree, "Introduction to the Field of Technical Communication, Research Methods, Rhetoric, Document Design/Information Design, Editing, and Theory" (p. 141). Of the most frequently required courses, three overlap with the established core undergraduate courses, the introductory course, the editing course, and the document design course, whereas the rhetoric, theory and research methods will be more geared toward graduate than undergraduate degrees.

My study expands this previous research by adding insight to how cross-listed courses are designed and integrated in programs. This work is important because a main purpose of my project argues for the need to build and maintain sustainable programs. The field's reliance and rationales for offering cross-listed courses directly intersects with sustainability strategies in that student enrollment and staffing often drive program decisions. More specifically, to build sustainable programs with an ethical consideration, certain aspects of programmatic development need to be considered—for example, aspects of course creation, student job preparedness, and program sizes. In this way, my research study design uses the cross-listed course as a way to expose issues with suitability and ethical considerations in the field.

In addition to tallying the number of cross-listed courses in my sample, I also analyzed what courses were offered as they related to core courses. To perform this step, I started a new

Excel workbook and copied/pasted the entire list of cross-listed courses in the field. Once all the courses were in a new workbook, I added tabs for the six core courses I discussed previously (basic, intro, editing, web, document design, and genre). I first coded for these courses, marking each course with a "1" in the column for the type of course. Using a "1" allowed for easy counting using the sum feature in Excel. Once I finished coding for the six core courses, I saw other trends arise from the data—namely that there were other common courses that were cross load in addition to the list of core courses. At that point, I added columns for TPC courses that dealt with international contexts, information, project management, and misc. Each course was then sorted into categories, allowing for easy counting through the Excel.

Once all the courses were sorted and tallied by number and course type, I used a digital humanities tool Voyant (https://voyant-tools.org) to analyze the most used words in the course titles. This process involved copying and pasting my list of course titles into Voyant and running a report. Through this step, I also created a word cloud of the most-used words. The intent behind the creation of the most-used word list allowed an interesting vantage point of data visualization. In addition, the usage of the word cloud was aimed at inclusivity, so that my results can be understood by different audiences, including those that learn visually.

2. Coding Interview Material

Following emerging standards in TPC (see Melonçon and St.Amant, 2019), my goal was to conduct 10 to 15 interviews. In total, I conducted 14 interviews from faculty at eight of the 21 institutions. Melonçon and St.Amant (2019) determined "of the approaches to empirical research, interviews seem to be the method that have the most agreement, as well as the least problematic use" (p. 143). Interviews allow the researcher to more directly perform the research as opposed to surveys or focus groups.

As Boettger and Palmer (2010) pointed out, “content analysts evaluate the text collection for emergent and recurring themes” (p. 347). Based on thematic analysis, I coded my data for reoccurring themes and concepts. Braun and Clarke (2006) argue that thematic coding falls into a type of methods that are “independent of theory and epistemology, and can be applied across a range of theoretical and epistemological approaches” (p. 78). The distinction—that thematic analysis is independent from theory—supports the applied nature of my research study. Thematic analysis is a way to minimally organize and describe a data set that is rich in detail (Braun and Clarke, 2006, p. 79). While data saturation is not common in TPC, thematic saturation through coding for themes or ideas has been used. In a similar way that my applied research methodology was borrowed from psychology, my coding also borrows the concept of thematic coding from psychology.

With a plan for thematic coding settled, I arranged my data for analysis. First, I made a list of my 14 sources and assigned each respondent an anonymous number. Next, I created a single workbook with 10 tabs, labeled as Question 1 through Question 10. From here, I copied each participants’ answers to the spreadsheet using their newly created anonymous numbers. For example, I pasted respondent #1’s answers into the top line of the worksheet—their answer to question 1 was pasted into the Question 1 worksheet, question 2 answer was pasted into the Question 2 worksheet, and so on. I was left with 10 worksheets, with each containing all the answers for each question. With the content sorted in this way, I was able to begin coding and organizing for themes.

The themes that emerged not only aligned with my prepared interview questions, but also with my overall research questions, demonstrating a consistency in my research study design. The following themes were determined from my thematic analysis.

Themes found include:

- Usage and motivations
- Student learning outcomes
- Assignment variations and student assessment
- Teaching experience, challenges, and approaches

My findings were then written up to present descriptive results for each theme.

3. Coding Additional Documents

The course materials collected were from seven instructors at six different institutions. Not every respondent sent all of the materials I requested. Thus, I ended up with the following materials from the seven respondents: two syllabi, two syllabi with assignments, and three syllabi with assignments and supplemental materials. Interestingly, six of the seven respondents use the same syllabus for both student populations, while only one respondent uses two separate syllabi.

Next, I performed discourse analysis of the materials, which included:

- a close reading of the syllabi looking for any references to cross-listed courses
- a meticulously search for any references to distinct student group (undergraduate and graduate)
- an examined the course materials for any of the themes that was found in the interviews—specifically learning outcomes, assignment variation, assessment.
- a keyword search, using the function in Microsoft Word, to look for the following terms: cross, co-, split, paired, u/g, mixed, undergrad, undergraduate, and graduate. The keyword search eliminates any chance that I missed the terms when doing my close reading.

Only one respondent used separate syllabi for each student group. For this set of materials, I used a website called text-compare.com to view the documents side-by-side to see what changes were made.

Second Round of Interviews

Thanks to the flexible nature of semi-structured interviews, the final question in my interviews was developed as I progressed. Question 10: Can you briefly describe your training or background as it relates to course construction and writing program goals? In other words, when did you learn about learning outcomes at the course or program level? Grad school? On the job? This question was added because it was clear that most faculty learned about programs and course development on the job. Once this was discovered, I chose to conduct a small number of additional interviews at schools without cross-listed courses to better understand how faculty describe the differences in bachelor's and master's degrees and how faculty learn about course and program development. These interviews provide results to use in my implications section. The goals of these interviews were to find out where the participant learned about program and curricular development. I began with a question similar to question 10 in my first round of interviews, but to also collect data on how faculty explain the differences in degree types. These interviews also garnered data on how faculty at schools without cross-listed courses view this type of course.

The second round of interviews was comprised of five participants, of which three were from schools in my original sampling plan (n=37) where I could not find evidence cross-listed courses online. The additional participants were faculty at schools with TPC undergraduate programs—which provided more generalized information toward the larger aim about

understanding program development, course development, and differences in degree level. The second round of interviews will provide data to answering the following research questions: When and how do program administrators learn how to develop and assess a program? How are the difference between bachelor's and master's degrees viewed by faculty? How are the differences in bachelor's and master's degrees explained to outside stakeholders?

Limitations

As with any similar field-wide assessment projects, my study will represent a snapshot in time based on the information currently available, understanding that curricula are constantly in motion. While I am collecting data with a strong and replicable research study design, it is possible for courses to change after they are listed.

In addition to possible changes with schedules and course listings, it's also possible that my initial list of bachelor's degree and master's programs does not account for recent changes (i.e. addition of a program at a school). My list of schools was created by Melonçon et al. (2021) as part of a forthcoming book. It represents the most accurate and current data available; however, it is a limitation that no dataset can ever truly be completely complete or perfect. Finally, I was unable to collect online data from the past four semester at every institution. Thus, my results are not a complete listing of every cross-listed course, but rather a reliable sample of 54 cross-listed courses used across the field.

Conclusion

Overall, my methodology and methods directly respond to the field's call for more rigorous research (Melonçon & St.Amant, 2019; Melonçon, Rosselot-Merritt, & St.Amant, 2020;

Blakeslee & Spilka, 2004). As a field-wide study, this project assesses the use of cross-listed courses across multiple institutions. The *phronētic* approach provides a solid foundation for this project to engage in both practical applied, but also, ethical and sustainably focused research. The three complementary datasets were carefully chosen to include both empirical and textual components through data gathered by the researcher and self reported by faculty and program administrators. As a qualitative, inductive study, my findings will afford TPC a baseline for understanding cross-listed courses so that trends can be determined in subsequent years. It also uncovers what, if any, differences occur in pedagogy when it comes to addressing the needs of graduate and undergraduate students in the courses. The next chapter addresses the findings from each dataset and determines common themes and trends in how faculty and administrators view and discuss cross-listed courses.

Chapter 4: Results and Discussion

Programmatic scholarship is vitally important to TPC and, as this study shows, research into types of courses—such as cross-listed courses—provides data-driven results to inform programmatic decisions. The following chapter describes the results of my study. As such, this chapter will detail my findings on the following types of data:

- Data collected online through course catalogs and schedules
- Interviews conducted with program administrators and faculty
- Course materials collected from interview respondents

The chapter will end with a discussion of the findings as they relate to the current state of programmatic and pedagogical scholarship.

These three datasets pinpoint different aspects of cross-listed courses with a goal of explaining the use of these courses, faculty perceptions, and written policies. The first dataset, material collected online, contains information broken into the following sections: universities, number of cross-listed courses, and course titles. The second dataset, interviews, contains the following categories: student learning outcomes (SLOs), assignments variations, and teaching experience, challenges, and teaching approaches. The third dataset, course materials, examines syllabi and assignments used in cross-listed courses. The goal of examining these three datasets is to offer a robust view of cross-listed courses across the field.

Data Collected Online

Universities

In analyzing my first dataset, data collected online, I look to answer the following questions:

- What schools offer cross-listed courses?
- How many courses are cross listed?
- What courses (using course titles) are cross listed?

Number of Cross-listed Courses

Ultimately, I found 54 cross-listed courses spread over 21 schools. The vast majority of courses (41) had a separate course number for undergraduate and graduate students. Commonly, the number was similar. Some examples include 411/511, 6910/4910, 431/431G, and 4662/5662W. Six courses (at three schools) used different names (for example, the same title with the word "advanced" added before the graduate listing). Although an outlier example, the naming conventions at one institution (classified as a public R2) were not similar (i.e. the gradate section was listed as Technical Editing (522), while the undergraduate listing is under Editing and Publishing (427)). However, it was the same instructor and room assignment, thus confirming the course contained a mix of degree-seeking students. There were an additional seven schools (n=7) that use one title and course number for the mixed sections.

Course Titles

Of the 54 courses, there were 102 course titles—accounting for each course section to be listed as two distinct courses with different titles. When examining the course titles as a corpus of data, it sheds light on the most commonly used words in cross-listed course titles. The most frequent words in the corpus were writing (23); communication (20); technical (15); editing (13);

design (10) (https://voyant-tools.org/?corpus=6d942aa6f2bb3da13fb95da06737d7a6). Figure 1 presents the most used words in a word cloud, using the 55 top words.

Figure 1: Course Title Word Cloud

Ideally, course titles offer a short description of the course content. Although the field's knowledge and understanding of course titles has garnered little scholarly attention, a brief discussion can be seen in Melonçon and Henschel's (2013) analysis of undergraduate programs. They suggest "that the field needs to discuss how we can better differentiate titles for courses with these different focus areas, perhaps by clearly marketing courses or using subtitle course" (Melonçon & Henschel, 2013, p. 61). Melonçon and Henschel (2013) suggested the field should move toward naming conventions that differentiate between theory and production-based courses.

The lack of critical thought around course titles intersects with building a sustainable field and sustainable programs since titles likely affect student and faculty perception of courses. Further analysis and attention to course titles would help the field's understanding of how

courses fit and are integrated into programs. The word cloud in Figure 1 illuminates the most used words in cross-listed courses. While "communication" is the most used word, we can also see that "technical" and "tech" are both commonly used words as well. The visualization in Figure 1 shows that course titles contain variations of the same or similar terms (rhetoric and rhetorical) and abbreviations (technology and tech), which supports the call that the field should move toward more consistent naming conventions to provide more transparency to stakeholders on course material. Transparency is key to the ethical development of sustainable programs so that stakeholders (students, faculty, PAs, and employers) have a clearer understanding of course material.

In addition to exploring the terminology, I look to examine which courses are typically cross listed to expose programmatic trends. For this inquiry, I turn the pre-established core course categories (Melonçon & Henschel, 2013) to align with ongoing research trends and explore the reliance on cross-listed courses in programs. Melonçon and Henschel's (2013) use the term *core courses* to represent the eight most commonly required courses in TPC programs—these core courses are offered at 40% or more of the programs in the author's assessment of 65 degree programs. To ground my results in recent work in TPC, I have coded my results to match the eight most common core courses for undergraduates: basic, capstone, intro, internship, editing, document design, genre, and web (Melonçon and Henschel, 2013). The work by Melonçon and Henschel (2013) considers the variations of naming conventions across institutions and thus the core courses rely on the main course title or course theme.

Of the 54 courses, 31 aligned with Melonçon and Henschel's (2013) list of the most common eight core courses. The largest grouping fell under the "genre" category, which includes nonprofit, government, marketing, medical, environment, etc., writing courses (p. 53). This

group also included scientific writing, social media writing, grant writing, and proposal writing. The largest categories are displayed in Table 4.

Table 4: Cross-listed Courses by Core Courses

Core Courses	Number of courses
Genre	14
Editing	5
Web Design	5
Document Design	4
Intro	3

A total of 23 remaining courses did not fit into the pre-established core categories; however, these courses were accounted for in Melonçon and Henschel's (2013) list of the most 65 common required and elective courses for bachelor's degrees in PTC. To align with existing research, I default to the course titles as used in Melonçon and Henschel. Table 5 displays the remaining 23 courses broken into categories.

Table 5: Cross-listed Courses of Other Titles

Course Titles	Number of courses
Rhetoric	10
Intercultural/global	4
Cultural	4
Misc. (included courses on content strategy, copywrite, project management)	3
Usability	2

My first mode of analysis was to compare the list of cross-listed courses to the core categories because it offers a point of comparison to begin to assess how cross-listed courses fit into programs in terms of sustainability. Said another way, uncovering the extent to which cross-listed courses are used for core courses exposes an important metric when examining the field's sustainability and establishes the field's reliance on cross-listed courses. As seen in Table 5, the

majority (31 of 54) cross-listed courses (54%) were core courses. This metric—more than half of cross-listed courses are core courses—shows that cross-listed courses align with trends in undergraduate and graduate curricular of courses offered at the field-wide level. This means, from a field-wide perspective, cross-listed courses are integral to program development and sustainability. Many programs therefore rely on cross-listed courses as part of their core or required offerings.

Based on the data, it seems plausible to deduce that programs utilize cross-listed courses based on individual program needs of staffing and student enrollment regardless of course type/topic. In this way, cross-listed courses have a positive effect on sustainability in that mixing student populations to offset staffing and enrollment allow programs to offer a wider variety of courses to more students. However, due to the lack of consistency and transparency for how these courses are titled, described, and integrated across programs and the field, it seems the field can more successfully focus on the positive opportunities these courses can offer to students. In my next chapter, I discuss the importance of prioritizing students and suggesting ways to best respond to student needs.

Interviews

In addition to the data collected online, I conducted 14 interviews with faculty teaching cross-listed courses at eight institutions to expose qualitative rationales. The number of cross-listed courses across the eight institutions ranged from two to 13+ courses. The programs with fewer cross-listed courses were typically schools with only a degree emphasis, whereas the schools with more cross-listed courses had full degree programs. At five of the schools, nearly all 400-level courses are cross-listed. Three institutions only had two to five cross-listed courses.

In analyzing and coding my interview data, I found several categories emerge. These categories initially arose based my interview questions, but were further specified during the interviews. This section examines the following topics and aims to answer the following questions:

Usage and Motivations

- What does each department call courses with a mix of undergrad and graduate students?
- How many cross-listed courses does each department offer?
- What is the motivation or reason behind offering cross-listed courses?

Student Learning Outcomes (SLOs)

- Are the SLOs varied based on student population?
- If so, is this required (by the institution or department) or left to the instructor's discretion?

Assignment Variations

- Are assignments varied for each student population?
- If so, is this required (by the institution or department) or left to the instructor's discretion?

Student Assessment

- Are assessment and rubrics varied for each student population?
- If so, is this required (by the institution or department) or left to the instructor's discretion?

Teaching Experience, Challenges, and Approaches

- How do instructors describe their experience teaching cross-listed courses?
- What challenges did instructors face when teaching cross-listed courses?

Usage and Motivations

The interviews confirmed my preliminary research that there is no clear naming convention or standardized terminology for these types of courses fieldwide. At the eight institutions, the following terms were used for courses that contain a mix of undergraduate and graduate students: cross-listed, co-listed, paired, mixed, and undergrad/grad (u/g).

When asked why courses were cross listed, every institution cited student enrollment as a contributing factor. Specifically, small graduate cohorts was mentioned frequently. One respondent commented, "it is almost all of them because we rely on that cross list to get them to run right when we don't have enough grad students to make the grad classes run alone… doing this cross list helps us guarantee that they will run. So it's pretty much all of our 400 level courses except for our undergraduate Capstone where they have to do [is] their portfolio" (R12, 8:49). Another respondent offered "we've all got numbers you've got to hit for [courses] to run" (R11, 7:54). Additionally, another respondent stated, "you start to run into problems where you need this class to exist but you can't make it exist and so we've determined that the easiest way to get over this problem is to create split listed courses where you'll have undergrads and graduates together" (R2, 20:10). As these comments suggest, the majority of respondents pointed to issues with enrollment, specifically in having enough students for classes to make.

In addition to enrollment, administrators were concerned with providing students with diverse courses offerings. A respondent remarked, "you can't give them a really rich offering because you need six or seven students for the class to be economically viable" (R5, 11:08). Again, this shows a positive attribute of cross listing—students have a more diverse offering of

courses to choose from. For that reason, cross-listed courses contribute to the framework around building sustainable programs.

While every respondent suggested enrollment contributed to the use of cross-listed courses, few interviewees could point to a time or meeting where it was decided to begin using cross-listed courses. Several respondents offered that cross-listed courses were being used before they began working at that institution. For example, one respondent remarked, "I inherited the [cross-listed course] so I'm not completely sure what happened" (R4, 7:54), while another said, "It has been a part of our program as long as I can remember, so it is not seen as unique" (R6, p. 1). Additionally, a respondent offered, "I don't know for sure when they designed them originally" (R7, 9:46). While, of course, length of tenure and institutional memory contributed to the reasoning behind cross-listed courses, only one respondent offered an explanation of when and why cross-listed courses were first used. The sole explanation of how and why cross-listed courses started was when the addition of a master's program was offered—a "big part of what determined the structure for our master's program…was faculty resources" (R13, 29:47). Aside from this lone example of using cross-listed courses to help enable the addition of a master's program, most participants could not point to the moment when cross-listed courses came into use. Instead, faculty inherited cross-listed courses and continued to use them as an accepted and commonplace aspect of the program.

The field's uncritical use and acceptance of cross-listed courses is problematic. Even while enrollment and diverse course offerings are logical and, seemingly, appropriate reasons to employ the use of cross-listed courses, it's concerning that these courses have always been a facet of TPC education, yet no research has been conducted to evaluate the usage. All departments need enough course offerings for their student populations, but unquestioning

acceptance of cross-listed courses fails to consider the best practice for either group of students. The lack of historical information on cross-listed courses within departments signals a lack of attention to addressing student learning. Cross-listed courses lack transparency to be understood by the affected stakeholders (students, faculty, and employers). The next section builds on the issue of transparency by looking at variations in student learning outcomes for each student population.

Student Learning Outcomes

Student learning outcomes (SLOs) or outcomes refer the course outcomes provided in the syllabus. Eleven of the 14 respondents stated that they use the same student learning outcomes for both the undergrad and graduate student populations. However, two of the 11 reported that they might include additional learning outcomes for graduate students at their discretion.

The vast majority of programs use the same learning outcomes for both student populations because it is essentially the same course. One respondent noted that using one set of outcomes is "an artifact of them being one course, so that…the learning outcomes are somewhat regulated. So, the ones that have been approved as part of the course are now set in stone to a certain extent" (R8, 22:01). Another respondent remarked, "we have tried to unify the learning outcomes across courses" (R12, 29:18).

In addition, three respondents reported they use different student learning outcomes for the two populations. Of these three institutions, one offers three sets of outcomes (for a service course, for engineering students, and for graduate students). Another respondent stated, "Graduate students have to take on a 'significant project or research'" (R14, p. 2). Finally, the third respondent offered more background by explaining they use separate graduate and

undergraduate learning outcomes that might not even be similar. They added, "student learning outcomes relate to your programmatic outcomes and are often dictated by, you know, to some degree, accreditation agencies" (R, 17:44). In all 14 interviews, only this one respondent mentioned accreditation agencies regarding student learning outcomes.

The lack of distinct outcomes likely points to larger oversights with the use of cross-listed courses. A single set of SLOs used for both student populations signifies that both groups will essentially be learning and engaging with the same material and content. To further explore variations in course content, the next section examines variations in assignments.

Assignment Variations

Assignment variation refers to differences in course content and assignments for each student population (i.e., undergraduate and graduate). Assignment variation represents a crucial component of cross-listed courses because it signals if the undergraduate and graduate students are receiving a differentiated experience. In addition to asking my respondents if they vary assignments for each student population, I was interested if that decision was left to the instructor or monitored by the department or institution. As seen later in my implications chapter, the lack of variation leads to issues with defining the degree type. As such, cross-listed courses blur the line between bachelor's and master's degree—making it hard for the students, faculty, and future employers to understand.

Regarding assignments, I asked my respondents if their institution or department had different requirements for graduate students in cross-listed courses. Two of the 14 respondents reported that their institutions required that the grad students do more and both respondents (from different institutions) stated that the differences needed to be defined as part of

accreditation standards. One of these two respondents said, “you have to have separate requirements for each of the classes the grad students have to reach a higher bar. And that manifests itself in additional readings” (R5, 18:19). So, while they need to show their accreditation board differences between the two populations, additional readings (not assignments) are adequate in some cases.

An additional four respondents remarked that their institution had an informal policy on required variations of cross-listed courses. For example, one respondent stated that there was an “informal university policy” (R11, 21:21). Another respondent added, “I don’t know the exact policy but the impression we’ve been given sort of from our department is that there should be separate things” (R7, 10:26). Moreover, one respondent stated, “I think it’s an understanding I think it’s a cultural thing, not a not a technical thing” (R9, 21:47). Similar to the lack of knowledge as to how and why these classes came into use, it appears faculty cannot pinpoint an exact policy that states requirements of work for the two student populations.

Even though some institutions required additional work, it does not appear that this work is quantified by the university or department. Said another way, while some governing groups may look for extra engagement from the graduate students, none of my respondents were told specific instructions or requirements for the course content variations. Thus, individual instructors decide what additional work the graduate students should partake in.

Table 6: Assignment Variations for Graduate Students

Institution Identifier	Assignment Variations
Public, M3	• no assignment changes for courses where both student groups have no prior experience (R1 and R2) • an extra weekly discussion post and a final paper (R3) • more in-depth engagement of longer more complex texts (R13)
Public, M3	• an extra presentation or a more depth of research (R4)
Public, R1	• additional readings (R5)

Table 6: Assignment Variations for Graduate Students (Continued)

Public, M3	• an extra research report (R6) • more work and/or discussion leading (R14)
Public, R1	• longer page length, engaging additional sources with higher level thinking and metacognitive work (R7) • added or altered the role of the graduate students (i.e. project manager or facilitator) (R8)
Public, R2	• problem solving its original contributions or a longer paper (R9) • an extra or a more complex assignment (R10)
Public, R2	• an extra more conceptual component (R12)

Table 6 presents the information based on institution. In a few cases, I interviewed more than one faculty member from the same institution, so this Table was constructed to also show trends at the same insinuations. It contextualizes the assignment variation in relation to the schools' Carnegie Classification. Eleven respondents expect more from graduate students, which includes a longer or extra assignment, discussion leading, more readings, and more advanced metacognitive work. Two respondents do not vary course content or assignments when the material is new to both student populations. With a lack of variations in assignments, the next section explores student assessment techniques.

Student Assessment

Since the majority of programs use the same assignments for both student populations, this section explores variations in student assessment to expose any pedagogical differences in the treatment of undergraduate and graduate students. I use the term "student assessment" to refer how instructors assessed student work. Of the 14 interviewees, 10 respondents stated they use the same assessment for both student groups. Three respondents didn't directly answer this question, while one stated they used different criteria.

Concerning rubrics, many respondents stated they use the same one, though they may comment differently. For example, “the rubrics are the same, so I do use rubrics as a starting point, but I also always provide in text and summative comments” (R7, 14:31). Another respondent offered, “they’re mostly the same [but] lightly altered” (R8, 21:39) in regard to rubric usage. Another noted, “what I tried to do is have the same rubric with them [plus] some kind of add on” (R9, 49:48). The lone respondent that said they use different criteria for the two populations noted, “I do have to have a separate grading scale for grad students than for undergraduates but that’s because they have different assignments” (R5, 28:05). As seen, only one respondent varies assessment on paper by using a different grading scale; the rest simply vary the way the respond to students.

The following comments were collected from respondents who used the same rubrics for both student populations, but looked for differences in their expectations. For example, “I expect a different type of engagement from the graduate students, not significantly different, but a little bit different” (R8, 19:23), while another remarked they look for “some sort of higher level thinking, often it’s metacognitive work” (R7, 10:26). Additionally, one stated, “Everyone has the same rubric, but I hold graduate students to a higher standard” (R14, p.2). So, while 10 of the 14 respondents use the same grading criteria or rubric for both student populations, instructors may unofficially look for higher level engagement from the graduate students. Nonetheless, they made no specific indication of what is meant by higher level of engagement beyond using words like “metacognitive” and “different engagement.” None of the respondents quantified or explained how they assess the metacognitive or engagement level.

Additionally, some respondents stated that the students were assessed the same in some classes because they thought the students entered with similar familiarity with the subject matter.

For example, “It used to be that our graduate students didn’t have any background in Visual Communication, same as our undergrads—almost identical. You almost couldn’t tell who is a grad student and who is an undergrad, in which case I actually didn’t make a big deal and I didn’t do much differentiation” (R1, 38:16). Another respondent offered, “when it comes to the joint assignments, the ones that everybody’s doing. I’m aware of which students are the graduates and I do, to some extent I treat them more like graduate students, but again, because the competencies that they come with are so similar that there’s not a whole lot that I do” (R2, 41:49). In these examples, both the graduate and undergraduate students’ lack of prior exposure to the subject matter affected the instructor’s choice to not vary assessment greatly.

Overall, 10 of the 14 respondents stated they assess students the same on paper, with no written guidelines or policies to vary their student assessment or grading. The differences in assessment for student populations are left to each instructors’ discretion for the particular class and mix of students. The final section of interview data, teaching experience, garnered more candid responses of the respondents actual experience in the classroom.

Teaching Experience, Challenges, and Approaches

Teaching Experience

Due to the lack of required variations in SLOs, assignments, and assessment, this final section aims to uncover differences in the classroom. I was interested in learning about experience with two audiences in the same class, so I asked how the respondents handled in-class discussions. Thirteen of 14 respondents discussed their experience teaching cross-listed courses. The vast majority, 11 out of 13, suggested that depending on the class, there may not be a noticeable difference in the student groups. Respondents noted that in specialized courses, such

as social media writing, user experience, and editing, neither student group has much experience in the subject area.

Table 7: Responses on Handling Class Discussion

Respondent #	Comment
2	There's very few people that are coming in with background competencies, both on the undergraduate and graduate side.
4	You know, sometimes the line between a graduate and undergraduate student is not always that different.
5	And I try really hard not to single them out…and treat them all the same.
6	Sometimes it's a challenge to keep the grad students engaged although it's not too big a problem since there are certain skills everyone in the class has to learn.
7	Many of them [graduate students], sort of, are in a similar learning space as the undergraduate students.
10	A junior or senior undergrad sees that the grad students make mistakes, don't know everything, aren't SO VERY different from them. (emphasis original)
11	We've also had situations where … everybody was new and had no foundational background at all so it's everybody's in the same boat.

As seen in Table 7, seven of the respondents cited instances where the two student populations came in with similar skills and were thus treated the same. The rationale of the lack of differences in the two student groups is interesting, yet again, troublesome.

The assumptions about incoming students' skill or content knowledge suggests that instructors have based these decisions on previous experiences. While the undergrad or graduate students may not appear to be very different, the department and instructor still owe the students different experiences.

Teaching Challenges

I use the term "teaching challenges" to refer to issues instructors faced specifically due to the mix of undergraduate and graduate students in the same course. In this section, I inserted full answers from respondents because they provide more context and background to their thought process.

Challenges with Student Variety

Table 8: Responses to Handling Mixed Student Groups

Respondent #	Comment
3	Those are pretty challenging courses to teach, because they've, they've got a big variety of students, and they're trying to accommodate all these students around learning styles. Within one course, our health communication courses for example, are quite cross listed and include nurses engineers and a few technical writers (11:02)
7	The biggest issue I think with the way that that it's cross listed is that I just get this really wide variety, even though the class is supposed to be for our majors and our MS students. So that's about I mean the majority of those students are in those two programs but I do get these outside folks that out a really different mix but it's usually really productive it's just challenging for me as the teacher (16:18)
8	I mean there's the multiple audience problem, that can be a little bit tricky are graduate students usually are working and so they have a lot of, you know, a fair amount of professional experience to draw on. And that's sort of a really valuable lens, the bigger problem though I would say is when we get students from outside that discipline, who they want the version of tech writing that is. I write about technical stuff, so this will help me do that, as opposed to, I'm going to be a person who manages the production of technical documents. Those are very different things. And then that that's a stark difference in audience (23:56)

As seen in Table 8, these three instructors point out the challenge is the wide variety of student levels and majors in cross-listed courses. It seems that the challenge is not only caused by the student levels but also the student's major. It was beyond the scope of my study to collect data on students outside the major, but further research could look at how cross-listing between majors affects the learning environment. As seen in Table 9, to respond to the multiple audience problem, many respondents attempted to create a "middle ground."

Table 9: Responses to Teaching Challenges

Respondent #	Comment
12	But that's how it is when you have a blended class like this, you sort of, you find the middle. Right, which is just challenging enough to be a grad course but not so challenging that you lose all your undergrads in the process. Does that make sense. Yeah, yeah, you have to get that in between and because you're aiming for the in between. Most grad students can handle it and actually most undergrads can handle it to like that find the middle. (33:35)
11	I think the biggest thing is keeping everybody—pardon the pun—on the same page. I'm trying to keep everybody at the same level when all the backgrounds and all the objectives of each student are so diverse gets really challenging. I think there are disconnects in terms of what's the purpose of this assignment, what's the purpose of learning this thing, how does this connect to what I do. Again the diverse, the diverse student body makes that an issue, how they all kind of align grading is a beast, you know, simply because of the different levels of, you know, foundational grammatical proficiency, or even foundational writing proficiency students come in with, you know, really can skew how things work out (19:42)
10	An important challenge is how to make the most of the opportunity of having grad students side by side in classes with undergrads. Not what can the silver lining be, but what opportunities does the situation offer? Can the usually more mature/older/more experienced grad students mentor the usually less mature/younger/less experienced undergrads? What can the grad students – many of whom are teaching sections of [redacted] or some other course – learn from having undergrads *as classmates* rather than students? (p. 5)
4	I find just seeing the narrative for the course or seeing the arc of the course can be really challenging, even if you have learning outcomes and objectives and things like that it's still. (56:55)

As seen in Table 9, many of the instructors struggle with having undergraduate and graduate students in the same setting at the same time. These respondents have explained how they structure their class to meet in the middle. This is yet another problem that has been unveiled from this project. From a fieldwide standpoint, do we not have a greater responsibility to target learning for both student groups?

Table 10 examines the responses when instructors were asked about student expectations. Even though 11 of the respondents stated that they typically require more from graduate students in the form of assignment variation, only two respondents discussed their expectations as a challenge of teaching the course. The lack of discussion around expectations will be discussed in my implications chapter.

Table 10: Responses to Expectations from Students

Respondent #	Comment
13	I would like to see in the graduate courses, I would like to see sort of digging deeper into a bigger greater balance of theory and application. Then, in an undergrad program. I don't know undergrad programs tend to get very theoretical in some courses, probably right. But, but for the most part they're kind of more straightforward, very applied and for the, for the master's program. What I try to do in my classes, is to bring in different theoretical perspectives. In addition to applied material. And honestly, sometimes that's really a challenge because the students we get often really don't care about the theoretical material. They basically want to know how am I going to apply this in my job. And I understand that. And in part again that's the student body right. So, we do get students who are going to go on to a PhD and they're way more interested in the backstory of things. Um, so, but yeah so so between undergrad and grad though, no matter what I think there should be a greater level of kind of conceptual thinking about how things are done why they're done that way why maybe they shouldn't be done that way, that type of thing. (55:59)
14	The different requirements you see in collaborative work. I typically will have an assignment that can or is collaborative/group work in some way. It's hard to have higher expectations of graduate students as compared to undergraduates. I've solved this problem, in some way, by requiring all students turn in a copy of the assignment and meet the expectations for their credit (p. 1).

Teaching Approaches

The final section of my interview data describes the instructors approaches to teaching cross-listed courses. Only six of my 14 respondents offered a distinct answer to their approach. The other eight combined this answer with their response to teaching challenges. Of the six

respondents that answered this question, five specifically mentioned having the graduate students do more work. For example, one respondent stated, “There’s always an additional graduate component, and that I tend to decide what that is, sort of, according to what class I’m teaching and how I feel like the experience level is among the students” (R1, 38:16). Others offered, “graduate students perhaps doing some kind of presentation” (R4, 31:02), “take into account the graduate students and ways I can engage them better than I can” (R3, 17:21), and “I have higher expectations for grad students” (R5, p. 10).

One respondent explained an assignment where “grad students have to do more complex work” in an editing course. In addition to all the work the undergrad students do, “the grad students have to create instructional materials for the instructor to use in the future. They have to write original papers, introduce errors into the papers, and create two copymarked versions as answer keys, one copymarked according to the Chicago Manual of Style and one copymarked according to the Associated Press” (R6, p. 2).

Only one respondent suggested that they typically approach the class the same way. They stated, “If it’s kind of all English majors, then usually it’s the same approach. Now I wish to point out, excuse me. Nine times out of 10 These courses are taught online and asynchronous, which, you know, again, makes it more complicated to do that kind of diverse teaching approach the few times that we’ve taught them on site. This course is on site once it’s been online since that’s a different method you can be a lot more uniform, and you can be a lot more diverse because you can break them up in small groups in person in a regular setting and work that way” (R11, 23:00).

The interesting takeaways are that when asked about their approach to teaching, the answers were either about challenges or assignments. Even though I was asking about teaching

approach, the answers were not contextualized to in-person classroom experiences. In this way, the instructors seem to be planning to engage the graduate student through additional work, but I was unable to extract information on to the changes they make in the actual classroom.

Additionally, eight of the 14 respondents mentioned engaging graduate students as "discussion leaders," "discussion facilitators," or "project managers" (R5, R8, R9, R10, R11, R12, R13, and R14). However, it's important to note that all the respondents explained this as something they have tried or occasionally employ, depending on the actual student mix. One respondent stated, "I have sort of in the past explicitly added or altered the role of the graduate students … I think that's usually a pretty good one to have people [graduate students] act as a project manager or facilitator … I also just noticed that the grad students sort of naturally will occupy those, those roles when integrated (R8, 18:21). Another offered, "We tried it a number of ways. The first is to [have] graduate students become sort of the mentor or the discussion group leaders, and so they, their job is to come up with the questions that they then guide the undergraduates together to do, or to discuss, or the undergraduates will do some preliminary editing on something and then they'll present their edited work in a group to the graduate student who then oversees it. But we've also had situations where we couldn't do that because everybody was new and had no foundational background at all so it's everybody's in the same boat" (R11, 7:26).

While the approach to engage graduate students as leaders seems to be common, no instructor felt it was a one-size-fits-all approach to roll out in every class. Instead, the respondents reinforced their flexible approach to determining what was right for each class. While it's beyond the scope of this study, it would be interesting to compare the instructors'

length of time teaching both traditional and cross-listed approaches to collect data that may begin to uncover how experience informs non-traditional classes.

To further bolster my results, I collected course materials from the respondents. The next section examines the materials in regard to written policies for each student population.

Course Materials

Each interview respondent was asked to provide a syllabus, assignment descriptions, and rubrics for a cross-listed section they have taught. Only 50% of my respondents provided the materials requested (n=7). In a future study, I would include the request for materials as an interview question. The course materials collected were from seven instructors at six different institutions.

From the seven respondents, I received the following materials: (2) syllabi, (2) syllabi with assignments, and (3) syllabi with assignments and supplemental materials. Interestingly, six of the seven respondents use the same syllabus for both student populations, while only one respondent uses two separate syllabi. The syllabi received were for the following courses: social media (1), digital technology (1), advanced composition (1), and user experience (4). It's interesting that four of the courses were user experience. While it's beyond the scope of this study, further research on cross-listed courses could look at the amount of variation in assignments, assessment and SLOs based on the course type. As reported in my interview results, respondents, including R1, R2, R3, R8, R11, remarked that in certain specialized courses, undergraduate and graduate students often entered with the same level of knowledge.

Syllabi

The following table displays any language in the syllabi to alert students it is a cross-listed course. Building on the self-reported nature of textual information collected from the interviews, the syllabi examples provide empirical and textual evidence as to how these courses are handled across the field. The differences in policies unveil how the two student groups are addressed. Table 11 displays a lack of consistency from the way the courses are addressed and described. In fact, only one example (R2) provides an explanation or definition about the type of course the students are taking. Said another way, only one in seven syllabi provides a policy on what a cross-listed course is. The rest of the syllabi either make no distinction between the two groups of students or addresses the graduate students with no additional context. In this way, there is a lack of transparency for student experience and expectations.

Table 11: Textual Evidence of Syllabi References to Undergraduate and Graduate Students

Respondent #	Printed variations for graduate students	Syllabi References to Cross Listing (emphasis original)
2	Yes	This syllabus offered a split course policy that stated: **"Split Course:** This course is a split course, where undergraduate and graduate students will be part of the same class. Undergraduate and graduate students will do the same assignments, with the exception that graduate students will have an extra assignment (the Audience Analysis assignment) and extra instructions on the [redacted] paper. These extra assignments change the grading structure for graduate and undergraduate students (see below)."
3	Yes	This syllabus only had one brief reference to being cross listed, "Graduate Students Only: Research Paper, 50"
6	Yes	There were two references to graduate students: "Graduate students will have additional assignments and will conduct part of the class at least once to help illustrate concepts." "Graduate Student Presentations: Graduate students will help introduce some of the materials and engage classmates in activities centered around supplemental readings."

Table 11: Textual Evidence of Syllabi References to Undergraduate and Graduate Students (Continued)

8	No	This respondent used separate syllabi for each student group, but the only references to the course being cross listed was the change of the course number.
11	No	Contained no references to the course being cross listed.
12	No	Contained no references to the course being cross listed.
14	Unclear (expectations will vary not the work)	This syllabus only had one reference to being cross listed, "Note: students taking this course for graduate credit will have different expectations for the [redacted] project as compared to undergraduate students."

As seen in Table 11, only three of the seven syllabi (R2, R3, and R6) have different requirements for graduate students printed in the syllabi. It's worth noting that R2 and R3 are at the same institution. One additional syllabus (R14) uses language about expectations but does not include any differences for assignment requirements.

The syllabi for R11 and R12 had no language to signal they were a cross-listed courses, besides the inclusion of more than one course number. The syllabus for R12 had both the undergraduate and graduate course numbers, while the syllabus for R11 had three course numbers (undergraduate, graduate, and an out-of-department course number). Only one respondent (R8) had two syllabi, one for each student group. From examining the texts side-by-side (text-compare.com), I found the only variation in between the texts was the course number. None of the policies, assignments, or assessment policies were altered.

Assignment Descriptions

The assignments were coded into the following assignment variation categories:

- No changes
- Workload

- Engagement

No changes signified identical project descriptions for both undergraduate and graduate students. Workload refers to assignments where undergrad and graduate students are given the same instructions, but graduate students are asked to do more work (which may include the wordcount, number of sources, number of artifacts to analyze, number of solutions to compose, numbers of users to test, etc.). Engagement includes changes to the instructions of the assignment—typically this includes asking graduate students to engage with theory, answer additional guiding questions, respond to more in-depth scenarios, compose more in-depth analyses, etc.

The following table displays the number of assignments received by each respondent and the difference in assignments.

Table 12: Responses on Assignment Variation

Respondent	Number of assignments	Assignment variation category(ies)
2	1	Workload; Engagement
3	1	No changes
6	1	No changes
12	5	Engagement (1 of 5 assignments had a difference in engagement for the two student groups)
14	7	Workload (5 of 7 assignments had a difference in engagement for the two student groups)

As seen in Table 12, two respondents used the same assignments for both student groups, one increased the amount of work, one increased the engagement, and one increased the amount of work and engagement. It's important to note that R12 increased the engagement for undergraduate students not the graduates. In R12's course, undergrads were required to submit a draft and revise their portfolio, while graduates were not asked to revise.

Admittedly, one limitation was that I did not collect a set of materials from each respondent. A future research idea would be to collect and examine a larger swath of course materials, although, even with more materials, it's unlikely the results would be remarkable or interesting. The course materials confirm the interview data in that many instructors are teaching cross-listed courses as a single course with the same assignments.

After reviewing the project descriptions, it was clear that the assignments (except for respondent 14) were written primarily to the undergraduate students as the main audience. The few changes for the graduate students asked for longer assignments but with no additional integration of critical thinking, problem solving, or theory. The lack of attention given to graduate students signals issues with the way these courses function. In my next chapter, I will offer examples of how to vary assignments for both student groups, while keeping the bulk of the assignment consistent.

Course Outcomes

Table 13: Course Outcomes from Syllabi

Outcomes from Syllabus	Associated Blooms Taxonomy Category
1. Basic definitions and understanding of social media 2. Rhetorical issues appropriate to the use of social media 3. Understanding of how different kinds of social media might meet specific needs of some professional communities 4. Understanding of concepts of Intellectual Property and Copyright—especially as they must be used in the open world of social media 5. Understanding of ethical issues that exist with the workplace use of social media	1. Remember 2. Remember 3. Understand 4. Understand 5. Understand
1. Analyze web site and web pages according to the design principles 2. Design test protocols, conduct, and analyze the results of a usability test 3. Explain how things like affordances and mental models relate to usability 4. Be familiar with usability design, evaluation, and test methodologies	1. Analyze 2. Create 3. Understand 4. Remember

Table 13: Course Outcomes from Syllabi (Continued)

1. Develop an ability to compose analytical arguments and use rhetorical strategies with an awareness and sensitivity to audience and context and with a strong sense of the power of language as a tool for intervening in social consciousness and for exploring our selves, our world, and received ideas. 2. Acquire methodologies for conducting original research and a range of skills for conducting research, such as using databases, working with archives, conducting interviews and surveys or engaging in other kinds of fieldwork. 3. Cultivate abilities to think, problem-solve, and act creatively in the world through learning to compose imaginative works in a range of forms. 4. Creatively address and explore larger issues of identity and interpersonal relationships and learn to take part in the imaginative exploration and reconfiguration of their worlds through the written word.	1. Create 2. Understand 3. Analyze 4. Create
1. Learn the building blocks of writing in internet environments 2. Identify, define, and solve problems 3. Understand diverse philosophies and cultures	1. Understand 2. Understand 3. Understand
1. Conduct basic user testing to evaluate how effectively products meet the needs and expectations of different audiences. 2. Plan a research and testing project to gather audience data on product designs. 3. Report the results of usability assessment research to different stakeholders and make design recommendations based upon these results. 4. Share usability-related ideas and approaches with other members of the field.	1. Apply 2. Apply 3. Evaluate 4. Understand
1. Understand user experience in technical documents, including impacts of/on medium and message 2. Practice ethical technical communication 3. Write and design convincing, effective, and usable technical documents 4. Experience multimodal tools for creating technical documents 5. Practice project management, including the process for creating technical documents 6. Understand community partners as integral in the selection, creation, and assessment of "effective" deliverables 7. Reflect upon their process and product during production to help them transfer skills beyond classrooms • understand practitioners' responsibilities to a community	1. Understand 2. Apply 3. Apply 4. Apply 5. Understand 6. Evaluative
1. Students identify varied rhetorical situations calling for a wide range of responses informed by context and theory. 2. Students evaluate the appropriateness of rhetorical choices in light of anticipated consequences. 3. Students demonstrate respectful negotiating behaviors during collaborative textual production and evaluation (listening attentively, airing all viewpoints, valuing difference, coming to consensus or dissensus, dividing labor fairly, balancing competing agendas, expectations, and values). 4. Students consider, apply, and control stylistic options (prose style, figurative language, voice, register, tone, word choice, etc.); correctness in syntax, grammar, usage, punctuation, mechanics, and spelling; coherence and cohesion; and the organization of their texts appropriate to the rhetorical situation. 5. Students identify and evaluate options for genre, medium, design, circulation, and delivery. 6. Students consciously synthesize and integrate insights from one project into another.	1. Understand 2. Evaluate 3. Apply 4. Apply 5. Evaluate 6. Create

For the sake of space, I chose to only include the actual learning outcome itself. At least half of the syllabi examples had additional context to explain the learning outcomes, including rationales, written explanations, subheadings, and assessment information. While the added context was interesting and useful, it did not directly apply to the goals of my project. Instead, I wanted to categorize the learning outcomes based on the six categories of Bloom's Taxonomy. The motivation of categorizing the outcomes was to get a clearer picture of what the course asked from its students. As a reminder, each of the seven syllabi I received had only one set of learning outcomes for both student populations.

The six categories of Blooms Taxonomy are as follows:

Lower level:

- Remember
- Understand
- Apply

Higher level:

- Analyze
- Evaluate
- Create

As seen in Table 13, I used a standard Bloom's Taxonomy resource to match the outcome to its corresponding Bloom's category. Any higher level skills have been underlined in Table 13. Overall, in the six syllabi there were a total of 32 outcomes, of which 22 were lower level skills.

Breakdown

- Two syllabi only included lower level skills

- Two syllabi included most lower level with one higher level skill
- Two syllabi included an equal amount of lower and higher skills
- One syllabus included more higher level than lower level skill

From analyzing these skills, it's clear the field prioritizes lower level skills in cross-listed courses. Most cross-listed courses field wide appear to ask undergrad and graduate students to *remember*, *understand*, and *apply*, which means programs are not offering enough of a robust education for graduate students. As a caveat, many schools do not treat learning outcomes as the actual basis for course development. Learning outcomes are often only used to justify institutional accreditation to review boards. However, learning outcomes are also the only surface level way to compare what students are learning. It's beyond the scope of my study, but deeper analysis of actual project descriptions may uncover more comparable data to compare courses across the field.

However, based on learning outcomes, as a field, we could serve both student groups better by offering two sets of learning outcomes for cross-listed courses. The graduate student learning outcomes should primarily consist of higher level skills based on Bloom's taxonomy. In my next chapter, I present an example of re-writing a single set of outcomes into two distinct sets for undergraduate and graduate students.

Discussion

Data Collected Online

My results provide a valid sample of 54 cross-listed courses used across the field. The vast majority of courses (41) had a separate course number for undergraduate and graduate students. Six courses (at three schools) used different names (one school added "advanced"

before the graduate listing). There were an additional seven schools (n=7) that use one title and course number for the mixed sections. Of the 54 courses, there were 102 corresponding course titles. The most common used words in the course titles were writing (23); communication (20); technical (15); editing (13); design (10).

The variations in naming conventions of individual courses signals issues with transparency and clarity in the field. The main stakeholders affected by cross-listed courses are faculty/instructors, students, and employers; without naming consistencies, stakeholders (especially employers), may judge course content simply by the course title. Moving toward more consistency with naming conventions would help outside stakeholders gain a clearer understanding. For example, one institution defaulted to adding "advanced" into the title of the section listed for graduate students. In many ways, this is a sustainable move because it offers a layperson-friendly description to instantly illuminate a difference in the courses. However, of the 54 courses across 21 institutions, only two courses at one institution had a clear difference.

In addition to the lack of distinction in the course titles, there was also a lack of consistency in the course descriptions. Considering that I was able to find course descriptions for 49 of the 54 courses, only 12 of those courses had separate descriptions for the undergraduate and graduate sections. Of those 12 variations, only two courses (at one institution) used the word "advanced" in the description to clarify the difference from the undergraduate section listing. The other 10 courses used slightly altered descriptions, but lacked easily identifiable signals that the courses are at different levels. The data bolsters my inference that there is a lack of transparency in that both undergraduate and graduate cross-listed sections typically have the same course title and description. Thus, only two out of 21 institutions provided public-facing written content online to explain the differences in the courses for each degree level. The lack of

distinction in titles and descriptions is disconcerting because stakeholders have no way to gauge any differences in the courses.

Comparing the cross-listed courses with core course categories (Melonçon and Henschel, 2013) allowed me to ground my work in recent scholarship and begin to infer the ways cross-listed courses are used. As recognized by Melonçon and Henschel (2013), core courses represent the eight most common courses required in TPC programs from an assessment of 65 degree programs. My results showed that the most commonly cross-listed core courses were editing, web design, and document design. This use of cross-listed courses for core courses unveils a glimpse into the infrastructure behind program development from a field-wide perspective. Programs rely on cross-listed courses to be able to reach enrollment thresholds. This is important because it shows that cross-listed courses are intimately linked to program sustainability.

Interviews

As the largest dataset in this project, interviews unveiled how these courses are being used and taught across the field. My data collected online provided a list of 37 schools in which to contact for interviews. I wound up conducting 14 interviews from eight institutions. The following themes, that were coded from my interview data, warrant discussion.

Usage and motivations

The interviews confirmed that the field lacks a common naming convention or standardized terminology for cross-listed courses as a type of course. The following terms were used for courses that contain a mix of undergraduate and graduate students: cross-listed, co-listed, paired, mixed, and undergrad/grad (u/g). The lack of standardization of terms can be confusing for students. For this reason, I recommend that programs should move toward a more

transparent approach of not only terminology, but also clear definitions—meaning programs offer students clear explanations of cross-listed courses, an overview of the intended experience, and an explanation of student assessment. This notion of clarity and transparency toward students will be further discussed in my implications chapter.

Every respondent cited student enrollment as a contributing factor to offering cross-listed courses, though only one respondent could explain how and when they started. The other respondents did not have the institutional memory to explain how and when cross-listed courses began being used. The field's failure to examine the usage of cross-listed courses further opens discussion around sustainability. Even though cross-listed courses can strengthen a program's sustainability, the field needs to more critically analyze the usage through ongoing program assessment and/or continuous improvement models.

The lack of standardized naming conventions and institutional memory around cross-listed courses leads me to suggest that the field needs to discuss how we can better clarify the usage of these courses. As a field, we should and move toward a more transparent and understandable experience for our stakeholders. For starters, the field should move toward using a single term for cross-listed courses as a type of course. Next, naming conventions for course section listings (undergraduate vs. graduate) could be distinguished for each student population. For example, the field could adopt an understanding that certain signal words, such as "advanced," would denote a course title is for graduate students. Therefore, an undergraduate listing of editing would be called "Professional and Technical Editing," while the graduate listing would be "Advanced Professional and Technical Editing." Ideally, then, the course descriptions could also provide an overview as to differences of the course.

Student Learning Outcomes

In addition to the lack of clarification in course titles and descriptions, my data showed a lack of distinct SLOs for each population. In fact, 11 of the 14 respondents stated that the student learning outcomes were the same for both the undergrad and graduate student populations. Two of the 11 reported that they might include additional learning outcomes for graduate students at their discretion. As shown in Table 13, the lack of higher level skills in learning outcomes in cross-listed courses may be acceptable for undergraduates, but it is not acceptable for graduate students.

In TPC, outcomes have been traditionally used to measure student learning for assessment practices (e.g., Allen, 2004; Boettger, 2010; Hundleby & Allen, 2010; Carnegie, 2007; Taylor, 2006; Yu, 2012). In addition, scholars have looked at connecting program student learning outcomes for assessment (Barker, 2012; Carter, Anson, & Miller, 2003; Say, 2015). Clegg et al (2021) examined program outcomes from 47 TPC programs to determine that outcomes can be used to help students more easily understand a program's offerings. Both areas of research around outcomes (using outcomes for assessment and using outcomes to clarify and solidify program offerings) lead back to the same goal of using outcomes to denote the goals of the course. The outcomes, then, should alert stakeholders to the main content or competencies students will gain in a particular course.

From a programmatic standpoint, the lack of differences of outcomes for each student group is another unexamined concern with cross-listed courses. As I have shown, cross-listed courses generally have the same title, same description, and same learning outcomes. Thus, it's unlikely a stakeholder (faculty, student, or employer) would be able to find a written description or policy of the differences between the courses. While course titles and descriptions should

move toward providing an explanation of the basic differences, SLOs can be used by PAs and faculty to solidify learning and content goals.

The collected course materials corroborated the lack of outcomes variation. My project argues for outcomes to be used as a through line (program outcomes → course outcomes → assignment outcomes); this way, course content and student assessment can be more easily planned and connected. Programs need to do a better job with transparency to instructors, students, alumni, and local employers. With clear outcomes, assignment regulations, and student assessment requirements, cross-listed courses can be transformed as an opportunity not an unevaluated afterthought. In the next chapter, I provide an example of how to rewrite one set of course outcomes for two student groups, with a focus on higher level skills.

Assignment Variations

The scholarship on assignments in TPC has been limited, though explications of assignments in writing studies have been more common (e.g., Eodice et al., 2016; Melzer, 2009; Graves, Hyland, & Samuels, 2010). A few TPC scholars called for clearer connections between service course assignments and future professional careers (Williams, 2001; Johnson-Eilola, 1996). Additionally, Francis (2018) surveyed 62 instructors to gain insight on how well service course assignments aligned with the demands of professional engineers in terms of reading and writing competencies. In addition to assignments in service courses and writing studies in general, some scholars have moved in the direction of a single type of course. For example, Melonçon (2019) examined the most used assignments in an editing course. The takeaway from the swatch of literature on assignments is that scholars are interested in the quality of assignments and their ability to transfer to future contexts.

The lack of clear and defined assignment variations for undergraduate and graduate student populations in cross-listed courses signals that there has been less effort put toward assessing the quality of assignments and intention for transfer to future contexts. This was illuminated through the discovery that most respondents use the same assignment for both student populations, though some add work for graduate students. The more important issue here is that the decision to vary assignments is left up to individual instructors, not dictated by the program. Only two of the 14 respondents (from different institutions) reported that the differences in work needed to be defined as part of accreditation standards. Another four respondents could not point to a specific policy but believed there was one. The lack of program guidance or policies affects a program's ethical responsibility to its students and its ability to be sustainable.

Even though 11 of the 14 respondents expect more from graduate students, including a longer or extra assignment, discussion leading, more readings, and more advanced metacognitive work, the decisions to alter assignments left to the instructors. Two respondents do not vary course content or assignments when the material is new to both student populations. While the field's reliance on "more" work will be further explored in my next chapter, I contend that tacking on extra work does not properly challenge graduate students in relation to critical thinking and problem solving. Instead, assignments for graduate students should focus more on higher level skills and concepts. More importantly, when programs leave the assignment variations to the individual instructors, the student experience becomes unpredictable. For example, of the four respondents I interviewed at a Public M1 university, two alter assignments, while two typically do not. As seen in this example, the students have different course expectations and experiences within the same program. For these reasons, programs should more

toward clear and direct policies on cross-listed courses to demystify these courses to stakeholders, including current students and employers.

The collected course materials affirmed that roughly half the respondents provide different course polices for each group of students. Additionally, half of the instructors provide different assignment descriptions based on student level. The most frequent assignment variations had to do with wordcount, workload, and engagement.

The lack of department and institutional requirements for variations in assignments allows the instructors to decide if they will alter the content for the different degree levels. As a discipline, TPC should be able to articulate the differences between a bachelor's and master's degree, yet this research shows that the decision of assignment variation for cross-listed courses is left to the individual instructor, which means there is no consistency across programs, let alone the field.

In addition to assignment variation, 10 respondents stated they use the same assessment for both student groups. Three respondents didn't directly answer this question, while one stated they used different criteria. While 10 of the 14 respondents use the same grading criteria or rubric for both student populations, at least three respondents stated they unofficially look for higher level engagement from the graduate students. Following the recommendations for distinct titles, descriptions, SLOs, and assignments for the undergraduate and graduate section listing, programs should make student assessment more transparent for both student populations. Offering a basis for assessment, whether it be a sliding scale rubric based on proficiency or grading criteria, again demystifies the student experience.

Teaching Experience, Approaches, and Challenges

Even though the two student populations may come in with similar skills, cross-listed courses have a responsibility to engage graduate students with higher level thinking. A majority of respondents (11 out of 13) suggested that there is not always a noticeable difference in the student groups, depending on the type of class. Respondents noted that in specialized courses, such as social media writing, user experience, and editing, neither student group has much experience in the subject area. Additionally, seven of the respondents cited instances where the two student populations came in with similar skills and were thus treated the same. While it's unclear how the instructors assessed content knowledge, each group of students for content knowledge should be a consistent component of cross-listed courses. However, even with similar levels of content knowledge graduate students should engage in higher level skills such as critical thinking and problem solving.

A move toward clarifying the distinction between bachelor's and master's degrees to students, faculty, and employers leads to greater sustainability in the field. Programs should prioritize addressing the needs of each student group through the creation of policies and regulations for cross-listed courses, including naming conventions, separate learning outcomes, varied assignments, and clear assessment standards. In addition, programs and faculty should move toward a more transparent method for assessing student content level knowledge in cross-listed course.

The mixture of degree levels and fields of study was a challenge for some instructors. Three instructors remarked a challenge is the wide variety of student levels and majors in cross-listed courses, which includes not only the student levels but also the student's major. While another four respondents struggle with having undergraduate and graduate students in the same

setting at the same time and thus try to meet in the middle. The idea of evening the playing field can result in undergraduates in over their heads, while graduates receive an easier experience. In chapter 5, I propose ways to engage both groups in face-to-face situations.

By prioritizing the benefits of cross-listed courses, the field can dictate better in-class experiences for both student groups. My next chapter, implications, offers suggestions for how to use the graduate students in the class as an opportunity. For example, as some of the respondents suggested, clearer polices and requirements for graduate student discussion leaders or presenters could benefit both groups. When given more advanced material, design theory for example, graduate students could present or lead discussion to expose undergraduate students without making the undergrads feel overwhelmed. The next chapter further explains ideas to vary teaching approaches.

Conclusion

This research study was designed to gather data about cross-listed courses from different perspectives. I was methodical in gathering data from online course offerings, interviews, and course materials to provide multiple perspectives to show how cross-listed courses are used across the field. Matching the empirical online information and course materials with the textual interview results provides added depth to this project. The data collected from online offers an account of the amount and type of course offered as cross listed. The interviews provide insight behind motivation and policies for cross-listed courses, while the course materials offer a concrete look at written syllabi and course polices. Together, the three types of data offer insight as to the usage of these courses across the field.

When compiled together, we can see that the field has no unified approach to cross-listed courses. Typically, the decision regarding variation to SLOs, assignments, and assessment was left up to the individual instructor. The lack of attention to these courses directly feeds into my implications. My next chapter will examine the differences in degree level, the divide of theory and production courses, and the problem with explaining not only cross-listed courses, but also degree levels, to outside stakeholders such as local employers.

Chapter 5: Implications

The overall goal of this chapter is to provide implications for the field and suggestions for program and course development and improvement. Even though my study centered around cross-listed courses, this chapter moves into larger programmatic issues of sustainability and ethics as a key implication of this type of programmatic research. TPC needs to understand the types of courses offered and how they support the program and relate to sustainability. In this way, cross-listed courses represent one type of course that needs to be better understood.

This lack of attention given to cross-listed courses unveils implications that this chapter will explore:

I. Programmatic and Pedagogical

- How can a contextualized analysis of cross-listed courses lead to more sustainable and ethical *programmatic and curricular development* and maintenance?
- How can a contextualized analysis of cross-listed courses lead to more sustainable *pedagogical initiatives* for teaching approaches?

II. Degree Levels

- How can learning about cross-listed courses expose issues with a lack of definition behind *degree levels*? And how can learning about cross-listed courses uncover *degree value* perceived by faculty, students, and outsides stakeholders?

III. Doctoral Training

- What does this study on cross-listed courses expose about flaws in how we are *training future faculty* in PhD programs?

Introduction

Before embarking upon the three major sections of this chapter, this introductory section examines overall trends of cross-listed courses in the field. The importance of this section is to tackle larger issues with sustainability and ethical program development by using cross-listed courses as an example. In other words, even though my project revolves around cross-listed courses, these implications connect to larger programmatic and pedagogical issues in the field. It is my hope to show how the field's unexamined acceptance of cross-listed courses needs to be challenged to provide students with an ethical experience that in turn leads to sustainability in programmatic development. This chapter focuses on three specific aspects of cross-listed courses that lead to larger issues in the field. The first section evaluates programmatic and pedagogical concerns, specifically advocating for distinct experiences where undergraduate and graduate students are both appropriately challenged. The next section more closely examines the field's lack of distinction between bachelor's and master's degrees. Finally, the third section examines concerns around how the field trains future faculty in graduate school.

The motivation for the use of cross-listed courses, as seen in Figure 2, involves programmatic requirements, staffing, and student enrollment. Essentially, certain courses need to be offered to fulfill the degree requirements, but there are not enough students or staff to offer two independent sections. The use of these courses is not viewed as unique or inventive, but simply a less than desirable aspect of TPC degree programs. My results section unveiled that

cross-listed courses are consistently used across the field, but with little thought or attention given to student populations.

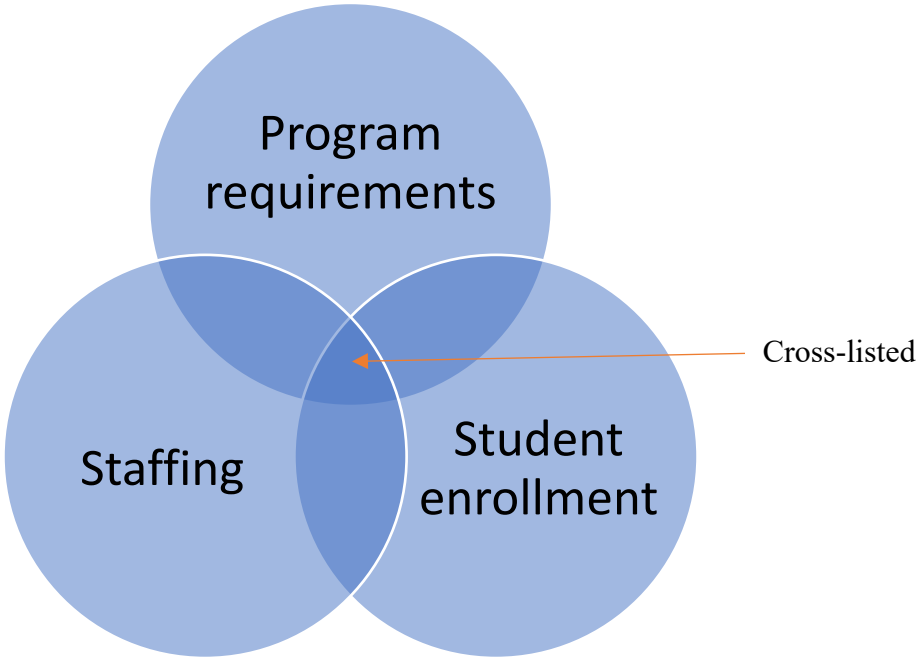

Figure 2: Motivation for Use of Cross-Listed Courses

To move toward sustainable and ethical programs, the field needs to examine and challenge the status quo by examining specific types of courses. The cross-listed course, then, serves as one common facet of programs in need of reflection. Current faculty and program administrators (PAs) inherited these courses from their processors—only one of my 14 interview respondents could explain how these courses came to be used in their program. Cross-listed courses have been passed down to faculty that simply do not have institutional memory of how or why they came into usage. The lack of historical information coupled with the practical necessity of the courses potentially points to issues with the way programs were designed and signal the need for reflection and assessment. Using the cross-listed course as a microcosmic

mechanism, I have found a lack of clarity between the two groups of students, which points to a larger problem within programmatic and pedagogical thinking related to the usage within programs. My findings suggest that PTC programs need a more deliberate and transparent approach to clarifying outcomes, assessment, and teaching approaches for each student population. The move toward this deliberate and transparent approach strengthens the ethical framework, in that programs have a responsibility to offer each student population a unique and appropriate experience. Specifically, the failure to clarify and explain the differences is cross-listed courses is an ethical issue, as it fails to take the student interests in mind in terms of offering distinct outcomes, assignments, and experiences.

In addition to the indiscriminating usage, the field has no consistent terminology or naming conventions, guidelines/rules, or explainable variations for student learning based on degree type. As TPC has struggled to maintain a clear identify, the use of cross-listed courses challenges the field's identity (see Schreiber and Melonçon, forthcoming). The use of cross-listed courses makes it difficult for stakeholders to understand the differences between a bachelor's and master's degree, especially for programs that rely cross-listed courses for the majority of their required courses. Then, add in the lack of written guidelines for these courses at the program level, let alone the field level, and the usage of cross-listed courses points to issues with student learning and degree level distinction.

As seen in Figure 2, cross-listed courses are used to meet program course requirements with limited staff and student enrollment. The issues of labor and enrollment are key to larger programmatic connections between course development, course assessment, program size, and program sustainability. While growth of the field is important, scholars have warned about building sustainable programs (Johnson, 2004; Schreiber and Melonçon, 2019; Fleckenstein et

al., 2013). Melonçon's body of programmatic work (see Meloncon, 2021) makes the argument that TPC needs a field-wide view of programmatic perspective and pedagogical practices to assist with building, expanding, and sustaining programs. Building on Johnson's (2004) concept of "deep sustainability," programs need reflective cross-programmatic work that goes beyond assessment to reach sustainability. He advocates for reflection that is "continually conscious of the past, critically active in the present moment, and measured about our future" (Johnson, 2004, p. 102). Johnson called for consideration of growth issues such as program size (students and faculty lines) and resources for development (p. 109). While Johnson's argument was published nearly two decades ago, the use of cross-listed courses has remained an unexamined, yet necessary, aspect of programmatic perspective. My study picks up the call to reflect more critically in real time to more toward a more sustainable future.

The reasons for offering cross-listed courses are logical and necessary, yet the field lacks research to guide usage decisions. As my results have shown, programs in the field lack formal policies on cross-listed courses; decisions on assignment variation are left to individual instructors. Cross-listed courses demand more attention from TPC PAs and the field because they have not received proper consideration in terms of building sustainable programs, meaning administrators use them uncritically. Cross-listed courses are treated like any other course, which exposes an ethical problem in how programs are developed and maintained. Without proper variation in course materials, TPC is conflating the distinction of bachelor's and master's degrees, which is not equitable or just to any of the affected stakeholders, including students, alumni, and employers.

These programmatic and pedagogical issues directly contribute to a lack of distinction between degree types. Some programs depend on cross-listed courses for the majority of their

offerings—with no written polices or guidance, there is no measurable distinction between the degree levels. The implications in this chapter call for a better clarification of course experience and student learning—through separate and distinct consideration for outcomes, assignments, and teaching approaches—which directly contributes to a clearer understanding of degree level. Said another way, TPC needs to put more focus on clarifying the differences among cross-listed courses so that stakeholders, including faculty, students, alumni, and employers, can explain the differences in degree level.

The data explored in the previous chapter revealed connections between programmatic requirements, staffing, and student enrollment. To build a maintainable field with sustainable programs, we need to more closely examine various ways that programs fit together. In addition to making practical suggestions and recommendations to better treat cross-listed course, it is my hope that this chapter also serves as a reminder that the field needs to assess and analyze courses regarding how they fit into programs.

Programmatic and Pedagogical

Cross-listed courses do not exist independently or in a vacuum; rather this type of courses is part of a program. They are a facet of a program and need to be contextualized in ways that interact other aspects of program development. This section begins by examining outcomes and assignments in relation to programmatic development and maintenance. That is, how can this analysis of cross-listed courses lead to more sustainable programmatic and curricular development and maintenance? More specifically, how can programs across the field better integrate cross-listed courses through outcomes and assignment variation. The second part of this section will look at pedagogical aspects of teaching these courses with suggestions for teaching

approaches. That is, how can this analysis lead to more sustainable pedagogical initiatives for teaching approaches? As a field-wide study of programmatic perspective and pedagogical practices, my research offers assistance for building, expanding, and sustaining programs. In this way, my study's results provide guidance for administrators to assess and improve their cross-listed course offerings.

Programmatic perspective refers to the work done by TPC PAs, faculty, and department heads. Schreiber and Melonçon (2019) define programmatic perspective as "the interconnected processes in which TPC PAs and faculty regularly engage" (p.254). Programmatic perspective includes the framework and approach taken by individual departments to build sustainable programs across the field. To build cohesive and sustainable programs, administrators should consider how the course offerings fit together to offer students a rounded education; however, not all program administrators build programs in this way. As my research has shown, only one in 14 respondents could explain how and why they started using cross-listed courses in their departments. The other 13 respondents simply accepted these courses as a necessary and commonplace aspect of their program. Clearly, time and resources across the field are limited, so it's not surprising that programs maintain the status quo with the use of cross-listed courses. However, the use of these courses without proper, in fact any, considerations of best practices need to be addressed.

With a goal of moving toward program development based on sustainable and ethical course development and integration, the field needs the type of data in my project to better guide decisions. The lack of variation in cross-listed courses across the field exposes an ethical flaw in that undergrad and graduate students are seemingly taking the same course with no documented differences. As Johnson (2004) argued, programs should engage in reflective cross-

programmatic work that goes beyond assessment to reach sustainability. More recently, Schreiber and Melonçon (2019) advocated for the field to adapt continuous improvement models, which provide a flexible structure for an iterative approach to program assessment, while deterring from assessment models based on student learning or institutional mandates (p. 255). Specifically, Schreiber and Melonçon (2018) introduce their own continuous improvement model called GRAM (Gather—Read—Analyze—Make), which serves as a flexible and adaptable framework. This approach to program administration and program assessment is holistic and sustainable because it continually adapts based on the changing set of parameters gathered by administrators. As the authors stress, "Programs need data from other programs to help them contextualize their own data" (p. 257). Put another way, by using continuous improvement as a model for research projects, the field can make better ethical and sustainable choices geared toward students. Building on the GRAM model, my data analysis led me to some basic suggestions for how faculty can "make" changes.

At a basic level, the following recommendations can be easily integrated at the programmatic levels:

- Adhering to transparent naming conventions to denote the difference in sections. For example, the two listings for an editing course could be Professional and Technical Editing for undergraduates and Advanced Professional and Technical Editing for graduates. The addition of "advanced" clarifies the difference in level to students.
- Offering an official department guidance to faculty and students that denotes a written policy for outcomes and assignment variation.

- Including a syllabus statement that explains cross-listed courses to students. The written policy should account for the department's guidance on variations of work, as well as expectations of the student experience.
- Requiring separate rubrics for each student population—thus, offering transparency to student assessment practices. The use of separate rubrics also allows for a through line from program outcomes to student assessment.

Programmatic

Outcomes

A key aspect to building a sustainable program is to start with program outcomes, then link program outcomes between courses, and build assignments to relate to the outcomes. As seen in Figure 3, this process ensures there is a through line between the program outcomes and actual course content. Without a clear connection developed through the use of outcomes, course content is not grounded or connected to larger programmatic goals. Additionally, the use of outcomes in cross-listed courses is further complicated when both the same outcomes are used for both populations. This begs the question, how can the students, faculty, and administrators explain the differences in the content for each student population when the outcomes are the same?

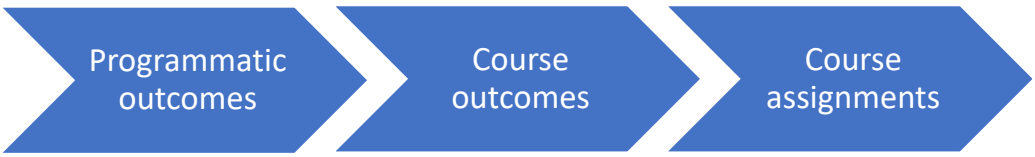

Figure 3: Programmatic Flow of Outcomes to Courses

To ground my findings in discussions in the field, it is important to consider how outcomes have been used historically in TPC. For example, outcomes have been traditionally used for assessment practices (e.g., Allen, 2004; Boettger, 2010; Hundleby & Allen, 2010; Carnegie, 2007; Taylor, 2006; Yu, 2012). Assessment is often viewed as a way to determine how well students meet learning outcomes in response to institutional accreditation. There are problems with the relationship between outcomes and assessment. The field's overreliance on outcomes as a measurement for assessment fails to consider "curricular practices such as course creation…recruitment, and student reflection into a larger programmatic context" (Schreiber and Melonçon, 2019, p. 253). As proposed by Schreiber and Melonçon (2019), "assessment needs to be one piece of a larger and more deliberative process that includes additional data points from different stakeholder perspectives" (p. 257). Because outcomes are often linked to assessment, the content in the outcomes needs to represent what students will learn in the class. Thus, programs use outcomes to explain what students learn in each course. When both populations are given the same outcomes, there are no discernable differences in course material to faculty, students, or future employers.

In addition to using course outcomes, program student learning outcomes (PSLOs) are gaining attention as ways to build courses with related goals throughout curricula. PSLOs "focus on practical and conceptual skills and indicate what students are expected to learn through curricular and co-curricular activities associated with programs" (Clegg et al., 2021, p. 19). In their analysis of 376 PSLOs from 47 TPC programs, Clegg et al. (2021) determined: "Well-considered PSLOs can help administrators more easily and adequately explain what their programs offer students; additionally, PSLOs help our students explain what skills they bring with them to the workplace and how they orient themselves as citizens" (p. 30). As a step toward

transparency and sustainability, Clegg et al. suggested that PSLOs provide clarity to students, in that students can more easily understand what the programs offer. A handful of scholars have connected program outcomes to assessment (Barker, 2012; Carter, Anson, & Miller, 2003; Say, 2015), but scholars have yet to compare program outcomes between an undergraduate and graduate degree at the same institutions.

The motivation and rationale for the usage of cross-listed courses is understandable, but the lack of separate student learning outcomes is an issue because students are seemingly learning the same material. The vast majority of respondents (11 out of 14) do not vary outcomes for undergraduate and graduate students. When both groups are following the same outcomes, there is no written evidence to show any variances between what the undergraduate and graduate students are expected to learn. However, in actuality, this may not be entirely true, as 11 of the 14 respondents said that typically they ask more from graduate students. The issue here is that, from a program level, both students should learn the same material and the variation of assignments is left up to the individual instructor. While instructor autonomy is highly valued and, often, inferred as a job perk, this lack of attention and program guidance does not have the students' best interest in mind.

A proposed solution would be to separate undergraduate and graduate course outcomes at the program level. This way, there would be clear variances to drive course content decision. The program would provide two sets of outcomes and instructors would have freedom to design their assignments to meet those outcomes. A study produced by education researchers assessed the student's perception of course variation. Balassiano, Rosentrater, and Marcketti (2014) found that while students reacted positively to cross-listed courses, there were problems "when different student abilities are not taken into account" (p. 24). The authors found that students

were not always pleased with cross-listed courses when undergraduates felt the expectations were too high and graduate students felt the material was too basic. Outcomes represent a logical way to provide students with transparent differences in requirements based on degree level.

Before providing an example of revised outcomes, I offer the following background context. In 2019, I was asked to create an undergraduate editing course. In an effort to base the course on field-wide trends, I defaulted to Melonçon's (2019) editing piece as an exemplar to guide outcomes and major projects. While the majority of my proposed projects overlapped with the most commonly used projects in the field, I varied the content based on the implications in Melonçon's piece and my industry experience of 10 years as an editor. Melonçon found "course descriptions also did not regularly and consistently talk about the editing of visual or design aspects" and "editing for global or cultural contexts" (Melonçon, 2019, p. 184). To combat the lack of visual editing found field-wide, my course incorporated a visual design editing project where students edited a one-page flyer for written content and visual design. Additionally, I addressed the cultural aspect—as scholars have historically advocated for teaching editing for global contexts (Leininger & Yuan, 1998) and editing of non-native English speakers (Ward, 1998)—by creating a final project that asked students to edit a technical user manual written by a non-native English speaker. While my course was designed for undergraduates, editing is a commonly cross-listed course. Thus, I will use my editing course as an example throughout this chapter.

The original outcomes for the editing course I designed as follows:

1. Demonstrate an ability to write in multiple genres (using conventions and formats) appropriate to the situation.

2. Employ flexible and collaborative strategies for generating, revising, editing, proofreading, and circulating texts.
3. Practice professional application of and strategies for editing, including content, organization, format, style, and mechanics.
4. Examine the complex roles of an editor through developing a clear voice of agency or authority when editing.

Next, I will revise these outcomes to account for knowledge capacity and two sets of students. I also offered rationales to explain the reasons for the revisions.

Revised Outcome #1	Rationale
Undergraduate Outcome Identify and implement the appropriate genres (using conventions and formats) for the situation.	The revised outcome integrates the "invention capacity" component by tasking students with choosing an appropriate genre for the situation. In this way, it incorporates basic rhetorical theory.
Graduate Outcome Analyze and apply appropriate genres (using conventions and formats) for the situation.	The revision for the graduate outcomes challenges graduate students to do more metacognitive work by analyzing and applying the genre, whereas undergrads simply had to choose and implement.

Revised Outcome #2	Rationale
Undergraduate Outcome Employ flexible and collaborative strategies for generating, revising, editing, proofreading, and circulating texts.	This outcome already contained "invention capacity" components in that the word, strategy, implies critical thinking. This outcome is an example of an embedded outcome, as it serves as an outcome for both "collaboration" and "revision."
Graduate Outcome Develop flexible and collaborative techniques for generating, revising, editing, proofreading, and circulating texts.	The graduate version of this outcome replaces "employ" with "develop" to represent that graduate students should show more metacognitive synthesis thinking.

Figure 4: Revised Outcomes

Revised Outcome #3	Rationale
Undergraduate Outcome Apply professional application editing techniques, including content, organization, format, style, and mechanics.	This outcome was revised to replace "practice" with "apply" and "strategies" with "techniques. While these changes are minor, changing practice to technique stresses that students should be applying what they've learned across the term. In this way, it reinforces "invention capacity" as a facility or toolkit.
Graduate Outcome Evaluate professional application editing techniques, including content, organization, format, style, and mechanics.	The graduate outcomes alteration was subtle but intentional. While undergraduates should "apply" what they have learned, graduate students should move beyond application to also evaluate the techniques. The metacognitive evaluation happens during the entire course, as students are consistently tasked with developing their technology literacy. The course does not teach students how to edit one way, but rather how to edit by using various programs and tools. Thus, they learn technology literacy or technology application rather than learning a specific technology program.

Revised Outcome #4	Rationale
Undergraduate Outcome Examine the complex roles of an editor through developing a clear voice of agency or authority when editing.	The pith of this outcome is to examine and develop a clear voice of agency. While the undergraduates should be tasked more with examining, the graduate students should be asked to inhibit the role of an editor. Both outcomes require "invention capacity."
Graduate Outcome Assume/personify/embody a clear voice of agency or authority when editing.	While the undergraduate outcome is based on examining, the graduate outcome should again include more higher-level thinking. This way, the graduate student is embodying an editor.

Figure 4: Revised Outcomes (Continued)

The examples above are meant to show one variation of how outcomes can be revised to target distinct student populations. The rationales in the right column provide further context as to why the decisions were made.

Assignment Variations

In addition to outcomes, the lack of variation in assignments presents another ethical dilemma that should be handled at the program level. When left up to instructors, students are not receiving a consistent experience across courses in the same program. Some instructors may choose to vary assignments, while others may not, which leads to an incoherent and confusing

experience for students. Again, this becomes an ethical issue in that programs are not being transparent and providing guidance for student experience.

Writing studies, especially first-year composition, has been interested in the types and number of writing assignments typical in writing courses (Bridgeman & Carlson, 1984; Melzer, 2009; Graves, Hyland, & Samuels, 2010). Composition scholars Eodice, Learner, and Geller (2016) saw "the [assignment] itself as an opportunity, its meaningfulness resulting from a connection between faculty and student aims" (p. 135). As such, the assignment remains the artifact for which instructors engage with student learning. While I was unable to find any discussion of assignment variation for undergraduate and graduate students, scholars have looked at the variation among different levels of undergraduates. A single-intuition study from Canada found that assignment length, frequency, and value do not differ proportionally across levels, "indicating consistency in assignments across all levels" (Graves, Hyland, & Samuels, 2010, p. 312). By "levels," the authors were referring to first-, second-, third-, and fourth-year undergraduate students. However, Graves, Hyland, and Samuels' (2010) study was limited, in that it only assessed assignments from a single institution. However, there is no research that compares graduate and undergraduate assignments in TPC or writing studies.

I propose that students and programs would be better served if faculty and PAs emphasized within their assignments the different expectations for graduate students and undergraduate students from the program level. Even though most respondents "expect more" from graduate students, the lack of institutional or departmental policy signals a lack of attention to providing distinct experiences for both student groups. The most common variation of assignments was to have graduate students simply do more work than the undergraduate students. Of the 11 respondents that require more work from graduate students, three respondents

added additional readings, writing assignments, and/or longer papers; five respondents looked for more complex work; two respondents altered the role of the graduate students (discussion leaders/project managers); and one added a problem-solving component. The following terms were used to describe *more complex work*: "level thinking and metacognitive work" (R7); "more depth of research" (R4); and "more conceptual component" (R12). Only one respondent tied the type of engagement to assigned readings: "more in-depth engagement of longer more complex texts" (R13). Considering that graduate courses typically rely on longer and more complex readings, it's surprising that only one respondent commented on tasking graduates with more engagement.

While asking graduate students to do more work may be an easy method to vary the assignments, more does not necessarily equal always better. Many cross-listed courses typically contain four major projects, so what does requiring graduate students to do more work accomplish? Do graduate students have more time to do more projects? As an alternative idea, I found that many of the respondents wanted more metacognitive or critical thinking from graduate students, so perhaps altering the assignments for engagement would be more beneficial.

Harkening back to my outcome revisions in the last section—we are generally asking undergraduate students to "remember," "understand," and/or "apply," while graduate students should be asked to "analyze," "evaluate," and "create." Following Bloom's taxonomy provides a framework for faculty and PAs to follow. In this way, faculty and PAs would opt for more challenging assignment expectations over a larger number of assignments. To be clear, I propose the minimum assignment variation requirements should come from a program policy. Then, instructors would have the freedom to match assignments based on the set learning outcomes for each population.

To provide an example of assignment variation, I return to my example of a cross-listed professional and technical editing course. The first suggestion involves using one assignment for both student groups, but with a goal of altering the engagement. For example, the third project in my editing course asks students to edit a one-page flyer. The textbook and additional readings expose students to document design and color theory; however, I have noticed undergraduates struggle with these concepts. To streamline the process, instructors could use the exact same artifact (a one-page flyer) and initial assignment description for both student groups, but add a requirement that graduate students need to make design choices based on at least two design theories. In some ways, this would be "more" work for the graduate students, but the extra work is through more *engagement* with and *application* of practical theories. The additional work for instructors is minimal, but savvy instructors could connect the work done by graduate students through class activities. For example, ask small groups of students analyze graduate student drafts to determine what theories were used; ask graduate students to present and explain theory choices from their drafts to the class or small groups; ask graduate students to lead small group discussion on design theory, etc. These examples demonstrate that "more" work does not need to be a longer or additional paper, but instructors can get "more" graduate student engagement by varying the projects slightly.

In addition to altering assignments for engagement, instructors reflect on the artifacts used in various courses. For example, editing courses typically include an editing portfolio or collection of different types of editing. The editing course I designed included an editing collection project where students perform copy editing, content editing, organizational editing, proofing, indexing, etc. Rather than change the amount of work, which already explores one type of editing per week—another way to challenge the graduate students would be to change the

edited material or artifacts. For example, my course has undergraduate students practice copy editing on short blog-style (click-bait type) articles. The articles are usually around 450-500 words and primarily composed of pieces from my consultancy on topics such as women's health, child rearing, diet/exercise, etc. While the short nature of these conversational artifacts are great for undergraduate students and can be used for in-class editing practice, I do not think they would adequately challenge graduate students. Thus, in a cross-listed version of this course, the artifacts for graduate students could be longer, more jargon heavy documents such as reports, proposals, marketing plans, etc. The addition of navigating and editing jargon exposes the graduate students to higher level tasks in that they are doing more than looking for errors but also "evaluating" if the syntax makes sense.

Section Takeaway

The proposed combination of separate outcomes and assignment variation for undergraduate and graduate students allows stakeholders to understand and discuss the differences in the degree types more clearly. Additionally, when this work is done at the program level it ensures all students received similar experiences, rather than leaving these important decisions to individual instructor discretion. Similar experiences then lead to a more ethical and sustainable approach to both undergraduate and graduate education.

At the start of this chapter, I proposed the following question: how can a contextualized analysis of cross-listed courses lead to more sustainable and ethical programmatic and curricular development and maintenance? My suggestion to provide distinct learning outcomes for each student population is ethical because graduate outcomes can include higher level thinking while undergraduate outcomes can rely more on exposure to theorical concepts with more focus on lower level thinking. This way, each group is properly challenged for their degree type.

Additionally, requiring minimum assignment variations based on the learning outcomes further extends a consistent experience that is ethical and sustainable.

Pedagogical

In addition to the programmatic issues discussed already (outcomes and assignment variation), instructors are faced with the need to vary their teaching approach and student assessment to offset unique challenges. Expanding my search beyond TPC and rhetoric and composition, I was able to locate one study in the field of Education that assessed cross-listed courses in relation to teaching approaches. Balassiano, Rosentrater, and Marcketti (2014)'s pilot study uncovered cross-listed courses (referred to as "paired" courses in this study) provide value to both undergraduate and graduate populations in certain pedagogical aspects such as team-based learning, peer teaching, or tutoring. The authors claimed, "The integrity of graduate education can be maintained in 'paired courses' when graduate students are assigned work that asks them to engage in larger scholarly conversations within the field, provides opportunities for practicing leadership or the mentoring of undergraduates, requires advanced level writing, and engages students in graduate-only extended class discussions" (Balassiano, Rosentrater, & Marcketti, 2014, p. 23). Thus, according to this study, in order to properly challenge graduate students, instructors need graduate students to engage in larger scholarly conversations, compose advanced level writing, and participate as leaders or mentors. As shown in the previous section, two respondents typically have graduate students as discussion leaders or project managers. One additional respondent engages graduate students by requiring more in-depth/longer weekly reading. Thus, when combined, only three of the 14 respondents in my study followed the guidance set forth by Balassiano, Rosentrater, and Marcketti.

At a basic level, the following recommendations can be easily integrated at the programmatic level:

- Requiring that instructors include at least one activity where graduate students act as leaders or mentors. Examples would include graduate student presentations, graduate student group leaders on collaborative projects, and graduate student small group discussion leaders.
- Requiring graduate students to participate in scholarly discussion through either separate reading responses or assignment requirements.

Teaching Approaches

Scholarship on teaching approaches continues to be explored in relation to TPC. For example, one area of research that has gained attention recently is the pedagogical approaches to teaching an internship course (Bay, 2021; Baird & Dilger, 2017; Bourelle, 2015; Katz, 2015; Kramer-Simpson, 2018). The internship course serves as a mode of comparison because, like cross-listed courses, the internship course requires faculty to alter their typical role or teaching approach. Bay (2021) contends the "focus on internship coordination over teaching, mentoring, or coaching leaves the faculty member as an observer of what is happening in the internship" (p. 16). She elaborated that the field needs to "develop innovative ways to support students in their internships, coach them to develop the professional skills they need on the job, and help them to make explicit connections between learning on the job and their academic coursework" (p. 16). Additionally, through a study that included interviews with eight TPC internship coordinators, Kramer-Simpson (2018) found that "[e]nsuring that the tasks students complete in internships are of professional caliber is a duty that often falls to the internship coordinator" (p. 119). The

instructor then cannot treat an internship class the same as they would other major courses because the instructor's role is altered.

The internship course example resonates with the discussion of cross-listed courses, in that this area of research is trying to figure out how a particular course works in relation to the students, program, and internship locations. The faculty should be altering their teaching approach from other types of courses (internship, cross listed, capstone, etc.). As proposed by Bay (2021) and Kramer-Simpson (2018) the approach to teaching an internship course is unique from other types of courses. Faculty often move into the role of observer and career counselor. As Kramer-Simpson pointed out, the added "coordination takes time and is not easily visible to other faculty or administration" (p. 119). The lack of visual work in pedagogy remains an issue for cross-listed courses as well. Similar to how internship coordinators need to learn to assess students as an observer, instructors of cross-listed courses also need to assess student knowledge at the start of the course. However, it is likely that faculty make faulty assumption about students experiences and knowledges without ever doing anything pedagogically to assess that knowledge and then plan their courses accordingly.

Instructors should be assessing each new group of students to determine their incoming content knowledge of the subject. Assessment of writing knowledge has been used in writing studies for many years. Typically, student assessment includes having students complete an introductory writing assignment in the first week to allow instructors to gauge skill levels. In a composition or TPC course, this type of assignment could include a response or reflection on writing habits, writing challenges etc. In cross-listed courses, the premise of assessing skill level should not be omitted. However, instead of assessing *writing skills* per say, instructors could gauge *content knowledge*—possibly in the form of a short survey of open-ended questions.

In an editing course, for example, questions could ask students to define different types of editing (copy editing, content editing, organizational editing, etc.). This type of in-class writing assignment provides a foundation for a discussion on types of editing, but more importantly, it allows instructors to assess the level of each section of students rather than relying on assumptions.

As laid out in the previous section, programs can help accommodate both student populations better by challenging graduate students with more metacognitive work, even when the perceived content knowledge from undergraduate and graduate students appears to be similar. Eleven out of 14 respondents reported that they treat the student groups the same because they have noticed minimal differences between the student groups in terms of skillset. While I did not directly ask how they measured incoming student's skill level, based on the answers it appears they could determine the typical skill level based on past experiences. Even though experienced instructors gain an intuition for assessing incoming student content knowledge levels, these sorts of generalized assumptions are troublesome from a teaching perspective. Studies by research psychologists have shown that instructors both underestimate and overestimate student's knowledge (Rovick et al., 1999). Each group of students is different and assuming knowledge based on previous experiences limits the instructor's effectiveness.

In addition to making assumptions about the student's content knowledge, instructors struggle with addressing multiple audiences. Three of the respondents discussed the issue of multiple student audiences specifically, while another four respondents explained how they set up a middle ground for students. When combined, 7 of 14 respondents commented on the issue. Of these comments, one respondent discussed how it can be a challenge to find the "narrative" or "arc" of a course, even with separate learning outcomes (R4, 56:55). This comment is interesting

because it affirms that this instructor examines each course to find the overall arc of the students, which shows they evaluate each course as it happens in real time, rather than just relying on past experiences. However, the comment could also suggest that even with separate sets of learning outcomes, teaching two groups of students at once can be a challenge. While providing two sets of outcomes can clarify the course goals on paper to the various stakeholders (instructors, students, and future employers), cross-listed courses still prove to be a challenge to instructors. Even though one respondent said that in online courses students may not even know the other group of students are present (R2), the mix of student populations would be more evident in face-to-face sections. To respond to this issue, respondents aimed to create a "middle ground" or even playing field.

Similarly, as displayed in my data results, the majority of respondents (n=11) reported that depending on the section, there may not be a noticeable difference in the student groups. Specifically, four respondents discussed their attempts to create a middle ground. In this way, Balassiano, Rosentrater, and Marcketti's (2014) study exposed student concerns with lowering graduate and raising undergraduate course expectations, yet my results show that the most common method is to find a middle ground. The middle ground essentially assumes that instructors settle on a class setting that is easier than a typical graduate course, but more involved than an undergraduate course.

The idea of creating a middle ground is further complicated by the individual instructor's time commitments. These courses are most commonly taught by tenured or tenure-track faculty, which means their time is limited and stretched between research, teaching, and service. As some of my respondents pointed out, if instructors treated a cross-listed section as two separate courses, they'd essentially be doing twice the work. This argument is valid, especially for early

career faculty; however, it's not entirely convincing. One respondent (R10) countered the problems of multiple student audiences by looking for possible opportunities afforded rather than the silver lining (p. 5). Based on my research, I would agree that there is room to find the opportunities for students.

Even though cross-listed courses are a challenge pedagogically, a possible solution would be to first assess student content knowledge and then be more meticulous in the development of activities, discussions, and assignments. For example, instructors could task graduate students with reading and presenting on practical theories to adequately challenge graduate students without over taxing undergraduates. Whether or not graduate students had prior content knowledge, a presentation would task them with more in-depth research on one particular topic. During the presentations, undergraduates would be exposed to theoretical concepts without being held to the same standards as the graduate students. In this way, both student groups would be properly engaged and exposed to new material without resorting to a middle ground where both student groups put in the same level of effort.

Takeaway

This analysis of cross-listed courses demonstrates the need for more sustainable pedagogical initiatives for teaching approaches. Two main areas, assessment of content knowledge and level of engagement, offer variations of engagement without opting for a one-size-fits-all approach. The two groups deserve distinct experiences. TPC not only has a responsibility to properly alter the material as an ethical responsibility to the students, but the field also needs to be careful not let stakeholders conflate the degree level. In order for programs to offer two distinct degree levels, the difference of those degrees should be understandable to the faculty, students, alumni, and employers.

Degree Levels

With the need for more transparent programmatic and pedagogical policies, this section looks to more closely evaluate bachelor's and master's degrees. Specifically, it aims to address how cross-listed courses conflate the differences in degree types and how the degrees may be understood by stakeholders. As my results have shown, the field of TPC has no standards in place for cross-listed courses. This means that the majority of universities have no official guidance or rules for cross-listed courses, leaving the decisions and variations in work and assignments to the individual instructors. As a field, this is highly problematic because this practice distorts the line between the expected value of a bachelor's and master's degree. When course outcomes and major projects are the same, the student (regardless of degree matriculation) seemingly receive the same education.

What are the differences between degree types? This is an important question because cross-listed courses blur this distinction. To gain a better understanding of how degrees are seen in the field, I conducted a second round of interviews. In addition to my initial 14 interviews, I spoke with an additional five respondents who work as TPC faculty at schools without cross-listed courses. In my second round of interviews, I used the following open-ended questions:

1. What do you feel are the differences between degree levels (bachelor's v. master's)? What is each degree preparing students for?
2. Does your institution ever mix undergraduate and graduate students into the same courses?
3. How did you learn about curriculum and program design?

Essentially, I was interested in hearing how they view the differences between bachelor's and master's degrees, as well as inquiring as to how they learned about program development. The main themes gleaned from the additional interviews were that graduate courses should have more theory than undergraduate courses (R17 and R18); bachelor's should offer exposure to more areas, while graduate work should opt for specificity and professional preparedness (R15 and R16); and preparing students for workplace professionalization or PhDs (R16 and R20).

Value to Stakeholders

TPC has no data on cross-listed courses, so the field is left with few sources examining, and more importantly in understanding, education level in relation to degree type (Keene, 1997, Melonçon, 2019). Keene (1997) was interested in degree types and, in some ways, picked up the conversation introduced by Storms (1984) regarding lack of distinction between bachelor's and master's degrees. He contended that "We need to pay attention to the differences in among our levels of instruction…How might a technical editing course on the graduate level be different from the undergraduate level?...a number of programs…are wrestling with this notion of levels" (Keene, 1997, p. 195). Because cross-listed courses are offered to undergraduate and graduate students, my study has exposed that there are no distinct differences in education to both student populations.

Keene (1997) warned that we needed to grapple with the level of instruction for undergraduate and graduate students. Picked up by Melonçon (2019), cross-listed courses and their use in "TPC programs seem to underscore that there is definitely a grey area in need of exploration around the distinctions between a graduate-level and undergraduate-level editing course. The materials from the crossover courses make few—if any—distinctions between the student outcomes" (p. 183). My study confirmed the assertion put forth by Melonçon (2019) in

that there are few, if any, distinctions between student outcomes. The lack of distinctions in student outcomes becomes a larger issue when students, instructors, alumni, and employers try to understand the differences in degree types.

Related to the degree level, TPC has long been concerned with accounting for the perceived value of a degree type; scholarly discussions have occurred around the following terms: value (Keene, 1997), prestige (Moore, 2008), integrity (Blakeslee & Spilka, 2004), and standards (Davis, 2001). As posited by Storms (1984), "courses at the graduate level typically require more work…more sophisticated concepts…than undergraduate degrees" (p. 17). Master's programs should be more work and examine more sophisticated concepts and theories than undergraduate programs, yet cross-listed courses blur this distinction. As such, my data addresses Storms' (1984) notion by quantifying the differences for undergraduate and graduate students in cross-listed courses. A lack of formal guidelines and assessment for the different populations in cross-list courses exposes clear issues with the overall value of the degree.

Essentially, the absence of clear differences in cross-listed courses creates a problem where none of the stakeholders can properly describe the differences between the degree types. This matter is further complicated when you take into account the expectations upon graduation. It's also important to assess the broader aims and goals of graduate education in relation to "expectations for different types of masters' degrees (e.g., ones that are specifically geared to serve as something akin to a terminal professional degree like an MBA or those that are more focused on preparing students for a PhD program)" (Melonçon, 2019, p. 183). This notion that graduate programs need to account for the different reasons students pursue graduate education ties into the stakeholder problem. When cross-listed courses achieve a middle ground, they are

not only doing a disservice to the two student populations, but further flattening the content for the diverse reasons people have to pursue graduate education.

Another related aspect of value is the number of cross-listed courses students encounter. Of the eight institutions in my sample, the number of cross-listed courses ranged from two to more than 13. At five schools, nearly all 400-level courses were cross-listed, which means that the majority of undergraduate upper-division and graduate courses will be cross listed. Thus, how can we ethically recruit master's students in degree programs where most courses are cross-listed? As an ethical argument, it is intimately tied to the field's sustainability in that there are no clear differences in degree levels.

Specifically, core knowledge, learning outcomes, and levels of proficiency (Davis, 2001, p. 143) arise as aspects of addressing the needs of education in regard to degree level. While Davis (2001) suggested professional societies should lead these endeavors, it's clear that nearly 20 years later the field has failed to wrestle with educational needs in this way. Representing the difference of degree levels to outside stakeholders should be a priority within TPC.

The questions around cross-listed courses and degree levels should be of most concern TPC. While cross-listed courses distort the distinction between degree levels, there is a larger issue of justifying the need for an advanced degree that is at stake. The field needs to move toward a clearer division of the distinct degree levels, one that all stakeholders (faculty, students, and future employers) can easily verbalize. The fact remains, higher level thinking and more metacognition are not quantifiable to most stakeholders. This study uncovered that most faculty failed to describe what they meant by wanting higher level thinking from graduate students. Thus, again, this is an ethical dilemma in that we have a responsibility to engage graduate

students in higher level work and this needs to be transparent and understandable. We are not a sustainable field if we cannot easily explain the differences in degree types.

Doctoral Training

The final implication has to do with how the field is training future faculty in PhD programs. To move toward a more sustainable and ethical field, we need to consider how faculty are learning about programmatic development. The results of my study exposed that faculty are primarily learning on the job. To properly create programs and courses geared toward proper student learning and distinctions for degree level, the field needs to adapt some common values or an area of scholarship.

The research on graduate education has revolved around developing graduate students as teachers and scholars, but I was unable to find any scholarship on how to prepare graduate students as faculty and program administrators. The now-dated piece by Johnson-Eiloa and Selber (2001) advocated for a flexible framework to engage graduate students in doing, thinking and teaching, but fails to discuss preparing graduate students for future careers in academia. Similarly, Pennell, Frost, & Getto (2018) conducted a study to explore professionalization practices of doctoral students. They frame the study through research, service, and teaching, yet only briefly discuss the need for program administration experience.

In 2017, the subject of graduate student training received its own special issue in the Journal of Technical Writing and Communication, though it mostly focused on training graduate students for research. The introduction's (Rickly & Cook, 2017) key points include a call for more transparency within the "messy process that is research" (p. 120). The strongest piece, by Albers (2017), claimed that graduate programs do not properly prepare students to perform

quantitative and empirical research. He argued, “Knowing how to do a test does not equate to knowing how to analyze data” (p. 17). In an example of single-institution research, Turner et al. (2017) advocated for the mentoring program at Michigan State, which portrays an “intentionally inclusive, participatory, and recursive mentoring model” (p. 9). Small (2017) promoted the inclusion of storytelling and narrative in graduate research methods courses. Pantelides (2017) examined metalanguage in methods and methodology sections of 10 years of graduate student dissertations. Hannah and Arreguin (2017) posited the inclusion of case-making within graduate (research) education. The authors define case making as “the ability to articulate one’s expertise and persuasively project its applied value in collaborative research contexts” (p. 2), framing their definition in a way that trains graduate students to negotiate entry into interdisciplinary research. Grant-Davie et al. (2017) advocate professional development to help graduate students progress as teachers and scholars. However, not a single article in the special issue considered the lack of coursework or training on how to run a program, how to write outcomes, how to design a course, etc.

My data also confirmed that there is a lack of training on how to run programs. In both rounds of interviews (initial 14 and second-round of 5), I asked participants how they learned about program and course development. I got 16 answers to this question. The results are as follows:

- Eight respondents learned primarily on the job
- Four respondents cited first-year composition administration training
- Two respondents mentioned specific experience with TPC PA training
- Two respondents had miscellaneous answers (one had worked in administration before grad school; another has a degree in education)

Thus, 50% of respondents learned on the job, 25% were exposed to composition administration, and only 12.5% were exposed to TPC training. Of the respondents that learned on the job, three mentioned the phrase “trial and error” (R13, R17 and R19).

The ties for more training in programmatic work are imbedded in the move toward sustainability. To develop a more sustainable and ethically responsible field, we need to consider the best ways to offer PhD students proper training. A first step could be the creation of a program administration-type course where PhD students are given a transparent view to programmatic work, including topics:

- how to write program outcomes
- how to write course outcomes
- how to connect program outcomes to course outcomes
- how to connect outcomes across courses
- how to design a course based on field-wide research
- how to write assignments for undergraduate students
- how to vary assignments for graduate students
- how to approach teaching graduate versus undergraduate students

While a single course on programmatic administration would be a first step, it would not be a singular way to solve the problems of graduate education. My suspicion, which needs more research to be confirmed, is that most graduate student training focuses on Theory (with a big “T”) and research in general over applied skills. The amount of R1 and R2 jobs are a fraction of the number of jobs available to new PhDs. My data confirmed that most faculty learn on the job, some with trial and error—which confirms we are not training graduate students properly. Many TPC PhDs go on to run a TPC program without any training in programmatic perspective. As a

field that can go on ad nauseum about trendier pedagogical topics (think social justice, for example), it's surprising more attention is not given to developing future faculty who understand sustainability and programmatic work.

To move toward eliminating the flaws in training future faculty in PhD programs, TPC needs to integrate better training of programmatic development, course development, outcome integration and assignment creation. The integration needs to account for the fluid nature of these types of programmatic and pedagogical aspects. While outcomes can be used as a through-line from program to course creation to assignments, the line is not always linear. Ethical and sustainable considerations often affect programmatic and pedagogical development at different levels. Consistent program assessment and reflection is essential.

Conclusion

Each section of this chapter—programmatic and pedagogical, degree levels, and doctoral training—influences how the field can progress in sustainable and ethical ways. The lack of programmatic and pedagogical variations (outcomes, assignments, and teaching approaches) directly affects the issue of degree level. How can we ethically sustain both master's and bachelor's programs when students are essentially taking the same cross-listed courses? The final piece of my implications explores the lack of training in PhD programs on programmatic perspective. The common thread through each of these implications is that TPC needs to do a better job of developing and sustaining programs that with an ethical focus on the students.

The implications identified in this section impede programs beyond cross-listed courses. TPC should be concerned with sustainability in relation to both the number of undergraduate and graduate students. Educators need to be ethically involved in the decisions that affect program

size and development. Bigger isn't always better. The goal should be on controlled and consistent growth that continues to use a continuous improvement model to gather, read, analyze, and make changes. The move toward sustainability is reflective and ongoing. A call for more attention to cross-listed courses is just one way the field can move toward an ethical sustainable response. However, moving toward an ethically responsible field with a goal of sustainable growth will take constant reflection on a vast collection of programmatic topics (e.g., contingent labor, differences in degree levels, graduate student education) and pedagogical research (multi-institutional analyses of types of courses). It is not my intention to suggest that more written policies and definitions will solve these issues; rather, I hope to urge faculty toward a more transparent and flexible relationship with students of all levels.

The next chapter further strengthens the call for an ethical and sustainable framework. In addition, I offer a related discussion of theory and production in courses, before offering suggestions for further research.

Chapter 6: Conclusion

This study began with questions targeted at assessing the usage of cross-listed courses across the field. In doing so, my results determined there is no consistent terminology or naming conventions, guidelines/rules, or explainable variations for cross-listed courses. The data from the interviews further displayed an absence of proper variation in these courses, as the majority of institutions in my study use the same outcomes, assignments, and student assessment for both student populations. Essentially, undergraduate and graduate students take the same course with little to no variation in material. Additionally, my study found that many instructors approach teaching by creating middle ground rather than look for the opportunities that the two student populations afford.

From these findings, my implications offered suggestions that I hope can be readily implementable across a wide variety of programs. As my dissertation has shown, continuous improvement models serve as the first step in reflective program evaluation, but sustainable programmatic perspectives must also have an overt ethical component. My implications urge program administrators and faculty to maintain a reflective approach toward developing a program where course outcomes, assignments, and policies offer transparency to students. The need for transparency is especially important for cross-listed courses because undergraduate and graduate students are combined into a single course section. Transparency affords both student populations clear policies, assignments, and materials based on their degree level. In this way, transparency contributes to building and maintaining programs with an ethical consideration of student learning. In addition to suggestions directly related to improving cross-listed courses, my

implications also uncovered the need for a more sustainable and ethical approach to programmatic perspective through clarifying degree levels and doctoral training.

As I built on my implications related to the usage of cross-listed course, I used a sustainability (Johnson, 2004, Fleckenstein et al., 2013; Schreiber and Melonçon, 2018) and an ethical approach to examine the lack of clarity between degree levels and the lack of programmatic training in PhD programs. My study uncovered that cross-listed courses typically use the same outcomes and assignments for both student populations, which conflates the degree levels (bachelor's and master's). To move to a more sustainable and ethical field, TPC needs to more clearly and intentionally describe the differences in degree level and student experience based on degree level. The need for more clarity in the degree levels and student experience extends beyond bachelor's and master's programs to include doctoral programs as well. My interview data determined that most faculty and program administrators learn on the job. The lack of programmatic training in PhD coursework or TPC program experience affects the field, in that future faculty have no formal training. More attention to program and course development during doctoral programs would better train future faculty to tackle programmatic perspective in ethical and sustainable ways.

As shown above, my implications chapter makes specific suggestions to improve the usage of cross-listed courses, but also moves beyond the course itself to make suggestions about the field in relation to degree levels and doctoral training. While working on developing my suggestions that moved past the cross-listed course as the object of study, I became interested in the way the field discusses types of courses in relation to programmatic perspective. The need to investigate types of courses is important to how programs are set up and courses are integrated. As explained in the next section, my data uncovered a divide in theory and production as types of

courses. Theory courses refer to courses that involve reading and discussing scholarship and theory, whereas production courses focus on the act of composing, compiling research, editing, and/or revising texts—often in an applied manner. While the field has worked to merge theory and practice at the undergraduate level; my results uncovered that faculty still discussed these courses as "theory" or "production" courses. This issue led me to begin to conceptualize an approach to clarifying and implementing theory-to-practice at the course level.

Theory and Practice

As proposed throughout this project, I am interested in what this analysis of cross-listed courses can tell the field about designing sustainable programs and courses. Through listening to interviews and reviewing the literature, it occurred to me that faculty often talk about course types in terms "theory" or "production." The term "applied" was also used as a replacement for "production" by some respondents. The problem with the usage of these terms is that well-designed applied undergraduate (and graduate) courses should integrate theory to some degree—often moving theory into practice. Even production or applied courses need to be grounded in context, theoretical concepts, and practical theories. While these courses do not need to contain high theory or theory with a capital "T," there is plenty of opportunity to integrate and promote theoretical concepts such as "critical thinking" and "problem solving." Likely, conversations about theory and production in courses are happening locally around the water cooler. The lone tech comm person is probably thinking about it, too. We need to uncover this divide and move toward a better integration of theory and production so our students can become critical thinking practitioners.

While none of my questions were geared toward asking specifically about theory *versus* production courses or the divide that separates them, a few of my respondents used the terms, "theory" or "production" in conversation. For example, one respondent commented about a lack of flexibility from faculty to teach courses the department needs, specifically mentioning "faculty that only want to come in and teach their theory courses and make everything about their courses" (R9, 58:36). Based on the context of the conversation, this comment was suggesting that some faculty prefer and prioritize teaching their theory courses as opposed to teaching more applied courses the department needs to offer for the benefit of student learning. Another respondent described an intro to tech comm course by saying, "it's not like a production course, it's a theory course" (R1, 48:17). Whether consciously or subconsciously, this brief comment displays that this respondent separates theory and production courses.

Furthermore, one respondent mentioned the divide of theory and production courses, stating, "it kind of goes back to this whole idea that production is kind of a lesser thing…it doesn't require as much differentiation, it doesn't require as much thought. And if that's how we're approaching it. We're kind of contradicting each other all those years of arguments about how tech comm should be a valid academic discipline" (R13, 1:09). This respondent further added, "If we have courses that are only about production…we're doing something wrong" (R13, 1:14). This last comment is especially poignant—production courses need to integrate theoretical concepts and practical theories.

The field of TPC has examined the separation of production- and theory-based courses for many years. As far back as Storms (1984), we can trace the notion that master's degrees should "emphasis theory more than…undergraduate programs" (Storms, 1984, p. 17). In the late 1990s and early 2000s, as the fields of writing studies and TPC became concerned with the

theory-practice relationship in writing pedagogies. The comfortable nature with separating production from theory courses could damage the work scholars have done to establish TPC and writing studies as interdisciplinary fields. For example, in a recent piece by Alexander et al. (2019), the authors encouraged a reflective method of course re-development and referenced the theory/production divide as a given or accepted facet of programs. They stated, "students should have a balance of theory courses and writing workshop courses at the upper levels" (Alexander et al., 2019, p. 29). This example shows that even in contemporary composition studies, the field is still making this move of separating theory and production as though it is commonplace.

In addition, traces of the theory and production divide is seen throughout my dissertation study. Several of my respondents (R1, R4, R7, R9, R13, R17, and R18) specifically mentioned the importance of theory in graduate courses; however, as my results showed, the majority of cross-listed courses across the field are the same course for both undergraduate and graduate students. So, this begs the question, do cross-listed courses expose graduate students to theory or is the theory being left out? Further research should examine the amount of theory in cross-listed courses across the field.

This theory-to-practice divide seen in my data led to a final implication that calls for integration of theory and practice in cross-listed courses. The next sections describe how the concept of *techne* has been used as a theoretical notion to merge theory and practice. *Techne* is somewhat limited, though, because it is abstract and, as an ancient Greek term *techne* has inspired many interpretations and therefore lacks a singular agreed upon understanding. The research on *techne* and classical rhetoric led me to bring these ideas to the forefront in a more concrete way through a concept I propose called "inventional capacity." As an applied concept, inventional capacity enables faculty and PAs to apply practical theory and theoretical concepts to

courses in more specific ways. Said another way, inventional capacity is comprised of an array of theoretical concepts that can be integrated into course design. Additionally, inventional capacity offers a way to integrate sustainability and ethics more visibly for students through transparency in student-facing materials. From there, I offer an example of using inventional capacity through an experiential learning assignment to show a clear and transparent integration of theory to practice for students. Transparency in student-facing material is a key aspect of moving toward sustainable and ethical programmatic perspective. In this way, this final implication pulls together my project's main framework of sustainability and ethics to show how these concepts can be employed for students.

Techne

This section offers an overview of relevant research concerning the classical rhetorical concepts *phronēsis* and *techne* before introducing my contribution to this research area. As explained in my Chapter 3 (Methodology and Methods), my applied study's methodology aligns with a *phronētic* approach to research. Based on an ancient Greek concept, *phronētic* research is concerned with usefulness and application of knowledge (Tracy, 2013) and used to enact ethical change or action (Gordon, 2002; Roos, 2017). Put another way, *phronētic* research uses a classical rhetoric inspired framework to engage in applied and ethical contemporary research. The connection to ancient rhetoric offers a guide to more ethical and applied integration. In addition to recent research on *phronēsis,* scholars have also been interested in the ancient term *techne* as a way to merge theory and practice. As the root word of common terms in the field such as technical, technology, and technique (Moeller and McAllister, 2002, p. 188), the idea of *techne* has been used to merge theory and practice through using it as a framework for producing knowledge through making and doing (Johnson, 2010; Atwill 1998; Moeller & McAllister, 2002;

Gordon, 2002). Gordon (2002) found that "a genuine *techne* embodies both theory and practice" (p. 156). Similarly, Fleming (1998) defines "*tekhne*, [as] an objective art, theory, or method which explained, taught, and managed" and uses the ancient concept of "the triad" to articulate something "that is simultaneously theoretical *and* practical, moral *and* intellectual" (p. 182). Based on these understandings, *techne* becomes the action (making or doing) that can be taught.

As others have noted, these specific ancient concepts are related when you consider *phronēsis* as the applied and ethical framework, while *techne* represents the knowledge creation and integration of theory and practice. For example, Johnson (2010) and Moeller and McAllister (2002) combined *techne*, praxis, and *phronēsis*. Johnson's addition of *phronēsis* offered the inclusion of "practical wisdom and ethical action" (p. 678). In these conceptualizations, *techne* blends theoretical knowledge (episteme) with *phronēsis* (practical wisdom). Additionally, Johnson (2010) "brings *techne* and *phronēsis* together within the frame of his concept, craft knowledge: the knowledge of the why, the what, the how-to, and the role of the maker and the thing made within its resident culture" (p. 679). His combination of *techne* and *phronēsis*—accounting for the why, what, how, who, and result—draw out a more comprehensive understanding how to employ *techne* as part of knowledge creation. The work by Johnson (2010) and Fleming (1998) established the simultaneous relationship of theory, practice, and ethics, but also established *techne* as a concept that can be taught. As an applied researcher, my orientation to *phronēsis*, to enact applied ethical change, influenced how I re-envisioned *techne*.

While most research on techne has been more abstract, Johnson (2010) calls for an applied application fails to provide any guidance. Recently, Scott and Pinkert (2020) moved toward a more applied conception of techne. They proposed "*integrative techne* as a transdisciplinary conceptual framework that can support students' development and deployment

of expertise" (Scott & Pinkert, 2020, p. 493). Referencing the American Association of Colleges and Universities and the Carnegie Foundation, they define integrative learning "as intentionally developing skills across multiple connected experiences and learning to adapt these skills to new complex contexts" (Scott & Pinkert, 2020, p. 497). The authors advocate for their concept of integrated techne to guide student learning as part of integrated learning, including transdisciplinary learning that extends to future contexts. Scott and Pinkert's (2020) progressed *techne* as a capacity to teach metacognitive principles and strategies. This conceptualization of integrated techne offers a more applied usage for their goal is to bridge learning across disciplinary contexts. In many ways, this important work by Scott and Pinkert (2020) directly sets up my contribution to the field, yet even with their clear usage laid out, they offer integrated techne as a guide without any concrete ways that it can be implemented by PAs and faculty.

Other work by Scott has also called for a more specific usage of *techne* at the program and course level. Scott and Melonçon (2017) progressed the understanding of *techne* in pedagogy to encourage student metacognitive thinking. The authors' discussion of *techne* was explorative and offered a range of ways techne can be integrated at the program level. They suggested that "*techne*-based merging of theory and practice enables students to learn and adapt rhetorical notions and principles (e.g., related to audience, contextual constraints, *kairos*) to new knowledge-making enterprises" (Scott and Melonçon, 2017, np). Building on their notion in a more localized way, when used at the course level, *techne* then blends theory and practice, while engaging students with rhetorical and ethical metacognition. Audience, contextual constraints, and *kairos* are theoretical concepts that can be difficult to integrate into production-only courses. Another important takeaway is that Scott and Melonçon (2017) move the conversation past "skills" or "competencies." They stated, "[a]lthough *techne* might at first glance appear to be the

same as competencies, they are also transferrable capacities, emergent enactments of knowledge, and guides for ethical action" (np). This progression from skills/competencies to a capacity or facility to guide knowledge creation and ethical action is especially useful in as a pedagogical concept. When integrated pedagogically, framing *techne* as a capacity begins to move the concept to a more applied interpretation that would be useful to bridge theory, practice, and ethics at the course level. However, the research stops short of firming up an applied usage of *techne*, which, I contend, is appropriate as a means to enact an ethical and sustainable programmatic perspective.

Scott & Pinkert (2020) and Scott and Melonçon (2017) recognize the importance of *techne* as a capacity of transferrable capabilities and habits. My work agrees with and builds on these interpretations, as I also see it as a capacity. In addition, I answer the calls by Johnson (2010) and Moeller and McAllister (2002) to integrate techne with an applied ethical *phronētic* research framework. For these reasons, my final implication looks to employ *techne* as a capacity or facility with applicable approach to combine theory and practice in ethical ways. The combination of theory, practice, and ethics led me to explore and conceptualize a more applied or concrete way to integrate *techne* at the course or program level. Drawing on these important contributions to *techne* (as theory and practice and ethics; as a capacity; as knowledge creation), the next section offers "inventional capacity" as an approach to implement *techne* programmatically. Specifically, inventional capacity addresses the need for sustainable and ethical programmatic perspective through the integration of theory, practice, and ethics.

Inventional Capacity

The work on *techne* merged with *phronēsis* has led to my nuanced transition of a more concrete idea that can be integrated at the program and course levels. My concept, inventional

capacity, connects the range of terms (e.g., problem solving, critical thinking, ingenuity, innovation, etc.) associated with the theoretical side of *techne* cognition—but intentionally moves away from using the word, *techne*, due to the varied and numerous interpretations of the ancient rhetorical term. Inventional capacity was directly inspired by Scott and Melonçon's use of "capacity," as a transferable knowledge to guide knowledge creation and ethical action. As such, I define inventional capacity as follows: a theory-to-practice set of habits that promote metacognitive and theoretical modes of thinking to engage students with knowledge creation and ethical action. I propose that inventional capacity can be integrated into outcomes and assignments, leading to transparent and sustainable programmatic perspective.

Inventional capacity bridges the theory-to-practice divide as an applied conception that focuses on an ethical and sustainable approach for students. Specifically, inventional capacity performs two pedagogical functions. First, it offers an applied approach to ethically integrating practical theory and theoretical concepts into applied courses. Inventional capacity combines practical theories and theoretical concepts into a capacity, facility, or set of habits that offers instructors guidance and appropriate language when developing outcomes and assignments. For example, in cross-listed courses, inventional capacity delivers a set of theoretical concepts (critical thinking, problem solving, etc.) that can be used to establish theoretical concepts in the course in quantifiable ways. Inventional capacity challenges students with ethical thinking as well; for example, problem solving is an inherently ethical act in that multiple perspectives need to be examined to reach a solution that is appropriate for various stakeholders. In these ways, inventional capacity is a set of habits that can be used to teach theory-to-practice moves.

The second part of inventional capacity occurs in the "practice" part of the theory-to-practice move. As a move toward sustainable and ethical programmatic perspective, inventional

capacity offers a way to make theoretical concepts transparent to students. This means, the concepts should be explained and integrated into outcomes and assignments with clear student-facing content. For example, assignment descriptions should explain the concept itself. Instead of simply saying that a project requires problem solving, assignment descriptions should include a definition of problem solving as an ethical concept and how it affects that project. Here is an example of student-facing assignment language: "This assignment requires problem solving, which refers to your ability to find, analyze, and compile research that will be integrated into your own ethical, creative, and innovative approaches to solving the problem." As seen in this example, inventional capacity concepts need to be acquired and practiced; the usage of these concepts is not innate knowledge. Student-facing transparency of inventional capacity directly leads to a sustainable and ethical approach to program development. The remainder of this section examines: the role of theory and theoretical concepts in cross-listed courses, integration of theory in transparent and ethical student facing content, and sustainable programmatic perspective through an example of inventional capacity in outcomes.

Inventional capacity relies on a broad interpretation of theory that moves beyond high theory and also includes practical theories (color theory, design theory, etc.) and theoretical concepts (problem solving, critical thinking, etc.). Moeller and McAllister (2002) advocated for instruction based on *techne* that values concepts such as "ingenuity" and "creativity," in addition to valuing the "agency" of writing in the classroom (pp. 186-7). Even though none of my respondents used the dated terms, "ingenuity," "creativity," or "agency," when discussing cross-listed courses, some respondents did include more contemporary pedagogical descriptive terms such as "problem solving" and "critical thinking." The use of "problem solving" and "critical thinking" possibly shed light on ways in which instructors tackle this sort of higher level

thinking in modern classrooms. Essentially, ingenuity, creativity, agency, problem solving, and critical thinking are theoretical concepts, in that they evoke advanced metacognitive thinking.

At the course level, inventional capacity includes attention to the following list of concepts when writing outcomes and assignments.

- Problem solving
- Metacognition
- Creativity
- Innovation
- Ingenuity
- Critical thinking

While inventional capacity can be integrated into most production-based TPC courses, I have used an experiential or community-based learning class as my example. Experiential learning courses typically include a partnership with a local business. Students often engage in projects where they are asked to find and innovate research to solve a specific problem, typically in an applied manner. The following examples represent an assignment or exercise that engages each inventional capacity concept in an experiential learning course. To clarify the nuanced differences of these concepts, I have provided a description or definition of each term that relates to the way the terms are used in TPC, an example, and a rationale. In the example, the community partner is a local mid-sized marketing firm with 50 employees.

Table 14: Inventional Capacity

Inventional Capacity	Assignment or Exercise Example	Rationale of inventional capacity in example
Problem solving: The process of finding possible solutions or suggestions to a given problem based on research.	Due to Covid, the community partner asks students investigate if it is feasible for employees to work remote long-term. To address this project, students need to find applicable research and then use and "problem solving" to draw connections between the research and the problem. In this way, students pull related secondary research and compile it to invent their own suggestions to solve the problem. The solutions must be based on applicable and related research. Students are asked to come up with three main areas to focus their suggestions (e.g., costs, productivity, mental health, communication, technology, etc.).	Through the process of finding and analyzing research to solve a problem, students demonstrate they can conduct research to solve an applied problem.
Metacognition: The act of reflective awareness of one's own thought process and patterns of thought.	Students begin by reading: Opie, T. & Freeman, R. (2017). Our Biases Undermine Our Colleagues' Attempts to Be Authentic. *Harvard Business Review.* https://hbr.org/2017/07/our-biases-undermine-our-colleagues-attempts-to-be-authentic Indeed Editorial Team. (2020). Work Ethic Skills: Top 8 Values to Develop. *Indeed*. https://www.indeed.com/career-advice/career-development/work-ethic-skills Then, respond to the following questions: • Based on the readings, how has your work ethic affected your approach to projects with the community partner? • Discuss at least two examples of where you encountered professionalism during the client-based work or with your group? • Describe at least two ways you could elevate your professionalism?	The example provides students with readings to ground and guide their own reflection of work habits. Thus, students are analyzing and responding to their own thought processes in relation to building practical and ethical workplace habits.

Table 14: Inventional Capacity (Continued)

Creativity: The act of creating original or imaginative ideas, often with a visual component.	The community partner needs help organizing their document production process. The company has recently hired two new copy editors and needs a workflow diagram of the document production process. In teams, students are asked to talk with each department head to create documentation of the process in a workflow type diagram.	In addition to helping students develop communication skills, this project asks students to gather information and use it to create a new visual process. Thus, the students using creativity to design a visualization based on research. As an applied project, the research is collected from the personnel rather than from published reports.
Innovation: The invention of a new idea, method, concept, or product.	The community partner wants to get more people to their website and has decided to do this by adding newly created content in the blog section. Students are asked to generate or invent a list of 10 article topics related to marketing trends or the local community. Students are encouraged to perform online research to look for ideas.	This example has student practice inventing content ideas within a set of given parameters. It also reminds students that invention can be based on other existing ideas.
Ingenuity: The quality of being clever or original, often in relation to technology.	The community partner often hires new graduates and has asked for a video demonstrate using MS Word's Track Changes feature and Google's Suggestion mode. Students are asked to create a short presentation (no longer than five minutes) explaining and demonstrating each tool intended for an audience of new hires that are learning these tools for the first time. Students can either record a narrated screen capture of using the tool or include screen shots demonstrating the tool along with recorded narration. The presentation must include the following elements: • A clear explanation of each tool and its purpose • A step-by-step demonstration of each tool's functionality	Due to ingenuity's connection to technology, this exercise builds on innovation and creativity, but in a technology focused-manner.
Critical thinking: The process of questioning or challenging an approach to knowledge or perceived wisdom.	Toward the middle to end of the semester, students revise resume and cover letter based on their experience with the community partner. Students are tasked with revising their resume and cover letter by adding the tasks/duties they have performed so far as part of this class. Students need to select and relate how these experiences have helped them develop as a professional.	In many ways, critical thinking is being done in each and every example in this list. However, this final assignment asks students to think critically and compose a written response to practice decision making in terms of their own experience.

As a move toward transparency, I advocate for including inventional capacity concepts and definitions in the assignment description. This way, students can more easily make connections to the work they are doing and the sets of habits they are developing. It is worth pointing out that many TPC programs already include inventional capacity concepts in projects; however, to what extent is not known. My proposed concept not only directs faculty and PAs to an evolving list of theoretical concepts to use in course creation, but it also advocates for directly connecting to inventional capacity concepts (e.g., "problem solving," "innovation" and "creativity") in the materials for students. More so, this leads faculty to create integrated programs. By integrated, I mean transparent language to students on how courses go together to move an outcome from introduction to being able to apply it. In this way, I advocate for inventional capacity to describe theory-to-practice application to students. Then, students can practice these theoretical concepts as part of the course assignments, in a theory-to-practice capacity. Inventional capacity not only expands the definition of theory, but also makes these moves more transparent and clearer to students.

Returning to this analysis of cross-listed courses, the discussions of *techne* in TPC offer a thread to connect theory and production in these courses. Inventional capacity enables faculty to apply practical theory and theoretical concepts in these specific ways. However, my contribution aims to progress from high theory and call for cross-listed courses to include practical theory or theoretical concepts. My proposed term of inventional capacity is meant to include theory-to-practice moves by calling for metacognition and theoretical thinking in courses that focus on production. In this way, inventional capacity offers a way to make assignments and outcomes more sustainable and ethical for the students through more transparency.

Future Research

This project reinforces the need for multi-institutional studies on programmatic research. To build sustainable programs with an ethical responsibility to students, more research is needed on cross-listed courses and assignments, outcomes, and degree levels.

Types of Courses

As the only study in TPC that examines cross-listed courses, more research is needed to further evaluate how this type of course affects programs. Directly building on my theory and practice implication, further research is needed to investigate the amount of theory and theoretical concepts used in cross-listed courses. A possible study could use my list of 21 institutions that offer cross-listed courses as a sample, then perform online research to collect course descriptions and syllabi from cross-listed courses. Searching for the word "theory" and other terms used in my definition of inventional capacity (e.g., critical thinking, problem solving, etc.), this type of study could determine the extent to which theory and theoretical concepts are used in cross-listed courses.

Additionally, more work is needed on particular types of courses to bolster the field's connection to pedagogical research and move toward sustainability. My project has suggested using an iterative and reflective process of programmatic perspective through a continuous improvement model. Future research could examine the ways other types of courses (e.g., experiential learning and community partnerships) or other core courses could contribute to ongoing programmatic perspective. Returning to Melonçon and Henschel's (2013) list of core courses, the field lacks research on the following courses: design, intro, genre, and web. Similar to the recent work on internship courses (Bay, 2021; Baird & Dilger, 2017; Bourelle, 2015; Katz,

2015; Kramer-Simpson, 2018) or editing (Melonçon, 2019), this type of study would assess the way certain types of courses are handled across the field.

Outcomes

In addition to work on cross-listed courses specifically, more work is needed to understand the relationship between programs and courses through the examination of outcomes. The recent research around program outcomes (Clegg et at., 2021; Barker, 2012; Carter, Anson, & Miller, 2003; Say, 2015) shows that the field is interested in understanding program outcomes. While most of this work has been related to assessment, Clegg et al. (2021) suggested that outcomes can clarify the program and course offerings to students (p. 30). More research on outcomes can help the field understand programs and courses as well. Outcomes can help the field understand pedagogical and programmatic work through the lens of an ethical and sustainable programmatic perspective. For example, the relationship of program outcomes to course outcomes offers transparency and clarity to various stakeholders, including outside stakeholders such as future employers. This type of research would provide programs with a foundational approach to programmatic work, offering a basis for ways PAs can describe how and why courses within programs work together.

Furthermore, TPC could use outcomes to compare undergraduate and graduate degree programs. A multi-institutional assessment of program outcomes could help clarify the differences in degree level. For example, this type of study could compare outcomes for bachelor's and master's degree programs at the same institutions. To achieve results that are more generalizable, this type of research would need to evaluate outcomes from numerous institutions.

Degree Levels

This study exposed flaws in the way stakeholders, including faculty, describe the differences in degree types. First introduced by Storms (1984), the lack of distinction between bachelor's and master's degrees was later picked up by Keene (1997) and Melonçon (2019). Over the years, scholars have looked to quantify programs in terms of value (Keene, 1997), prestige (Moore, 2008), integrity (Blakeslee & Spilka, 2004), and standards (Davis, 2001); however, little effort has been allocated toward clarifying the differences in degree levels. Cross-listed courses further complicate this issue, in that students are taking the same course with no written guidance on the differences between the outcomes and experience for undergraduate and graduate students. An idea for future research includes the assessment of outcomes mentioned above. Another future research idea would be to compare degree requirements levels based on written policies for bachelor's and master's degrees. This type of research would be best suited for a multi-institutional study that not only looks at polices but also integrates stakeholder perceptions (students and future employers).

Graduate Student Training

The inadequate work on graduate student training has been limited to developing as teachers and scholars (Johnson-Eiloa & Selber, 2001; Pennell, Frost, & Getto, 2018; Grant-Davie et al., 2017). TPC needs further research on how we train graduate students to be future faculty. To start, we need a multi-institutional overview of what preparation for programmatic work is already being offered across the field. This research would then need to consider the current job market in higher education and the potential effects of the pandemic on that market.

Conclusion

When I began this study, I had a loose understanding of cross-listed courses based on my experience in my master's program. Through the last year and a half, I have, in many ways, become an expert on not only cross-listed courses, but also in understanding how a single point of entry can shed light on larger programmatic issues and field-wide concerns. The investigation of a singular course type opened broad perspectives and insights for the field. Even though the study started off as analysis of a type of course, the project's results lead to implications for macro issues in TPC from a sustainability and ethical framework. My contribution of inventional capacity provides a more concrete and ethical way to integrate metacognitive moves at the program and course levels. It also continues my project's main work to evolve programmatic perspective in sustainable and ethical ways.

As a learning process, this project exposed me to the various nuances and attention to detail needed to perform programmatic research and more so, to the importance of this type of research for student learning. This project represents the type of research I will continue in my career.

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