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What on earth are we doing (?): A Field-Wide Exploration of Design Courses in TPC

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What on earth are we doing (?)\footnote{}: A Field-Wide Exploration of Design Courses in TPC

by

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A dissertation submitted in partial fulfillment of the requirements for the degree of
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Abstract

This study explores design related courses within the field of Technical and Professional Communication (TPC) to uncover programmatic trends in undergraduate courses at a field wide level. This applied study uses a mixed methods approach to understand the following questions: what do the range of design courses look like in the field of TPC, how are these courses taught, and what would an effective design course look like? To answer these questions, this study uses a mix of three types of data: (1) institutional data on courses, (2) interviews with faculty and administrators who have taught (or are currently teaching) these courses, and (3) course materials (syllabi and assignment sheets) gathered from administrators and faculty to understand the pedagogical context for how these courses are approached. Collecting institutional data allows for a better understanding of the types of courses across the field, while materials and interviews gathered from faculty and administrators uncovers the varying approaches and goals for these courses. The implications call for a sustainable approach to programmatic work in the field, specifically being critically reflective about how courses are developed. Additionally, this study provides examples of how effective courses could be designed with critical reflection in mind.
Chapter 1: Introduction

I remember the first time I stood in front of my students and told them “I don’t know”. It was a class early on in my graduate career, and we had been talking about how their projects required use of design elements. One student had asked what the formula was for designing things, in this case a data visualization, and I honestly couldn’t explain in a way that was useful for students. In some ways, design was intuitive—in others, ambiguous. This lack of clarity made it all the more difficult to explain the rationale behind the decisions made in certain situations. Now, my answer—“I don't know”—was the most honest response, but it led me to search for an answer—to give my students something concrete, the principles, but also the process they could follow as they visually designed in their own lives.

As we do, I searched through various resources to find a specific approach, or approaches, that would develop my students’ knowledge and skills. I found a lot of work on design theory, accessibility, and even how important graphic design is, but it was mostly theoretical and conceptual. I could not find anything that actually offered any practical insight into visual design. Not only that, but it didn’t help my students fully grasp the entirety of the term visual design. At the time, I offered my students the practical insights I had gathered from my own experience, but I remained unsatisfied by the literature I was able to gather on the subject, and that frustration stuck in the back of my mind as I progressed through school.

I didn’t know how to ask the right question until I was working as a research assistant when I discovered programmatic research and the applied techniques it encompassed. One of my tasks was to update a database with course and institutional information for the field of technical
and professional communication (TPC). The learning curve was brutal, but there was something about doing something that would have a real-world impact that I found appealing. Programmatic research, as I quickly found out, did real good for people, students among them, and this was when I connected my quest for applied research into visual design with the applied methods of programmatic research. What better way to do significant good for students than to look at the way programs serve them? Thus, I conceived my dissertation predicated on doing the most good I can for students by analyzing the visual design courses students take to gain insight into the way those courses are taught.

The questions I had filed away when looking at literally thousands of course descriptions continued to resurface, and it wasn’t until I became more involved in applied research that this began to take shape. There were two cases that I can directly link back to as solidifying my research interest. The first was an analysis of student learning outcomes across various institutions within TPC. The second, a collaborative project focusing on an information design assignment, looked at student work and their achievement of the outcomes of the project itself. Throughout each project, the question of how instructors understand and define design was prevalent. Within the project on outcomes, how various programs interpreted and categorized the term design influenced how the outcomes for the program were written. For example, did the program seek to have students understand formatting and document layout, or were they trying to understand specific organizational and color motivated choices? In the information design project, I found that through the perspective of student work, students were struggling with the understanding of how design is enacted within their own work.

Long before I had begun to brainstorm ideas of what I would do for my dissertation, I knew my end goal was to do something that not only contributes to the field and is able to be
built on, but that it would benefit students and instructors—as this is a direct reflection of how I approach my own work and teaching. So, I took advantage of the fact that not only was the concept of design something that I wanted to understand more of, but it also needed to be better understood within the field. I realized that not only was the goal to understand a specific course in TPC, but to also understand other facets of how courses within a TPC undergraduate program operate. Ultimately, I started questioning design to help my students. If there wasn’t material already in existence to help them, I decided I would create it for them.

This focus on design is especially relevant considering “today’s technical communicators need knowledge and skills not only in written communication, but also in information design, multimodal communication, and in a range of tools and technologies” (Brumberger & Lauer, 2015, p. 225). More so, not only are PTC alumni “taking responsibility for an increasing amount of visual communication” in their work (p. 279), but they are also “required to complete visual work without the help of a design specialist” (p. 279) because the type of writing they’re responsible for “appear to be largely visual (instructions, promotional materials, newsletters)” (Blythe et al., 2014, p. 281). Because visual design is such an important aspect of programs, I wanted to gain a better understanding of how it operates at the field wide level. Specifically, how this understanding can differ among instructors and within programs and how it is ultimately reflected in the curricula. While not new to the field of TPC, visual communication and visual literacy are continuing to gain importance in TPC degree programs. Brumberger (2007) found that 75% of professionals spend approximately 20% of their time at work addressing issues of visual design (p. 378). Additionally, Brumbergers survey found that 94% of those working professionals felt that TPC curricula should include “instruction in visual communication” (Brumberger, 2007, p. 386). As a result of this focus on design, visually
focused courses within TPC curricula have increased from 4% in 2005 to over 40% in 2011. (Melonçon & Henschel, 2013). While courses focused on design are increasing, there remains a question as to what these courses include and how the material is understood by instructors and then implemented within the curricula. Design focused courses are those that teach a range of material within the category of design and, as a result, are often difficult to confine within one category. Generally, courses labeled as design (and for the purposes of this study) are those that include both theory and practice. These courses may include design theories, such as Gestalt or color theory, and may present materials that offer a thorough understanding of form, function, and style.

To do this, I determined that a field wide approach would be best. Field wide research not only provides knowledge about how other programs operate, but it also helps to identify and address changing needs within TPC while providing contextualized information on specific courses. Within TPC, there have been scholars who have attempted to provide information on the field as a whole (Allen & Benninghoff, 2004; Melonçon, 2012; Nugent, 2013; Melonçon & Henschel, 2013); however, “the field has never had data precise and comprehensive enough to point to curricular trends” (Melonçon & Henschel, 2013, p. 54). In order to identify curricular trends in courses such as those labeled as design, a field wide perspective is invaluable. As I quickly came to learn, there is not a lot of field wide research occurring within TPC, let alone work focusing solely on design courses. While faculty and program administrators may understand the importance and value that design has within student learning, more research is needed to be able to “answer questions about what we are doing and why” (Brumberger & Northcut, 2013, p. 6). Ultimately, this project will provide detailed insights at the field level about key courses in the curricula, as well as theoretical insights into how theory and practice
operate within these spaces. Questions in this study will focus on how instructors and administrators understand and utilize theory within visual communication courses, and how this impacts their own interpretation of the course materials. These practice questions and insights also suggest larger concerns about the role of theory and practice in TPC curricula. Early on Miller (1989) argued about the social aspect of practice and, intermittently through the years, scholarship has directly or indirectly engaged with issues of the binary of theory and practice (Miller, 1991; Phelps, 1991; Pope-Ruark, 2014). Most recently, some of the social justice scholarship claims that emphasis on practice and product has obscured the necessity to engage with issues of inequality. Much of this stems from either socially or ethically driven issues encountered when designing and their impact on the document as a whole. In fact, Kong (2020) argues that because many existing courses focusing on visualizations within TPC “rarely devote time to the context, ethics, and soft skills involved in the process” (p. 190), the “importance of ethics, humanism, and context will never be overemphasized” (p. 190). Thus, additional theoretical discussion about the theory and practice, how they are implemented within curriculums, and how they can be leveraged as action for change are necessary. Therefore, my inquiry starts with the following research questions to get a better understanding of how these courses operate:

- What do the range of design courses look like in the field of TPC?
  - Such as document, information, and visual design courses
- Where does this course happen in degree?
  - How are these courses taught?
  - How are they categorized?
- What are design courses teaching?
○ Are they teaching a tool or aspects of design?

○ Do they focus primarily on theory, practice, or a combination of both?

● Can we develop a set of effective practices for different types of courses?

Chapter summaries

Chapter 2, the literature review, provides an overview of recent scholarship surrounding the field of technical and professional communication (TPC). This section begins by examining the state of programmatic research in the field of TPC. As some have noted (Harner & Rich, 2005; Melonçon & Henschel, 2013), programmatic research is especially needed in core areas of TPC, such as design. Programmatic research is then followed by a focus on scholarship on theory and practice, as well as work on the area of visual rhetoric, to show how these ideas have influenced how the field understands core themes. Chapter 2 then moves into the concept of design, specifically how design is parsed through for this study. For instance, in this section there is a discussion of the field's course naming practices and how this impacts how the course is understood. The final section in chapter 2, focuses on the teaching of design. Included are discussions of literature that highlight how design has been taught within TPC, such as the use of skills (i.e., problem solving), principles (proximity, alignment, contrast, etc.), or current textbooks (Kimball & Hawkins, 2008). This literature further connects to the overall theme of examining how instructors understand design and how they explain it to their students.

Chapter 3 is the research study design, which explains my rationale, as well as the methodology and methods employed in this project. In this study, I use Melonçon & Schreiber’s (forthcoming) taxonomy for research questions to identify and guide the goals of my research questions. I then paired this taxonomy with the continuous improvement model, GRAM, to put these questions into practice at a field wide level. This study consists of three main methods of
data collection: institutional data collected from public resources (online course catalogs),
interviews from faculty and administrators within TPC, and course materials gathered from
faculty.

Chapter 4 details the findings from this study and highlights areas of note. This chapter is
organized by research questions, such as “What do the range of design courses look like in the
field of TPC” and “what are these courses teaching” to help uncover the trends in both course
design and instructor practice across the field. This chapter ends with explaining some of the
challenges that emerged over the course of this project, for example the engagement and
motivation faculty experienced with students who took these design focused courses, as well as
the challenges that generally accompanies technology use.

Chapter 5 is the discussion of the findings found in chapter 4. In this chapter, I will
examine data collected from institutions, faculty, and instructors and will discuss the key patterns
noticed. For example, this chapter focuses on the use of student learning outcomes (SLO’s) as a
way to direct course design. This chapter also discusses the use and impact of technology on
students within these courses, and well as how instructors view the concepts of theory and
practice operating within their classrooms.

Chapter 6 discusses the broader implications of this study and recommends action for
future research. In this chapter, I provide implications based on my study, such as a focus on
supporting faculty, developing technological literacy in students, and designing courses that
align with the goals of degree programs. Based on these implications, I suggest that the field of
TPC invests more time uncovering the different types of courses within their programs, and
understanding what these courses are teaching and how they operate across institutions.
Additionally, the field must also look towards how sustainable their current practices are in order to develop what Melonçon (2021) calls a “sustainable collective identity” (p. 10).

One of the strengths of this study is the amount of data gathered from a variety of institutions. This data provides a basis for the field in accounting for the types of design related courses across the country. It also works to give a brief glimpse into how instructors are approaching these courses on their own. While useful to the field at large, it is also limited because it does not account for recent or future changes. Additionally, with regards to some of the specific course materials gathered, there are certain sections that are missing. Whether or not this is due to department or institutional policies, or personal choice, it is unknown. Through identifying the ways undergraduate TPC degree programs integrate design courses into their curriculum and analyzing the approaches to teaching design courses, I am working to uncover the connections between course construction and implementation to see if field wide patterns emerge.

TPC programs, and the programmatic work that centers around them, have a real impact on students. The degree programs students go through directly correlate with what the field is currently concerned with. The programs (and this type of research) impacts what courses they take, assignments they complete, and, ultimately, what skills they develop for their future careers. If this concern does not include students and their success, then it needs to be reevaluated. Overall, while this study aims to find answers to many questions that the field of TPC does not currently have, my real goal is to find the answer to the questions that I wish I had known when my students asked me years ago.
Chapter 2: Literature Review

Design, for the purpose of this study, covers any material that has to do with the theory and/or practice of design. This can include titles ranging from document design to information design to visual design. When looking at current course labels, the first two are fairly common. Visual design, however, branches off into areas of visual communication and visual rhetoric—which are typically focused on both design and rhetorical theories. Allen and Benninghoff (2004) were some of the first to report data on TPC by examining core concepts and common skills taught within US technical and professional communication undergraduate programs. They found that while 62% selected rhetorical analysis as a core concept, fewer respondents selected document design (48%) or visual rhetoric (26%) (Allen & Benninghoff, 2004, p.170). Harner and Rich (2005) are another example of a study of programs as a whole. They examined 80 programs at 75 institutions to identify trends in scientific and technical communication undergraduate programs. One of the goals of this study was to find out what the most commonly required courses were for technical communication. Their data showed that more programs categorize document design as an elective (10%) rather than a core course (4%) (Harner & Rich, 2005, p. 213). Additionally, unlike document design, more programs categorize visual communication as a core course (28%) than an elective (13%) (Harner & Rich, 2005, p. 213). Melonçon & Henschel (2013) were another example of the type of field wide research that is needed. They reported on the state of undergraduate degrees in TPC, explaining that the ways in which courses are differentiated was a

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1 Parsing through the differences between broader categories, such as visual communication and visual rhetoric, is beyond the scope of this study.
point of concern. Courses with the goal of design can vary from courses named information design, document design, web design, visual rhetoric or visual communication. For example, courses with the title visual rhetoric “are as varied in content...[and]...have a focus on visual design and theory, and often are introductory courses” (Melonçon & Henschel, 2013, p.61). Because “questions about document design...get to the heart of the work and significance of [TPC]” (Rude, 2009, p.199), I answer Melonçon and Henschel’s (2013) call for more research on visual and design related courses.

Although there is scholarship from many avenues that touch on visual communication and design, I chose to limit it to work within TPC in order to build a project specific to TPC program administration, teaching, and learning. This also excludes literature on the TPC service course because of the focus on degree programs. It should also be noted that this study does not engage with design thinking or the design elements of user experience (UX). While complementary, work on design thinking and UX does not directly impact the goals of this project in relation to visual design courses.

In choosing to focus on the term visual communication for this project, I realize that this brings in many different interpretations. Other possible terms, such as visual rhetoric or document design did not offer the range that I was looking for. Additionally, since in this study visual rhetoric courses (viz) focus heavily on theory, while document design courses (design) focus on practice, it is difficult to find a productive way to reference variations of design courses found within TPC. This is not to say that these are useless approaches, but that it is just as important to understand the theoretical underpinnings of these ideas. For example, I approach visual design as the design choices associated with creating visuals—be they charts, graphs, or icons, versus visual rhetoric which focuses on the communication because of the images or
icons. Courses are named as a result of many factors: trends in the field, personal preference, decisions made by the institution, past course history. Although course names are diverse, the fact remains that “the requirement for courses in designing the visual aspects of technical communication has increased in importance in the last several years” (Melonçon & Henschel, 2013, p. 57). In what follows, I begin by describing the current state of programmatic research in TPC and explaining the need for research into a specific type of course. Then, I will examine relevant scholarship surrounding design and the teaching of visual communication courses. Finally, I will discuss how theory and practice have impacted the concept of design and the courses that stem from it.

**Programmatic work in TPC**

Programmatic work has been an important component of the field of TPC. Throughout the years, the focus has been on how programs function: how they were developed, how they currently operate, and how they can be made better. This was done through research on assessment, on individual perspectives, or on case study examples. For example, there is a range of scholarship looks at assessment within an individual program (Faber et al., 2002; Johnson & Elliot, 2010; Brady et al., 2012), as well as how assessment plays out among programs (Allen, 2004; Cook, 2003, Yu, 2012; Clegg et al., 2021). More recently, there has been a move towards defining programmatic work and what this type of research and study should do within the field of TPC. Schreiber and Melonçon (2019) defined programmatic work as a “critical review of programs involving careful deliberation on the nature of programs to better understand how and why they exist and work” (p. 254). For instance, edited collections highlighting different variations of programmatic work and perspectives (Ilyasova & Bridgeford 2014; Tillery &
Nagelhout, 2015), to individual studies examining the impact institutional pressures and changes can have on a program (Maylath et al., 2010; Williams & Ilyasova, 2021).

While much of the research done previously has underscored the importance of program focused research, many of these studies have been single institution (Ford & Newmark, 2011; Katz, 2015; Baalen-Wood & Knievel, 2015; Coppola et al., 2016; McKee, 2016) or individual case study examples (Taylor, 2011; Steiner et al., 2020). Additionally, with this focus on an individual approach to programmatic research, there has also been work on sustainability (Ericsson, 2009; Johnson, 2004; Johnson et al., 2017; Melonçon, 2012; Melonçon & Schreiber, 2018) and how these programs can thrive going forward. This shift is especially important because it calls attention to the need to push past how individual institutions can survive to how they (and their students and faculty) can thrive. Recent work in TPC has also begun to look more closely at how programs and courses operate along with the practices of instructors (Chong, 2016; Melonçon & Schreiber, 2018; Turner & Rose, 2022; Tham, 2022). For example, Melonçon and Schreiber (2018) offered an analysis of data on the undergraduate capstone course, while Tuner and Rose (2022) focused on specific practices by gathering data on how instructors teach UX.

While the type of research listed previously is useful for determining goals and progress within a localized context, this does not provide the basis I need for a field wide study. Not only am I looking into a variety of courses but, by using a field wide approach, I am examining multiple programs. A field wide programmatic approach is where my study falls. This perspective “looks at TPC programs and courses at the field level by combining data and experiences from multiple institutions and programs” (Melonçon, 2022). This is different from a programmatic approach that focuses on individual teaching instances. Because programmatic
research is “typically data-driven” (Melonçon et al., 2019, p.14) and “directly affects curriculum development or program administration” in some way (Melonçon et al., 2019, p.13), using a field wide perspective offers a unique view. The data collected from this approach will then “provid[e] a macro view of curricula and programs that can be read alongside the rich history of micro views that typically focus on a single program or course” (Melonçon, 2022). Field wide programmatic research has identified two types of visual design courses: those that are more theoretically oriented and those that are more practice oriented. Because of the long-standing conversations around theory and practice, it is important to define their meanings. Simply put, theory is conceptually driven and focuses on the relationships among concepts. Practice, on the other hand, is more applied and focuses on the practical application of skills learned. But much of the field-wide research thus far lacks the specifics about what theory and practice distinctions really mean, and more importantly, how these distinctions shape what is taught in TPC courses.

**Theory and practice**

Since the emergence of the field, there have been many approaches to how theory and practice can work within TPC. Aristotle explained that theoria (theory) and praxis (practice) are both ways of knowing; “For the end of theoretical knowledge is truth, while that of practical knowledge is action” (Aristot. Met. 2.993b20-21). Aristotle views these as two separate entities, with theory having a higher value over practice. Atwill (1998) built on Aristotle's claim and argued that when the distinction between theory and practice is “used to secure either the canonicity of the *Rhetoric* and or the respectability of the discipline” (Atwill, 1998, p. 193), they are no longer separate avenues of inquiry. Tying the theory and practice binary back to a split between rhetoric as practice versus rhetoric as theory, Atwill defines practice as being concerned with “human action and…human behavior” (Atwill, 1998, p.171), and explained that the main
difference between theory and practice is that theory “is pursued for no practical end” (Atwill, 1998, p.170). Theory is placed above practice; they are “arranged in a conceptual hierarchy whereby theory either governs or reflects rhetorical practice” (Atwill, 1998, p.193). In essence, theory is held above practice because of its ability to be separate from the object of study; “epistemological foundationalism is characterized by its demarcation of an unsituated, dehistoricized object of study, over which an equally decontextualized observer may exercise interpretive mastery” (Atwill, 1998, p.194). The problem with this interpretation is that there can never be a situation with an “unsituated object” or “decontextualized observer.” Atwill (1998) described Bourdieu’s expansion of this interpretation, explaining that “epistemological orders are inextricably tied to social orders” (p.195) and that the “theoretical perspective is the distinguishing mark of a particular class” (p.194). This “mark of a particular class” is who gets to name, circulate, and perpetuate these theories. As hooks (1994) argues that “the privileged act of naming often affords those in power access to modes of communication and enables them to project an interpretation, a definition, a description of their work and actions, that may not be accurate, that may obscure what is really taking place” (p.62).

Additionally, Moore (1997) explained that theory has limits because “...rhetorical theory overemphasizes some writing genres...[and] does not devote enough time to the skills that are valued by practicing technical communicators” (Moore, 1997, p.165). Hart-Davidson (2001) argued that “[TPC] need[s] theory,” by which he explained that “the ranks of working professionals and academics in technical communication should participate in activity that makes the core expertise of technical communication explicit” (Hart-Davidson, 2001, p.147). The tension between finding a balance between teaching useful skills and valuing rhetorical expertise is what Miller (1989) describes as the “complex relationship between prescription and
description” (p. 65), or the difference between what is vs what ought to be. In other words, how theory and practice is used in different areas versus how it should be used is what continues to divide practitioners and scholars alike.

Among the many interpretations of how theory and practice operate together there has been an emergence of the concept of praxis. Praxis, or the “knowledge produced through action” (Given, 2008, p. 676) allows “those who employ praxis [to] use their knowledge of a particular situation to understand a more general problem” (Given, 2008, p. 676). Within technical and professional communication (TPC), the concept of praxis has been used in particular ways. Within TPC, Miller (1991) and Miller (1989) both examined the definitions and associations with the idea of “practical” within technical writing. Miller (1991) argued that not only should technical writing be viewed as a social practice but that we must “discover ways of developing students' ability to interpret how traditional values and assumptions speak to practical problems” (p.68). Miller (1989) also moves towards practice as social action and explained that being practical “suggests a certain attitude or mode of learning, an efficiency (or goal directedness) that relies on rules probed through use rather than on theory, history, experience, or general appreciation” (p.61). She makes the distinction between what is thought to be high and low practice, explaining that high practice, derived from Aristotle's praxis, concerns itself with “human conduct in those activities that maintain the life of the community” (p.62), versus low practice which focuses on everyday activities. She ultimately argues that understanding practical rhetoric is a mix of these high and low forms and that thinking of praxis as conduct means that rhetoric is both political and economic; “practical rhetoric is a matter of conduct rather than of production, as a matter of arguing in a prudent way toward the good of the community rather than of constructing texts” (Miller, 1989, p. 69).
Pope-Ruark (2014) also viewed praxis as a “social action” (p.324) and examined concepts, such as techne, praxis, and phronesis in relation to the idea of metic intelligence to support current attempts to prepare students for the workplace. Phelps (1991), on the other hand, does not immediately make the move towards social action, but instead uses phronesis to determine the “right action” (p. 864). Phronesis, according to Phelps, is the “exercise of practical intelligence to take right action in particular case” (Phelps, 1991, p. 864). To do this, Phelps merged “composition theory [with] the activity of teaching into a reciprocally critical relationship” (Phelps, 1991, p.865) using lore as an example of phronesis in action. Generally, the view of theory “prize[s] formal knowledge over practical wisdom, knowing over action” (Phelps, 1991, p.864), but through phronesis one is able to take reflective action. This reflective action is then the ”right action,” or wisdom used to determine which action is correct and is the difference between traditional practice.

There are also those who expand the idea of praxis as merely a social action. For example, Sullivan and Porter (1997) defined praxis as “practical rhetoric” (p. 26) that is “focused on local writing activities (practice), informed by as well as informing general principles (theory), and calling upon ‘prudential reasoning’” (p. 26). This definition offers a “perspective [which is] willing to critique both theory and practice by placing both in dialectical tension” (Sullivan and Porter, 1997, p. 27). This tension is the key—each opposing force balances the other allowing them to exist together in a state of constant change. When theory and practice are placed in “dialectical unity” (Aoki, 2004, p.116), it is not a split between the two. The binary disappears and, even though there is tension between the two, both theory and practice reside together. The “interactive, reciprocal shaping of theory and practice” (Lather, 1986, p. 258) is praxis.
Therefore, continuing to split theory and practice, especially in TPC, is not useful. The consequences of this binary result in a continuum that places a hyper pragmatic approach against an overly theoretical one. We need both sides to operate as an “ongoing interaction between theory and practice” (Odell, 1993, p. 6) because, as Odell (1993) explained, “Theory often figures prominently in efforts to bring about fundamental changes in practice” (p. 2). Using both in conversation serves to unite, not only the concepts themselves, but the aspects of academy and industry to which they are tied; “Theory needs practice and practice needs theory; each continually challenges and refines the other” (Odell, 1993, p. 6).

Though the field of TPC has not recently engaged with discussions of theory and practice, more attention should be paid to this topic because it directly impacts aspects of teaching and scholarship. Understanding that praxis requires a break from the view of a split theory versus practice and, “rather than seeing theory as leading into practice, we need now more than ever to see it as a reflective moment in praxis” (Aoki, p.120). It is vital to recognize how the faculty interpret and utilize theory within visual communication courses and how it is integrated in curriculums.

**Visual rhetoric**

Visual rhetoric overlaps with many areas, design and technical communication being the two that pertain to this study. Over the years, visual rhetoric has been expanded as scholars have attempted to “understand the role of visual elements in rhetorical theory and practice” (Hill & Helmers, 2004, p. 2). Hill and Helmers (2004) go on to explain that, to some, “studying the “visual” seemed to consist solely of analyzing representational images” but to others “it could include the study of the visual aspect of pretty much anything created by human hands…making the study of “visual rhetoric” overlap greatly with the study of design” (Hill & Helmers, 2004, p.
As Kenney (2002) notes, while most people “have no trouble understanding immediate visual and verbal contexts” (p. 58), there are many who “have problems with visual culture because visual culture changes significantly over time, and some people may lack visual cultural literacy” (p. 58). The current research offers an avenue for my project to identify what aspects of visual rhetoric are being included in courses across the field of TPC. Also, exploring this shift in how design is understood, along with the overlap in visual rhetoric interpretations, will help to uncover how visual rhetoric is understood in relation to design.

Gallagher (2011) approaches visual rhetoric by splitting rhetoric and design, specifically, how these two impact concepts such as visual rhetoric and visual wellbeing. Gallagher argued that the concepts of rhetoric and design are both art and practice. They are both art because they have “a set of principles that can be taught and learned, because there are established means for assessing/evaluating it, and because it is a separate area of human activity that we can observe and upon which we can reflect” (Gallagher et al., 2011, p. 29). Rhetoric is a practice “to the extent that we engage in the creation of rhetoric in both our public and our everyday discourses through the exchange of symbols,” while design is a practice “to the extent that designers and others participate in it by designing visual and material artifacts/objects” (Gallagher et al., 2011, p. 29).

Other scholars separate visual rhetoric into visual and verbal elements. For example, Courtis (2004) explained that while “visual rhetoric assumes…that various visual and verbal elements convey meaning and the effects of the messages” (p. 266), studies of visual rhetoric “focus on the picturing aspects as complementary to the selected words rather than on the colours used” (p. 266). Additionally, Porter and Sullivan (2004) argued that the core premise of visual rhetoric is that “any page of text is composed of visual as well as verbal elements, and
those visual patterns themselves exert a rhetorical effect” (Porter & Sullivan, 2004, p. 292). Foss (2004), on the other hand, argued that visual rhetoric “had two meanings” (p. 304) was split into a perspective and production. Foss explained that this split means that visual rhetoric is “both a visual object or artifact and a perspective on the study of visual data” (p. 304). Foss goes on to explain that, as an object, “is purposive production or arrangement of colors, forms, and other elements to communicate with an audience” (p. 304). However, as a perspective, visual rhetoric “constitutes a theoretical perspective that involves the analysis of the symbolic or communicative aspects of visual artifacts” (Foss, 2004, p. 306). Finally, Buchanan (2004) approached visual rhetoric as a product: “the subject matter of design studies is not products…but the art of conceiving and planning products” (p. 230). Buchanan claimed that it is not merely the split of visual versus verbal or product versus perspective, but two types of product—it is the difference in the poetics of products versus the rhetoric of products; “the poetics of products—the study of products as they are—is different from the rhetoric of products—the study of how products come to be as vehicles of argument and persuasion about the desirable qualities of private and public life” (Buchanan, 2004, p. 230).

Within this separation between visual and verbal elements within visual rhetoric, this divide is also the source of some contention. Finnegan (2004) argued that because of this split “...visual rhetoric is destined to always be visual rhetoric, whereas verbal rhetoric, or textuality, gets to be just rhetoric” (p. 198). Additionally, Finnegan argued that visual rhetoric should be termed visual culture, in order to approach the concept as a “mode of inquiry...a critical and theoretical orientation that makes issues of visuality relevant to rhetorical theory” (p. 198), rather than a product that “relies on something other than words or text for the construction of its meaning” (p. 198). This is similar to Goggin’s (2004) argument, which claimed that we need to
“consider the…distinctions…[and] convergences between word and image” (p. 106) and to “visualize the word, and word the visual” (p. 106). To do this, Goggin argued that “historicizing the praxis and demonstrating that rhetorical construction, artifact, and circulation are pliant, radically shifting over time and place in response to myriad social, cultural, economic, political, and technological forces” (p. 106). Considering how concepts surrounding visual rhetoric and design operate together, ultimately leads to looking inward at the impact of the designer. Whether visual rhetoric is an artifact, perspective, or product—it is nonetheless impacted by the decisions the designers make, seeing how “a designers beliefs are sometimes elevated to the status of determinate principles governing all of design, rather than personal visions infused into a rhetoric art of communication and persuasion” (Buchanan, 2004, p. 231).

Design

For years, the concept of design within technical and professional communication (TPC) has been split off into different avenues. Scholarship has sought to define design as well; textbooks have theoretically grounded design (Kimball & Hawkins, 2008; Riley & Mackiewicz, 2010; Kostelnick & Roberts, 2011) and many studies have focused on design as problem solving (Carliner, 2000; Carnegie, 2013). The term design itself has a multitude of meanings. Design, in the simplest terms, can refer to the aesthetics, the form, or the function of a document. Design as aesthetics is fairly common. Aesthetics is usually a synonym for “‘beautiful’, ‘tasteful’ or ‘inoffensive,’” however many who use the term really mean “style” (Wagner, 2008, p.16). More importantly, aesthetics questions if “words such as “beautiful” or “ugly” can be applied to specific objects, or whether it is perhaps the sum of our personal and social idiosyncrasies that interprets something as beautiful or ugly” (Wagner, 2008, p. 17). Design as a function is the “goal of an objective's intended result” (Spitz, 2008, p. 175), or the “goal of an action” (Spitz,
Design as form, on the other hand, is the shape that it takes to achieve the goals of the document. Each of these areas work together, as seen, for example, in the creation of data visualizations. The form may be a pie chart but if its function isn’t to show parts of a whole then it does not work. Even if the form and function work together, the aesthetics (or style) of how the visual is created, for example color use, can also impact the reception. Many areas of design (and courses focused on this topic) break down each category and attempt to teach some variation of function and aesthetics. Design, at its core, can “be applied to new and changing situations, limited only by the inventiveness of the designer…” (Buchanan, 2004, p. 230).

Design interacts with several areas, such as content strategy (Verhulsdonck et al., 2021), design and the practice of TPC (Weedon & Fountain, 2021), design thinking in technical and professional communication (Tham, 2021), information design (Carliner, 2000), document design (Kimball and Hawkins, 2008), and visual rhetoric (Tovey, 1996; Portewig, 2008).

Verhulsdonck et al. (2021) examined how, since TPC and user experience (UX) are so often combined, the impact of included design thinking, content strategy, and artificial intelligence to reveal “industry practices, skills, and ways to advocate for users” (p. 468). While courses using the term design all have unique approaches to problem solving and design, recognizing the naming conventions of these design courses is an important step in understanding how they differ. Some of the most common course names include information design, document design, and visual rhetoric and communication.

Information design is an umbrella term that includes document design (Kimball & Hawkins, 2008, p.2). Information design (ID) is concerned with “the relationships among people who create the information, people who use the information, and people’s cultures, societies, and environment. Information designers create artifacts that define and build these relationships by
helping people solve real world problems they face” (Kimball & Hawkins, 2008, p.3). Similarly, Carliner (2000) views design as problem solving and claims that design is a “problem-solving discipline” (p. 563) that “considers more than the appearance of the designed product, but also the underlying structure of the solution and its anticipated reception by users” (p. 563). Carliner goes on to argue that “the practice of design as improving the appearance of pages and screens has replaced the concept of design as problem-solving” (Carliner, 2000, p. 562, emphasis added), which is especially problematic if design should “help designers develop their instincts for choosing “right” solutions” (Carliner, 2000, p. 563). As it relates to information design, Carliner examines the inner workings of the creation process by explaining that it has three levels: physical, cognitive, and affective (Carliner, 2000, p. 564). The first level, physical, focuses on “the ability to find information” (Carliner, 2000, p. 564) which is what is typically thought of when approaching design (e.g., can they find the information?). The second level, cognitive, focuses on “adequately defining the users performance goals and preparing a solution that addresses them” (Carliner, 2000, p. 566) (e.g., once they find the information, can they understand it?). The affective level asks if users are comfortable with and motivated to use the information (Carliner, 2000, p.564). Overall, Carliner (2000) explained that this framework might “refocus design efforts away from a preoccupation with physical design elements to the potentially more fruitful exploration of the problem-solving process” (p.570). As noted previously, “the practice of design…has replaced the concept [emphasis added] of design as problem-solving” (Carliner, 2000, p. 562) and therefore greater focus is needed on aspects of teaching design related courses.

Throughout the various terminologies used to describe design courses, it is important to recognize that they can overlap and be much more intertwined as a result. For instance, while
document design is connected to information design, the first focuses more on the specific design objects and the principles that govern them. According to Kimball and Hawkins, document design is “the practice of creating these sites of interaction in such a way that they respond effectively to the needs of both information producers and information users” (Kimball & Hawkins, 2008, p.6), such as aligning lists to show the relationships between the items as well as organization throughout the document. Additionally, the visual communication courses coded by Melonçon and Henschel (2013) in their study of undergraduate degree programs “could be equivalent to some of those we coded as visual rhetoric…or they might have been coded in our study under document design” (p. 57). Meaning, the materials used to code intersected with other topic areas and themes of design, thereby making it difficult to separate them completely.

While there is a lack of consensus in the field about what falls under the term design, this study focuses on how the term, visual communication, is used within TPC programs. In fact, Northcut (2007) explained that “visual communication, as an area of study that falls within technical communication but overlaps with many other fields, considers a veritable constellation of cognitive, creative, and contextual objects and events that contribute to meaning-making” (p. 375). Visual communication are theories of design that focus on how visuals are used to create an argument—from the visual itself to the way it’s presented on the page. Portewig (2008) argued that invention was a key element to visual communication and that although “visual invention can take place in any phase of the documentation cycle” (p. 339), the design of documents are primarily influenced by three factors: conventions, social dynamics, and resources (p. 339). Brumberger (2007) asks what it means for a topic, such as visual communication, to be included in a course and explained that “this may mean coverage ranging from extensive and carefully integrated (e.g., visual communication is introduced as a critical component of...
professional communication, and every project in the course has a visual component) to extremely limited (e.g., document design is the focus of a unit or a lecture or one assignment)” (p. 390). To encompass the nuances of these terms, I use Brumbergers’ (2007) definition of visual communication, which states that this term includes “designing print, Web, and multimedia documents (including decision-making about issues such as layout, typography, color, etc.), creating visual displays of information/data, generating other visual material (e.g., images, photographs) for professional documents, and any other communication tasks which rely on visual language” (Brumberger, 2007, p. 373).

**Teaching design**

Visual communication is a fundamental skill and, while the number of visually focused courses within undergraduate TPC curricula has increased from 4% in 2005 to more than 40% in 2011 (Melonçon & Henschel, 2013), more attention must be paid to the teaching of design itself. There is a need within TPC for scholars to work towards a “more nuanced and comprehensive understanding of document and information design to know how the visuals interact with the text” (Melonçon & Warner, 2017, p. 6). In order to achieve a more nuanced understanding, the foundation of the course must be explored. Within design and production courses there is an attempt to focus on a variety of topics, such as the principles of design (i.e., contrast and alignment), variables of design (i.e., size and color), and the impact of design choices (for ethical or accessibility/usability reasons). With this variety comes a divide in how to approach the course itself: most often seen through a grounding in theory or application through practice. Because of this separation, visual communication courses often lean toward a theoretically focused or practically situated approach.
Understanding the connection between visual components and text and how these impact the overall effectiveness of the product is important and yet, “typically the result of a process that is at times intuitive and at times systematic and logical” (Brumberger, 2007, p. 380). According to Brumberger and Northcut (2013), “most faculty members who are now asked to teach visual communication in their courses have little grounding—practical or pedagogical—in the field” (p. 3) and that instructors should be able to “answer questions about what we are doing and why” (p. 6). In the teaching of visual communication, instructors are often at the disposal of their own understanding of the term. With influencing factors such as instruction from program administrators, along with their own content knowledge, there is rarely a full understanding of one definition of the term. This understanding will then impact any course goals and outcomes. Brumberger and Northcut (2013) explained that a part of guiding students “involves teaching them to see the world around them, and their place in it, in new ways” and that learning to “think visually and to recognize visual communication as problem solving and as argument is fundamental to this process” (p. 4).

The field of TPC has many texts, specifically textbooks used in visual communication related courses, that theoretically ground the teaching of design to help guide students. For example, Kimball and Hawkins (2008) introduce concepts of design through “theoretically informed practice” (p. v), or a balance between theory and practice, while still grounding the text in visual rhetoric and usability. Kostelnick (2007) examines approaches to the visual rhetoric of data displays, arguing that visual rhetoric begins with “issues of clarity” (p. 280) and the demand that they must “facilitate the readers comprehension of the data” (p. 280). Understanding clarity, according to Kostelnick (2007), requires investigation into areas of “perceptual principles, cognitive models, aesthetics [and] the exigencies of the rhetorical situation” (p. 292). Throughout
these examples, the field of TPC notes both theory and practice as a staple within textbooks, as well as the connection between rhetoric and other areas, such as clarity.

While textbooks are useful, they are not the only resource that can aid in identifying trends in visual communication related courses. There are also those who have researched theoretical approaches to teaching the concept of design. For instance, Kostelnick and Roberts (2011) use rhetorical strategies to aid in the understanding of visual design, while Riley and Mackiewicz (2010) focus on the teaching of specific design principles and connect how these principles must consider the context and audience of the document. Both pair rhetorical strategies with concepts of visual design, setting a deeper foundation for students past a shallow understanding of aesthetics. Driskill (2013) argues for the need to “introduce vocabulary, concepts, and genre-or context-related choices” (p. 55) within visual communication and design courses. Carnegie (2013), on the other hand, takes a step back and argues for “design as problem solving” and advocates for explicit instruction in problem solving to help students “critically solve both well-defined and ill-defined problems” (p. 47).

Merging problem solving skills to get an understanding of the facets of design was extended by Carnegie (2013), where design as problem solving is split into four theoretical avenues: traditionalist, associationist, information processing, and Gestalt. The first, traditionalist, views design as a problem and focuses on the “knowledge needed to design effectively—design principles, the technology used to create designs, and the rhetoric of design” (Carnegie, 2013, p. 35). The second, associationist, views communication as a means for “providing or facilitating solutions.” In relation to design, it is visual communication that “provides information that enables users to solve a problem” (Carnegie, 2013, p. 36). The third, information processing, views design as a problem-solving process in which design “becomes a
cognitive activity by which the designer formulates and reformulates a problem to create original solutions” (Carnegie, 2013, p. 36). The fourth, Gestalt, is a contrast to the others in that it “focuses on insight and on solving ill-defined problems” (Carnegie, 2013, p. 43). Gestalt operates as a continual restructuring of the problem in a recursive process; “Each restructuring of the problem situation reveals different solutions and solution paths” (Carnegie, 2013, p. 44). To solve the problem of design, multiple avenues are needed to help “see different approaches and applications for problem solving” (Carnegie, 2013, p. 47). The emphasis on problem solving is just a small part of understanding how design operates. By focusing on problem solving techniques, we are teaching valuable critical thinking skills. By asking students to problem solve, we teach them the skill, rather than the steps to visual designing.

There are also several works that focus on the skills needed to navigate design, rather than the theories of design. Brumberger (2007) uses the results of a survey of practitioners to provide information on the role visual communication plays in the workplace. According to the study, practitioners' responsibilities require “fluency in visual thinking and problem-solving as well as design principles and tools” (Brumberger, 2007, p. 387). The study also revealed that the most common responsibilities of practitioners include “designing visual content from scratch, determining when and where to include visual material, modifying existing material, and applying pre-existing templates” (Brumberger, 2007, p. 387). This is important considering Wolfe (2009) reviewed 12 TPC textbooks and found that there was a “lack of attention to relevant research in data visualization” (p. 364), but many texts consistently failed to “leverage current research in relevant fields such as data visualization” (p. 353). In fact, Veltsos and Patriarca (2017), whose research focused specifically on the service course, found that stakeholders wanted TPC courses to “include visual communication (creating tables and graphs),
document design and layout, and numerical literacy” (n.p.). Curriculum within TPC programs have tried to rectify this “lack of attention to relevant research” (Wolfe, 2009) by focusing on concrete applications of design and showing how it has been or could be implemented within curricula. Melonçon (2013) designed a series of classroom exercises to highlight the relationship between design and comprehension. These exercises eventually culminated in a “data handout” assignment to help students to see “in physical and material ways...that the design—the way something looks—can lead people to draw conclusions” (Melonçon, 2013, p. 19). Columbini and Hum (2017), by including an outcome labeled “visualize” and scaffolding visualization into course assignments, encouraged students to “make meaning through visual displays using the situated knowledge of rhetorical, visual, and design principles” (p. 384). Bell (2019) also followed the theme of rhetorical awareness by developing course material centered on the effective use of visualizations by encouraging a rhetorical awareness of how visuals operate and what they accomplish within a text. Overall, the data gathered by Brumberger (2007) “argue[s] for instruction that marries theory and practice, concept and skill, and that gives particular weight to careful rhetorical decision-making regarding the design and layout of print documents” (p.388).

TPC has also focused specifically on the intersection of visual rhetoric and teaching. For instance, Wolfe (2009) argued for the importance in teaching students how to make visual arguments using data through classroom activities that “help students see the recursive nature of data visualization and invention” (p. 344), while Amare and Manning (2007) developed a tutorial to provide students with a “three-pronged approach to visual rhetoric based on the rhetorical functions of decorative, indicative, and informative strategies” (Amare & manning, 2007, p. 68). Additionally, Welhausen (2018) called for “increasing attention to visual rhetoric pedagogies”
(p. 132) and claimed that the concept of aesthetics is “undertheorized in visual rhetoric pedagogical scholarship and oversimplified in textbook coverage” (Welhausen, 2018, p. 133). Because of underutilization, Welhausen proposed a “heuristic that teachers and students can use together to create a vocabulary for discussing the aesthetic aspects of color and typography in document design work” (Welhausen, 2018, p. 133). Brumberger (2007) also called for pedagogy that “extend[s] beyond coverage of rudimentary principles to a carefully integrated rhetorical understanding of design” (p. 389). Therefore, in order to achieve this “integrated rhetorical understanding of design,” courses should include both theory and practice aspects. The separation between theory and practice is a reflection of how knowledge comes into being and, as such, how knowledge of design is enacted in different ways.

**Conclusion**

While the field of technical and professional communication does not lack scholarship focused on individual aspects of this study, such as design and visual rhetoric or the teaching of design, specifics as to how visual communication courses are taught across the field remains unknown. By building on research from areas of visual communication and visual rhetoric I am able to offer a firmer base to what courses should include. That is what my study hopes to uncover. In addition, finding ways to balance both theory and practice within visual communication to better teaching practices is also an important aspect. Moving forward, the next chapter will detail the methodology and methods used within this study.
Chapter 3: Research Study Design

The methodology and methods employed within field wide studies are extremely important, especially since field wide studies “combin[es] data and experiences” (Melonçon, 2022). Ensuring the study is founded in data while making sure that the study is replicable are key components to strengthening the study design. A research study design, as defined by Melonçon at al. (2018), is a “comprehensive plan that provides the rationale and justification for methodology, methods, and practices with an intense and transparent focus on ethics” (p.108). Therefore, this chapter will provide a comprehensive explanation of the rationale for this study, followed by the overarching methodological framework: GRAM. The chapter begins with an overview of applied research as it relates to GRAM and then moves into the explanation and justification of each method used within the study.

Methodology

The SAGE Dictionary of Qualitative Research Methods defines methodology as the “assumptions, postulates, rules, and methods—the blueprint or roadmap” that researchers use to situate their research (Given, 2008, p. 516), while others have noted that methodology operates more as a “philosophical stance or worldview” (Sapsford, 2006, p. 175). In fact, Melonçon and St. Amant (2018) define methodology as an “approach used to gather research data" and they make it clear that “method is not methodology” because methodology is “the ideological or disciplinary approach to the broad practice of the work of research” (p. 131).
Throughout various definitions, there remains a thread that methodology is the framework by which the researcher thinks about the study. It should be noted that this is separate from the method, which are the ways in which data is collected. In this study, the methodology is approached through an understanding of the previous definitions: a framework, a philosophy, a worldview. Because methodology is the overarching framework, it is important to understand how aspects of this framework impact the study itself. For instance, this study heavily relies on a programmatic approach. This type of research or approach, according to Melonçon et al. (2019), “directly affects curriculum development or program administration” (p. 13). This framework operates with the understanding that because this research will be programmatic, it will be utilized to help faculty improve their programs for their students. By doing this, the study is inherently impacted by the perspective of the researcher, because their worldview influences the perspective of the study itself. This is further reflected in how this chapter is set up, with the main headings following the separation of methodology and methods.

First and foremost, this project is an applied study. Unlike traditional forms of research (i.e., basic research), applied research is “conducted for practical reasons and thus often has an immediate application” (Lewis-Beck et al., 2004, p.19). This type of research is carried out with the goal of increasing knowledge and “creating a better solution” (Salkind, 2010, p. 35). Applied research “does not have a focus on theory building” (Allen, 2017, p. 40) but instead, its “primary focus is on collecting and generating data to further our understanding of real-world problems” (Guest et al., 2013, p. 3). Instead, scholars and practitioners use the data they gather to “find ways to communicate recommendations and connect them to stakeholders related to the social issue” (Allen, 2017, p. 40). The main goal in applied research is not necessarily for generalizable results, but for “evidence-based findings to be immediately applicable to a particular context”
(Frey, 2018, p.105); this type of research addresses real world issues and uses data to do so. An applied study works toward addressing the lack of information about the field and adds to field wide data by “providing a macro view of curricula and programs” (Melonçon, 2022). This type of research also aids in finding “better solutions” for problems going forward.

Research within the field of technical and professional communication, specifically programmatic research, has long had an applied focus (Bridgeford, et al., 2014; Chong, 2016; Tillery & Nagelhout, 2015; Turner & Rose, 2022). Many of these examples, however, focus on single institution studies that are difficult to generalize. This project focused on solving a real problem, with real implications to the field at large, by providing a field wide, multi-institutional perspective. This study is based on data that has been observed and measured, or empirical data. I use the term empirical to describe the research done in this project. By using this term, I would like to clarify that I am using it to describe the type of data I am gathering. This is especially important to note since “programmatic research is typically data-driven in some way” (Melonçon et al., 2019, p.104), and field-wide programmatic data “combin[es] data and experiences from multiple institutions and programs” (Melonçon, 2022). Therefore, combining empirical research with an applied study combines the observed and measured data with the goal of “address[ing] real-world practical problems” (Frey, 2009, p. 31).

To address these practical problems, the field of communication, specifically scholars in applied communication, have proposed the use of practical theory “not a unitary concept with a singular fixed meaning,” but rather as “new forms of theory or theorizing practices intended to be more “useful” or “practical” than traditional theory” (Barge & Craig, 2009, p.55). In fact, merging applied studies with theory “became part and parcel of conducting high-quality applied communication scholarship” (Frey & Wolf, 2009, p. 32). Practical theory was “explicitly
designed to address practical problems and generate new possibilities for action” (Barge & Craig, 2009, p.55), and “applied communication research should test the usefulness of theoretical ideas, which themselves should be explicitly designed to be useful in practice—a central goal of practical theory” (Barge & Craig, 2009, p. 57). When explaining how to enact practical theory, Barge and Craig (2009) used the idea of “engaged reflection” (Barge & Craig, p. 59) to demonstrate one example of how practical theory can operate:

Engaged reflection “explicitly addresses the reflexive relationship between theory and practice—how each can inform the other—and, therefore, reflects an integration of practical and theoretical discourses. From this perspective, theory emerges from a systematic reflection on communicative practice in terms of the kinds of problems, dilemmas, and sites that people engage in the conduct of their lives and how they manage them” (Barge & Craig, 2009, p. 59).

While not categorized as a practical theory but working with the ideas behind engaged reflection and applied research, Melonçon and Schreiber (forthcoming) proposed a taxonomy for programmatic research questions to help TPC program administrators (PA’s) guide their own research. The authors call for more attention to the “types of questions TPC PAs often need to ask in their everyday work to support students and faculty and to provide information to the institution” (Melonçon & Schreiber, forthcoming, p. 6). In this taxonomy, Melonçon and Schreiber explain that programmatic research “serves both to support the growth and effective refinement of your program (evaluation) and to provide evidence for potential research questions to share with the field” (Melonçon & Schreiber, forthcoming, p. 2). To do this, they offer “precision by categorizing and explaining different types of questions TPC PAs and faculty should be asking about their programs and courses” (Melonçon & Schreiber, forthcoming, p. 6)
in order to provide an avenue towards evidence-based programmatic research. The four parts of their taxonomy are listed below:

- Description
- Practice
- Impact
- Inquiry

The first category in their taxonomy is Description, which is used to understand where programs start. Questions that fall into this category “look to gain information on current practices” (Melonçon & Schreiber, forthcoming, p. 7), and they typically include the word “what” “with the goal of gaining a baseline knowledge of programmatic features and practices that occur across institutions, including courses, programs” (Melonçon & Schreiber, forthcoming, p. 7). For example, the first two research questions in my study fall into this category: 1) What do the range of design courses look like in the field of TPC and 2) what are design courses teaching? The goal of both of these questions is to determine what information exists within the field to establish a baseline of information for the field. The goal of the second category, practice, is to “gain insights into what may be working or not and why programs may be doing things a certain way” (Melonçon & Schreiber, forthcoming, p. 8). It should be noted that, while similar, these types of questions are different from the previous category (description) in that these questions “start from some existing data and then seek to gather more and different information” (Melonçon & Schreiber, forthcoming, p. 8). The third category, impact, “show the impact of the TPC program on student learning and on the mission and strategic goals at the department, college, and institutional levels” (Melonçon & Schreiber, forthcoming, p. 9). The fourth and final category, inquiry, do not “examine or test an existing practice or process” but rather aims to
“reimagine or incorporate or develop new practices and approaches” (Melonçon & Schreiber, forthcoming, p. 10). For instance, my third research question falls into this category: What would an effective design course look like? This question seeks to develop a new approach to these types of courses for TPC. It should be noted that when using the term design in these research questions, it is interchangeable with visual communication².

In this study, I employed Melonçon and Schreiber’s (forthcoming) taxonomy as a framework to guide and to identify the goal of my questions, and then GRAM to begin to put these questions into practice at a field wide level. Used for program sustainability and modeled after improvement models in the workplace, the goal of Schreiber and Melonçon’s (2019) continuous improvement model (GRAM) is to “visualize work and the related process(es) that shape work” (p. 259). This continuous improvement model, named GRAM (Gather-Read-Analyze-Make), was created to be a model of sustainability at the programmatic level. In this process, actions that are typically assumed or hidden are formalized in order to make explicit and guide processes. For example, Schreiber and Melonçon use the example of reflection, explaining that “knowledge work like reflection is a related process that needs to be captured and recognized, not as an attempt to control work, but to formalize and guide it” (p. 259). At the program level, GRAM operates as a “systematic approach to analysis and action” (Schreiber & Melonçon, 2019, p. 262), which “unifies current programmatic practices (e.g., assessment, course objectives, program outcomes, curriculum mapping, stakeholder identification) by enabling the alignment of programmatic and course outcomes with field-wide curricular practices, while also making these practices and reflections visible in documentation” (Schreiber & Melonçon, 2019, p. 262). What this means is that by using this model, the processes that go

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² These two research questions were written before deciding to use the term “visual communication”
into creating and maintaining programs (and all that they include) are made transparent, so as to be repeated and replicated. Additionally, this model asks programs to align their practices so that they can better articulate the overall goals.

Schreiber and Melonçon (2019) note that GRAM can “help TPC PAs systematically reflect on their own programs and as importantly reflect with other peer programs” (p. 260). Therefore, in this study I will use Schreiber and Melonçon’s (2019) programmatic continuous improvement model GRAM (Gather-Read-Analyze-Make) (p. 253) as a way to understand what is occurring at the field level. By using this model, I hope that it will aid in helping the field of TPC reflect on and improve what they are currently doing.

![GRAM and Research Question Taxonomy](image)

*Figure 1. GRAM and Research Question Taxonomy*

As seen in figure 1, the taxonomy of research questions prompts action from GRAM. In this process, GRAM is an iterative process, where reflection of these key moves is woven throughout. Additionally, because reflection is so embedded into the process, it is important that it is included here (see figure 1). Schreiber and Melonçon (2019) note that not only is reflection an important part of this process, but that creating a sustainable culture requires “encourag[ing] all stakeholders to participate in making work processes apparent and visible and to explicitly
establish connections between processes” (p. 259). Below is a breakdown of how the steps of GRAM will function in this study and at a field wide level.

**Gather**

Defined as “the process of gathering together existing data about the program or exposing the lack of existing programmatic information and data” (Schreiber & Melonçon, 2019, p. 262), which is the first step in the process of GRAM. In this step, I will be gathering existing data on courses that fall into the category of visual communication. This data includes course descriptions and materials that are currently available.

**Read**

This step is described as “reading landscapes” (Schreiber & Melonçon, 2019, p. 262), which is a process by which you “obtain additional information to better understand the multiple perspectives” (Schreiber & Melonçon, 2019, p. 262). In the case of this study, the read step will include interviews with faculty and administrators to contextualize the course and institutional material gathered. This step is important because while there may be official documentation at the department or university level, faculty still have a large impact on how these courses are taught and, by extension, what the field is focusing on.

**Analyze**

This step involves putting together the gather and read steps—analyzing the information gathered to try to understand the whole picture. In this step, one of the most important pieces will be contextualizing the individual perspectives with the official material.

**Make**

This final step is defined as the “implementation of changes or the making adjustments to documentation or curricula or processes” (Schreiber & Melonçon, 2019, p. 263). This step,
which will occur much later in the discussion of the study, is where I will provide examples of how these courses should be set up and what the next steps for the field will be. Overall, the process of gathering, reading, analyzing, and making are all tied together with aspects of reflection. Below I will detail the specific methods used within this study in greater detail.

**Research questions**

My research focused on visual communication courses across the field of technical and professional communication (TPC): what they look like, what they are teaching, and what an effective course would look like. To answer these questions, I made sure to incorporate the context in which these courses operate, such as their institution, department, and those teaching these courses.

My research questions are as follows:

- What do the range of design courses look like in the field of TPC?
  - Document, information, and visual design courses
- Where does this course happen in degree?
  - How are these courses taught?
  - What are they categorized as?
- What are design courses teaching?
  - Are they teaching a tool or aspects of design?
  - Do they focus primarily on theory, practice, or a combination of both?
- What would an effective design course look like? Can a set of practices be developed for different types of design courses?

My goal in answering these questions was to help set a baseline for the field as to how these types of courses function within degree programs across the field. These questions allow for
deeper engagement with the course itself, along with the perspective of those who teach it. For the first question, it was important to gain information on the ways this type of course is named. This is because the name is often aligned with the focus of the course. The second and third questions try to understand how these courses are taught. This is necessary because instructors have their own ways of teaching and not all courses use the same curriculum or structure. The last question works to uncover not only what an effective course would look like, but how this reflects disciplinary and field wide values.

**Methods**

Throughout this study, the focus remains on the field wide patterns that emerge as the data is gathered. To answer the aforementioned research questions, I will take a field wide approach and gather data on the following areas:

- Institutional data (types of design courses, where they fall within a program, program outcomes)
- Course data (title, course descriptions, syllabi, course outcomes, required assignments)
- Instructor data (interviews with sample instructors)

By using multiple avenues of data collection, I am able to provide a thorough view of this research, as well as to “verify and validate the consistency and integrity of research findings” (Given, 2008, p.894). This project was reviewed by the University of South Florida Institutional Review Board PRO 00038267.

**Institutional data**

This data will be pulled from TechComm Programmatic central. The information on degree types was gathered as part of a larger, ongoing project and used with permission
(Melonçon & Henschel, 2013). In the field of technical and professional communication, there are only three self-enrolled databases which collect information on a variety of TPC programs: Association of Teachers of Technical Writing (ATTW); Council of Programs in Technical and Scientific Communication (CPTSC), and Society of Technical Communication (STC). Melonçon (2022) began a quasi-inter-rater related programmatic database (TechComm Programmatic Central).

I chose to use Melonçon’s database because the other databases within TPC were out of date and incomplete, mainly because the participants could self-enroll their information. Melonçon’s database continues to remain the most comprehensive list of TPC degree programs, and as of 2022 this list has more than 332 institutions and 685 degree programs (Melonçon, 2022). Each institution is referred to by its Carnegie classification identifier number to keep all participants and institutions anonymous. The Carnegie Basic Classification separates institutions into six categories:

“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)
Using the preset codes from TechComm Programmatic central as a starting point, I used each institution's course catalog to both verify and add additional courses that may have recently been updated. I began with 128 institutions, all ranging in classification level and program offerings. From this, I eliminated minors, certificates and master’s programs (N=97). I then extracted the name of every institution that offered a bachelor's degree in TPC or had one that was listed as a degree or emphasis (emph). These emphasis codes were included because they focused on a degree with a concentration, or emphasis. For example, a degree in English with a
concentration in professional communication. After these decisions, I was left with 83 institutions.

This list then became my initial list of institutions/ courses. Because the information gathered is publicly available via the course catalogs, there is no issue regarding the legitimacy of the data. Using only institutions with a TPC degree program, the data gathered will include:

- the most recent name of the course,
- the course code,
- the department it is housed in,
- the type of degree,
- whether the course is required (core vs elective),
- course descriptions,
- and the institution (see appendix relating to corpus).

Within the full dataset, there are two notable codes that need to be explored to avoid confusion: whether the course is required and the course name itself. When looking at the course requirement, the data was split into two areas depending on if the course was a requirement for the degree (i.e., a core course) or an elective. According to Melonçon & Henschel (2013) core courses are synonymous with required courses and “include those listed in the catalog as required to complete the degree” (p. 47). Elective courses, as the name suggests, are those listed as options for students to choose to complete their degree. These codes point to what the institution and, ideally, what the field values as core competencies of a TPC program.

Looking at the second set of codes, the data was split further to negotiate the differences on course name and content. For the purposes of this project, it was to understand the difference between the *viz* and *design* labels. Courses labeled as *design* focus on “designing documents and
information” (Melonçon & Henschel, 2013, p. 53) and these courses include a “mix of theories of design principles and hands on practice in creating different types of documents” (Melonçon & Henschel, 2013, p. 53). On the other hand, courses labeled as viz are theory courses. Some of these courses labeled design fall under one of these categories: information design, document design, or visual rhetoric (communication). I chose to focus on courses coded as design and viz because I am looking to see how different aspects of theory and practice play out in these courses. To reiterate, the term design in this study refers to specific courses that focus on aspects of design, either from a theory perspective and/or as part of a practice-based course. While visual rhetoric (and visual communication) is important, many courses named this focus solely on design and rhetorical theories and therefore do not allow for a rounded look at enacted praxis. I aim to not only examine courses where the practice and theory is obvious, but also those that may be obscured through vague naming practices. I chose to include both codes because they may have been coded as one category while having traits of another (coded as design/ practice with aspects of viz/ theory). My goal is to determine whether there truly is a distinction between the viz and design courses. In this stage, I use this data as a starting point to dive further into contextualizing these courses.

*Interviews*

Interviews, which are the second most used primary method in empirical research (Melonçon & St. Amant, 2019, p.142), are also the method that has “the most agreement, as well as the least problematic use” (Melonçon & St. Amant, 2019, p.143). While interviews generally include a smaller number of participants, and can vary in length, the depth of data gathered is the main focus. As Saldaña (2013) stated, “qualitative inquiry demands meticulous attention to language and deep reflection on the emergent patterns and meanings of human experience”
To do this well, the researcher conducting the interviews must be reflexive and flexible in their approach.

Interviews also offer an in-depth look at other data points, for example experiences gathered from participants will help to contextualize the intent behind the course materials received. The goal of conducting interviews in this study is to contextualize the data gathered from other areas (i.e., course materials), as well as to gain insight into the perspectives of those teaching these courses. Not only will this strengthen the understanding of specific institutions, but it will also allow for greater triangulation between methods.

The interviews will be semi-structured, which allows for greater communication between the interviewer and interviewee. In this stage, I used purposive sampling to select participants, and interviewed 25 faculty and administrators of full degree programs within TPC. The participants came from a variety of institutional classifications (as classified by the Carnegie classification system) to gain a representative sample of the field as a whole (see Table 2). Participants were informed of the goals of the project, as well as how data from their interviews would be used (anonymous, only identified through Carnegie classification number). The breakdown of interviewees and their institutions classification are listed below:
Table 2. Breakdown of the amount of interview participants from each institution level.

<table>
<thead>
<tr>
<th>Institution level</th>
<th># of interviewer participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1: Doctoral Universities—Very high research activity</td>
<td>9</td>
</tr>
<tr>
<td>R2: Doctoral Universities—High research activity</td>
<td>5</td>
</tr>
<tr>
<td>D/PU: Doctoral/Professional Universities</td>
<td>0</td>
</tr>
<tr>
<td>M1: Master's Colleges and Universities – Larger programs</td>
<td>5</td>
</tr>
<tr>
<td>M2: Master's Colleges and Universities – Medium programs</td>
<td>3</td>
</tr>
<tr>
<td>M3: Master’s Colleges and Universities – Smaller programs</td>
<td>1</td>
</tr>
<tr>
<td>BAC: Baccalaureate</td>
<td>0</td>
</tr>
</tbody>
</table>

Interviews were conducted virtually, while using an online tool (Otterai) to transcribe the conversation. No video or audio recording was collected. The questions asked within the interviews varied in order, depending on the conversation itself. The questions listed below are categorized between institutional and pedagogical data. In each interview, participants were asked a series of questions depending on their role within the institution/program. For example, program administrators were asked institutional questions, while faculty who primarily teach were asked program related questions about their course (see Appendix A).
**Course materials**

In this stage, I collected data to contextualize data gathered previously. In order to gather these materials, I requested them from interview participants and also sent out an email requesting the use of course materials. The materials requested included syllabi, major assignments, and any other materials that were pedagogically relevant. I received a total of 23 syllabi, and those who sent materials back included faculty and/ or administrators that have taught or are currently teaching a visual communication or related course.

Specific materials requested included:

- Syllabus
- Course goals and outcomes
- Assignments and/or major projects list and descriptions

Gathering these materials offers a look into what is being taught in real time within programs across the field. Additionally, pairing course materials and interviews with the data taken from TechComm Programmatic central provides greater context to individual programs. The faculty and administrators’ names and contact information were pulled from their online institution affiliation/ website.

**Approach to analysis**

While traditionally discourse analysis is linked with language and communication (Byrne, 2017), and would be expected with methods such as interviews, I opted to use a thematic analysis throughout the study. Thematic analysis “provides a comprehensive understanding of an overall experience of a communication event, series of interactions, or messages within a variety of communication contexts” (Allen, 2017, p.1757). When using this method for analysis, data are
“segmented, categorized, summarized, and reconstructed in a way that captures the important concepts within the data set” (Given, 208, p. 867).

For institutional data, I read through each course description of relevant visual communication courses and code it as either design or viz. Then, I looked for connections between the naming practices of the courses and how they are coded according to their course descriptions. This is just the first step to understanding where programs are housed and how the courses within the degree function, while offering a foundation to begin finding instructors and faculty from these various institutions to request course materials. This stage of data collection answers two of my main research questions: What does the range of design courses look like in the field of TPC and where does this course happen in degree?

After completing the interviews, I conducted a thematic analysis to gain both an overarching understanding of how their programs function along with insight into the nuances of how specific visual communication courses are taught. Additionally, I also considered the ways in which interviewees' responses are influenced by their position in the institution.

Finally, I used thematic analysis to analyze the data within course materials to identify common themes among assignment descriptions, course outcomes, and project types. The goal was to identify patterns between the materials of the course and how it is interpreted and implemented within the classroom. Additionally, how course materials have been shaped by individual instructors. These patterns were seen within the major assignment goals, the course outcomes listed on the syllabi, and what topics were covered in the course. These materials not only aid in understanding what is being taught within the course but, when paired with interviews from instructors who have taught this course, it can contextualize the information.
In using thematic analysis in this study, I am working to uncover both individual patterns within the data as well as what the data means within the larger picture of the field. By uncovering these themes, or patterns, they may help “explain phenomena or point out areas of needed improvement” (Allen, 2017, p.1757) within visual communication courses.

While uncovering these themes, I considered the data through the lens of GRAM where I focused on how theory and practice are included in course design as well as how individual instructors have incorporated reflection into their implementation of the course. The overall goal is to gather and analyze data-driven research on visual communication courses in TPC, while providing alternate options for course design.

Limitations

A strength of the study is the large amount of data gathered from a variety of institutions; not only does it provide a basis for the field in accounting for the types of visual communication related courses across the country, but it also gives a brief glimpse into how instructors are approaching these courses on their own. While this dataset is useful, it also has its limits because this discussion of data does not account for recent or future changes. Although this list represents the most recent and accurate total of institutions and courses (as of 2021-2022), this can shift as time passes. Additionally, when researching program development and classroom practices, it is impossible to capture every aspect of it due to its dynamic nature. Additionally, the syllabi collected focused only on what was required by each institution. Whether this was required or a personal choice is unknown, however this does impact the type of data gathered. In many cases, the syllabi did not include individualized instructor input.

Also, the codes used to distinguish between types of courses were taken from a previous study (Melonçon & Heschel, 2013). There are so many variables involved with how a course is
designed and implemented. Therefore, it could be suggested that the codes used within this study are limited. Melonçon and Henschel's (2013) codes were helpful in establishing a baseline for existing courses and remain useful when taking a broad view of the field, however they do not adequately reflect the intricacies of specific courses. While many course descriptions in this study can be separated between theory (viz) and practice (design), the way the courses are actually taught suggests a need for a much more blended approach to coding, that the original codes do not account for.

Conclusion

Overall, this mixed methods study answers the call for more research on TPC courses in degree programs (Melonçon & Henschel, 2013). This study takes an applied approach and uses empirical data gathered from three main areas: institutional data, course materials, and interviews. The quantitative data, which was taken from Melonçon’s (2022) TechComm Programmatic Central, was analyzed for themes within the original coding scheme. The qualitative data, which is based on the institutions and programs gathered from the aforementioned database, includes the interviews done with faculty as well as the course materials from those who have taught visual communication courses.

The use of these methods is complemented by the continuous improvement model at the field level. Using GRAM as the main framework not only offers an approach to collecting and analyzing data, but it also offers a model to understand how design courses could be developed. Moving forward, the next chapter looks at the findings from each dataset as well as patterns that emerged during the analysis.
Chapter 4: Findings

One of the strengths of the study is that a large amount of data was gathered, too much for this chapter alone. This is why this chapter consists of highlights from the data in order to present an overview. To answer my research questions effectively, I have gathered three sets of data to better contextualize the state of visual communication courses in the field. The first set was gathered using each institution's course catalog and included course prefix, number, name, description, and if it was a required course. The second set of data includes course materials collected from interviewees, as well as from an email request. The third set of data comes from interviews from program administrators and faculty who have taught visual communication courses. I analyzed the data using thematic analysis to account for codes as they arose throughout the study.

Additionally, one of my goals with GRAM was to productively reflect on the decisions made while gathering the data. While gathering institutional data, course data, and interview data I took time to reflect on how I was collecting it, how I was framing it in my notes, and how I was beginning to write about it. For instance, after realizing additional codes emerged from the interview data I went back and reread each transcript to make sure that I included any previous piece that fit within that code. Furthermore, this chapter is organized according to two of my main research questions:

- What do the range of design courses look like in the field of TPC?
- What are these courses teaching?
To answer these questions, I have included data from all three sources which are organized by themes that emerged during analysis. This is done to provide a well-rounded look at the state of visual communication courses within the field.

**What do the range of design courses look like in the field of TPC?**

Visual communication courses in TPC are, for the purposes of this project, separated into both theoretically driven and practice-based courses. Institutional data shows that the course descriptions fit with how the courses are named. For example, document design courses that are labeled as *design*, which tags them as a practice-based course, has practical applications. This course would not have a lot of theory but instead would allow students to use the concepts they've learned in a very hands-on way. On the other hand, those courses tagged as *víz*, are theoretically driven, which means they often have students look at visuals, pictures, any other visually focused documents and have them think about the choices that were made to construct them. Students are not creating documents themselves but identifying the principles that were used to create it.

To begin answering the questions of what these courses currently look like and how they are taught, I collected institutional data from 128 schools within the U.S. (see Table 3). I wanted to gain an understanding of how these courses were taught across many institutional levels.
Table 3. Number of courses from each institutional classification (all)

<table>
<thead>
<tr>
<th>Institution classification</th>
<th># of courses from each classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAC</td>
<td>6</td>
</tr>
<tr>
<td>M3</td>
<td>6</td>
</tr>
<tr>
<td>M2</td>
<td>9</td>
</tr>
<tr>
<td>M1</td>
<td>38</td>
</tr>
<tr>
<td>R</td>
<td>10</td>
</tr>
<tr>
<td>R2</td>
<td>25</td>
</tr>
<tr>
<td>R1</td>
<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>128</td>
</tr>
</tbody>
</table>

In the end, much of the data came from research-based institutions (R1-R3’s), which could be because of the amount of Technical and professional degree programs at that classification level. While table 1 includes institutions who have an undergraduate degree program, minor, undergraduate certificate, and emphasis degree \((\text{emph})\) I chose to focus solely on those with an undergraduate degree in TPC (or closely related, such as professional writing) or a degree with an emphasis in professional or technical writing or communication. This then led to a total of 84 schools (see table 4).
Table 4. Number of courses from each institutional classification (UG degree or emph)

<table>
<thead>
<tr>
<th>Institution classification</th>
<th># of courses from each classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAC</td>
<td>3</td>
</tr>
<tr>
<td>M3</td>
<td>2</td>
</tr>
<tr>
<td>M2</td>
<td>8</td>
</tr>
<tr>
<td>M1</td>
<td>23</td>
</tr>
<tr>
<td>R3</td>
<td>5</td>
</tr>
<tr>
<td>R2</td>
<td>19</td>
</tr>
<tr>
<td>R1</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
</tr>
</tbody>
</table>

**Design & viz courses**

Out of the 83 schools, I collected the course name, prefix, number, and description for courses relating to visual communication within technical and professional degree programs. I also collected additional information, such as where the course was within the degree program—as either a core or elective requirement. Then, using Melonçon and Henschel's (2013) coding scheme, I separated the courses into two categories: design and viz. Courses coded as design are a “mix of theories of design principles and hands-on practice in creating different types of documents” (2013, p. 53), while courses coded as viz focus on using rhetorical and design theories in analyses.

What differentiates the viz from the design course is a difference in the materials and how the course is set up. Specifically, courses that focused primarily on analysis of visuals and other visual materials and asked students to discuss design choices was coded as a viz course, meaning the main focus was on theory and analysis. Whereas a design course, for example those that
asked students to apply principles to produce something, focused on the practical application of theoretical principles and skills. While many of these courses include a mix of both theoretical and practical elements, courses are often split between those titled Visual Rhetoric (often coded as *viz*) and Document Design (often coded as *design*).

In the courses coded for the 83 institutions, there were 72 that fell into the *design* category, 62 coded as *viz*, and 19 courses that were coded as a mixture of both *design* and *viz*. Some schools had both design focused and visually focused courses, so there were a few instances of overlap. I used the information gathered from each institution to determine the top course names to see if they coincided with how they were coded, meaning did the course names match the course descriptions? Courses coded as design had Document Design as its most common title (table 3), while those coded as viz had Visual Rhetoric (table 4).

*Table 5. Top names for design coded courses.*

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Design</td>
<td>14</td>
</tr>
<tr>
<td>Document Design and Graphics</td>
<td>2</td>
</tr>
<tr>
<td>Information Design</td>
<td>2</td>
</tr>
<tr>
<td>Visual Technical Communication</td>
<td>2</td>
</tr>
</tbody>
</table>

*Table 6. Top names for viz coded courses.*

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Rhetoric</td>
<td>13</td>
</tr>
<tr>
<td>Visual Communication</td>
<td>6</td>
</tr>
<tr>
<td>Visual Technical Communication</td>
<td>2</td>
</tr>
<tr>
<td>Visual literacy</td>
<td>2</td>
</tr>
</tbody>
</table>
The most popular use of course names for theory driven courses fall into the visual rhetoric name, while those focused more on the practical application are labeled as document design. What is interesting to note is that when looking at the most common names, “Visual Technical Communication” is used to describe both types of courses. This could be for a few reasons, the first being that it is a broader term that encompasses both visual aspects as well as technical communication and is therefore more fitting. It could also be because of the institution or department itself, for example if there is already a document design/visual rhetoric course listed it would be necessary to come up with a new name. The last is a slight issue because courses may be created according to institutional standards, but they might not reflect what students actually need at that school, what the department needs (course wise), or the state of the field as a whole.

While this doesn't mean that these were the only titles used, but it does point to how the field views the separation of these specific course titles as well as what they should teach and value within the classroom. Courses related to the concept of visual communication include a range of approaches—all of which can be dependent on current trends in the field, personal preference, institutional decisions, and past course history. Though diverse, the requirement for courses [within technical and professional degree programs] in designing the visual aspects of technical communication has increased in importance in the last several years” (Melonçon & Henschel, 2013, p. 57). Regardless of the label, the way courses are named is an important aspect of understanding trends in the field and what is valued as a whole.

Core & elective courses

The first set of data includes the breakdown between those that were required (core) and those that were electives (table 5). While examining undergraduate catalogs from each
institution, the course was either listed as a requirement or as an elective. Depending on which category the course fell into, I coded it using the terms core or elective. This category was developed because it is important to see where courses are placed within degree programs. Additionally, what is labeled as a requirement, or core course, provides a window into what the program and department values, mirroring that of the field.

Table 7. Core vs elective courses.

<table>
<thead>
<tr>
<th></th>
<th>core</th>
<th>elective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coded as design</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>Coded as viz</td>
<td>16</td>
<td>23</td>
</tr>
</tbody>
</table>

This table shows that more degree programs had courses coded as design as requirements, rather than electives. Additionally, the theory-based courses (viz) were more often seen as elective courses. For example, in the courses coded as design, the course descriptions from the catalog focus on practice and production. A few descriptions are listed below:

- “Principles and strategies for effective document and information design, focusing on print media. Students design, produce, and evaluate documents for a variety of applications, such as instructional materials, brochures, newsletters, graphics, and tables.” (#35 R2)
- Documentation design: “Students will learn to plan, design, and create user documentation through systematic user analysis, task identification, effective writing, and effective visual design.” (#12 MS)

However, there were some that had different definitions than that of the university catalog, which were supplied by the instructor themselves. In one instance at an R1 institution, the descriptions convey slightly different meanings:
● Catalog description: “Document design in technical and professional communication.” (R1)

● Syllabus description: “In this course, students will learn about visual communication from several different perspectives: semiotics (or the study of signs), visual culture, graphic/principles of design, visualizing data, and rhetorical theory. This class strives to balance theory and practice. We’ll analyze the work that other designers have produced, and then you’ll produce your own designs by applying these theories and coming up with your own ideas.” (R1)

It should be noted that while individual instructors can (and do) offer additional information to their syllabus description to encourage students to take their course, it is unknown if this is the case in this example. For courses coded as viz, the descriptions mainly focus on understanding and applying theory, however in what capacity students are applying it is not determined. A few descriptions are listed below:

● “In this course, students will practice reading visuals as texts, as well as producing visuals that serve as effective texts by balancing ethos, pathos, and logos in ways persuasive to specific audiences. This course seeks to illuminate connections between contemporary visual practices and classical rhetorical theory.” (#12 MS)

● “Students analyze and synthesize the rhetorical principles by which visuals are produced and used to inform, educate, advocate, and persuade. Students also consider the cultural contents for visual communication, how visuals work with other forms of communication, and the ethical implications of how visuals are used for rhetorical purposes.” (#62 M1)
The course is “an introduction to visual communication using perceptual, physiological, psychological, cultural, and semiotic concepts. The course focuses on visual awareness and processing as key elements in effective communication.” (#42 R2)

Identifying trends in the larger corpus of institutional data is helpful in understanding where instructors are starting when looking at these courses, because many instructors do not create the courses (catalog descriptions, SLO’s) themselves. This data also does not account for the size of the programs themselves—for example, a program that may have a requirement of three elective courses, with the viz course listed as one of them. This means that while not officially required, students often end up taking this course regularly.

What's important to note about the findings of this study is that they reflect not only the perspective of a variety of instructors and faculty, but also allow for a view at what the field values as well. When looking at course names, courses tend to focus on the design aspect or the rhetorical aspect (document design vs visual rhetoric) which points at what their class will cover (even if the instructor includes additional material).

**What are these courses teaching?**

While these courses range in how they are described and designed at the institutional level, it was important to gain context for how these courses were actually working. After sending out requests for course materials to instructors and faculty across the field (n=92), I received 23 responses. The most common forms of course materials I received were syllabi, therefore I used this to identify some common trends among institutions using student learning outcomes, types of assignments, and course descriptions (if they were different from the catalog description). I also used my interview questions to code participants' responses, and then analyzed the individual themes within each code. For example, while looking through each
transcript I highlighted the questions that discussed student learning outcomes, feedback, reflection, challenges, and theory/practice. Then, because technology emerged as an additional theme, I added it to my list of codes. Finally, within each code I read through and made notes about patterns. For instance, in the feedback code I noticed there were responses that mentioned the same few forms of feedback (group critique and individual feedback), so this was noted as a place to expand on further. By gathering this data from instructors and faculty, I was able to answer one of my main research questions: What are these courses teaching?

What follows are results from both a thematic analysis of course materials as well as interview responses. This data is organized according to how topics (codes) were being approached in the course (ex. student learning outcomes, feedback, reflection, technology, theory/practice) and ends with overall challenges faced by instructors across the range of institutions. This was done to move towards contextualizing the institutional data for the field as a whole.

**Student learning outcomes**

This section focuses on student learning outcomes found in course syllabi, with the goal of identifying what the courses are teaching and how they align with the projects in the course. Based on the responses from participants, there were some difficulties because of how the syllabi were submitted. For example, some did not include course schedules, major assignments, or readings. While this can be for a number of reasons (such as the course is not yet fully developed, the institution specific guidelines surrounding syllabus creation, or personal preference of the participant), the fact remains that it was difficult to gain as broad of an understanding as I had hoped.
When looking at the trends within the student learning outcomes in course syllabi, it could be seen that there were some common outcomes that directed these courses, such as a focus on theory. Some of these outcomes focused on specific skills and provided language to define these skills. Many, however, were embedded\(^3\), meaning they focused on more than one goal. To identify these trends, I gathered all of the outcomes from the course materials and separated them into categories depending on their specific focus. For example, the outcome “Analyze visual texts” was labeled as theory, while “Create visual arguments” was labeled as practice (BAC). Together, the outcomes from various visual communication courses from 18 institutions were separated into the following categories (see Table 6). The goal of the categorization of these outcomes was not to discover how many fell into which category, but to get a sense of what topics were being highlighted as overall course goals.

Table 8. SLO categories from course materials

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>collaboration</td>
<td>4</td>
</tr>
<tr>
<td>ethics</td>
<td>1</td>
</tr>
<tr>
<td>genre</td>
<td>2</td>
</tr>
<tr>
<td>practice</td>
<td>10</td>
</tr>
<tr>
<td>research</td>
<td>1</td>
</tr>
<tr>
<td>rhetoric (rhetorical principles)</td>
<td>22</td>
</tr>
<tr>
<td>technology</td>
<td>6</td>
</tr>
<tr>
<td>theory (design principles)</td>
<td>26</td>
</tr>
<tr>
<td>writing</td>
<td>7</td>
</tr>
</tbody>
</table>

\(^3\) Explanation on impact of embedded outcomes in chapter 5.
I chose to break apart the theoretically focused outcomes because there was a mix of both rhetorical and design theory. Both played an important role in the courses; for example visual rhetoric courses have outcomes addressing theory in reference to principles of rhetorical theory such as: “Demonstrate an understanding of the rhetorical principles by which visuals are produced and used to inform, educate, advocate, and persuade.” (#62 M1). Whereas others include an outcome strictly focused on design principles as the driving theory behind their course. For example, “Apply knowledge of best practices in using visual components in your works, e.g., CRAP and Gestalt design principles and accessibility” (#103 M2). While these theories do overlap in some ways, they are not the same and should each be included. For example, (#103 M2) has outcomes that address both design and rhetorical principles. One outcome reads “Apply knowledge of best practices in using visual components in your works, e.g., CRAP and Gestalt design principles and accessibility” (design), while another reads “Explain and justify your topic and design choices in terms of your target audience” (viz).

While many courses included rhetorical theory and design theory as core outcomes, few included outcomes on ethics, collaboration, or technology. Collaboration was included as an aspect of project management or peer feedback, and this focus on collaboration as project management is most often seen with client projects. For example, an R2 institution has an outcome for a Visual Technical Communication course that reads “You will apply project management skills” which corresponds to their group project centered on a user manual for a client. Interestingly, when analyzing the full syllabus and assignment descriptions, there were many that actually required the use of a particular technology. When they did mention technology, they used it as a means to design documents as seen in this outcome: “Use
appropriate technologies to organize, present, and communicate information to address a range of audiences, purposes, and genres” (M1).

Additionally, when looking at the course materials as a whole, there was a disconnect between the assignment types and the outcomes for the course itself. Take the course outcomes for a visual communication course:

- “Analyze photographs, websites, films, and other visual texts.
- Write critical and reflective essays regarding visual communication and culture.
- Discuss scholarly literature focusing on visual communication and visual culture.
- Develop an original project related to visual communication.” (R2)

From these outcomes, it can be assumed that the students within this course will spend the majority of their time analyzing, reading, and writing about visual texts, rather than practicing these concepts. One of the assignments to get students to these outcomes is a critical analysis essay of a photo or other visual. The second project asks students to “produc[e] a visual artifact and writ[e] an explanation of the creative process behind it, addressing [their] intentions as a creator, the possible meanings the project can evoke, and the potential audience for it.” For the first project, students have been prepared to simply analyze what is in front of them, however for the second, students are asked to produce their own visual artifact. In what way have the students been set up to be able to do this?

Similarly can be said for the outcomes and assignments at this R1 example:

- Design with users in mind
- Discuss how the differences in design affect your message
- Apply and discuss principles of design
- Demonstrate an awareness and understanding of the impact of visual rhetoric on society
Some of the assignments include having students complete smaller design tasks in response to a reading, creating a flyer and infographic for a specific purpose and audience, revising a document based on usability, and writing a recommendation report responding to a local design challenge. Based on these assignments, one could assume that students will be learning principles of design (in addition to applying them) or learning rhetorical or design theories to help them create these documents, but students should be able to know what they're learning in a course. While some of the outcomes gathered in the course materials are aligned with the types of assignments, the outcomes are not clear of what assignments should be doing and, as a result, what students should be learning.

**Types of assignments**

Originally, this section stemmed from an interview question focusing on how instructors frame their courses. It was my intent that the questions tease out how instructors approach both theory and practice in their classrooms; however, this was not the way it was understood. This question was found to be a difficult one to answer and often led to participants responding with a focus on their specific assignment choices, rather than reflecting on their overall approach. Their responses, in addition to trends found within the syllabi collected, were the reason this section emerged. It should be noted that many of the syllabi collected only had the university required information present, instead of the individual changes made by instructors, which could be seen as a limitation going forward.

The first section I will describe are the assignment trends found within syllabi. Out of the 23 syllabi gathered, 6 courses fell into design code, while 17 were coded as viz. Based on the syllabi course descriptions, the materials gathered came primarily from viz courses, or courses
that focused primarily on theory. Using the course materials collected (n=23), I have broken down the most common assignments:

- Individual design tasks (flyers, infographics, data visualizations, comics)
- Analysis papers
- Client projects (also used as a collaborative project)

Interestingly enough, although the majority of materials gathered were from courses coded as viz, many of the assignments highlighted the ability to practice creating as their main goal.

Based on the available materials, individual design tasks are a large portion of the course assignments. These include either a redesign of an already existing document or the creation of a new one. These tasks vary in length and were used as both major course assignments and small class exercises. For instance, one participant explained that their class does a “bad design with recommendation” assignment, which asks students to “analyze what aspects of the design are not working, what weaknesses exist and take on the persona or the voice of a consultant”. This instructor explained that the goal of this assignment is not to just tear apart the original design, but to “talk about it in a way as if [they’re] actually providing a recommendation to the author or creator whoever owns the document” (Anonymous participant 12, 2022, interview). Another participant had students do mini design tasks, rather than reading responses, where students design something and explain the “theoretical underpinnings behind their decisions” (Anonymous participant 12, 2022, interview). These design tasks focused students’ attention on specific areas of design to practice their skills, such as designing a page with alignment or color choice in mind.

Additionally, many participants included an analysis component to assignments, asking students to “justify [their] choices conceptually” (Anonymous participant 8, 2022, interview).
This is seen especially in classroom exercises where students are able to have discussions about specific design principles used. For example, some instructors have students annotate a website or mobile device screen on their own (Anonymous participant 2, 2022, interview), while others ask students to identify principles within a document (contrast, proximity, alignment, and repetition) during classroom discussion (Anonymous participant 12, 2022, interview). However, some instructors still have students complete a formal analysis. This is seen in one participant who has students analyze an article focusing on the theoretical background of principles discussed in class (design or rhetorically based). In this assignment, students wrote one to two pages summarizing the article's key points, selecting a passage to do a close reading, and then creating discussion questions for the class (Anonymous participant 12, 2022, interview).

Client projects are another assignment that are frequently seen within both theory and practice-based courses. Client projects are those that “require students to write documents for an audience other than their writing instructor” (Kastman Breuch, 2001, p. 193). The goal of these assignments is to “have [students] be able to manage projects, working with the client, not just doing something for themselves” (Hovde interview). What is important to note is that client projects can take shape in different ways. For example, they can also be made up scenarios posed to the student to get them to think about writing and creating documents for different purposes and audiences. For instance, one participant said that they have students complete a redesign assignment and create a mockup to pitch to an imaginary client (Anonymous participant 16, 2022, interview). These types of assignments can also have students be involved with a real-life client, which is exactly what another participant had their class do, explaining that “client stuff is the most interesting…you do have a real audience and you're working with a real purpose that you have to attend to” (Anonymous participant 8, 2022, interview). Specifically, during a
previous semester their class worked with a nonprofit organization to create and redesign branding materials, such as a logo and website (Anonymous participant 8, 2022, interview). Another participant explained that painting students “with nonprofits, local businesses...startups” allows students to have real world stakes to their assignment.

**Approach to feedback & metacognitive assignments**

According to participating faculty, there are many approaches to feedback within these courses. Much of this feedback focused on the design or rhetorical principles behind the task, rather than specific writing being done. Some instructors gave traditional written feedback, while others provided audio feedback. Regardless of the method of feedback, interview participants sought to get students to understand their decision-making process when it comes to their designs—to “ask them questions to kind of prompt them to talk more about the theoretical underpinnings behind their decision” (Anonymous participant 2 (R1), interview, 2022), rather than asking surface level questions of if they personally liked the design or not. This focus on communicating the rationale behind decisions is unsurprising, especially since communication is a key part of professional and technical communication programs.

Additionally, having students work with peers was a popular method. In this, instructors take a few different approaches: peer to peer, collaborative workshop, or group critique. Peer to peer is individual feedback given in pairs, while a collaborative workshop has students review each other's work together as a group, often with guiding review questions. Group critique, according to participants, functions in one of two ways: structured small group critique or class wide critique. Small groups start by giving the original designer time to explain or justify their choices. Then, their group members provide notes on what is good or what can be improved with the design. One participant prompts students to get them to think deeper about the design to give
productive feedback: "What do you like about it? What do you not like? What works? What doesn't work? What do you think the designer was trying to get across through this design?" (Anonymous participant 1 (R1), interview, 2022). Class wide critique, however, allows the entire class (including the instructor) to offer feedback, often similar to the small group notes of what is working and what can be improved. While all forms of peer feedback, group critique was by far the most popular among interview participants.

What is notable is that in many cases, participants linked their way of getting students to give feedback with the way they engaged metacognitively, which points to an interesting aspect of design courses. Many interview participants claimed that there is usually an element where students consider what they are learning within the course, but where it was (and in connection to what type of project) varied. Some included an assignment at the end of projects to have students justify their decisions, while others included a formal reflection at the end of the course to have students think back on the concepts learned within the course (rather than the course structure). For example, instructors wanted students to articulate the theory and principles behind their decisions, rather than a step by step of how they designed the document. One participant explained that, rather than a formal assignment, they included “small, reflective spaces” in their class (Anonymous participant 3 (R1), 2022, interview). They explained that they “build more reflective conversational moments in the context of the class and other spaces” for students. For example, “identif[ing] a couple of pieces [students] developed in class and talk about how [they] would or wouldn't revise them and draft an annotation for [their] professional portfolio” (Anonymous participant 3 (R1). 2022, interview). This aspect of reflecting on decisions or justifying required students to think about their own learning, and by extension, how they can apply this in future contexts.
Challenges

During interviews, participants noted that they often had issues or challenges arise during course creation or while teaching the course. It was because of this continued theme that I decided to include the code “challenges”. One of the challenges participants noted was that of student engagement. Those interviewed expressed frustration with the lack of student motivation or interest in the course itself, and therefore experienced struggles when trying to engage the class as a whole. Additionally, some participants found that how students approached and were able to understand some of the course content also posed challenges. Specifically, the outcomes used to explain material and assignments, as well as the technology used in the course. This section will detail challenges that emerged from data collection, which focuses on various challenges interview participants had when teaching these courses.

Student engagement

One challenge was the motivation of the students themselves. This includes both the interest students have in the course content, as well as the knowledge students bring to the course to help them stay motivated throughout the semester. It is also important to note that the interpretation of “motivated student” varies greatly depending on various factors (attitude, stress level, explanation of course material, etc.). Student interest in the course, according to participant interviews, can depend greatly on who makes up the course. In many cases, there are students from a variety of majors and interests that take the course. For example, one participant explained that students coming from different majors “creates the challenge of getting everybody tuned into the same content” (Anonymous participant 6 (R2), 2022, interview). Students that do not fall into the PTC or TC major area are often included in these core and elective courses, which leads to a variety of student goals and knowledge bases that must be considered when
designing and facilitating these courses. Another interviewee expressed that, in an adjoining department, “students are really good because they take courses in sequence…they remember tools, they're able to learn things quickly, because it's built into the program” whereas in the technical communication major “a lot of students really struggle to understand tools” (Anonymous participant 4 (R2), 2022, interview).

Additionally, the expertise students bring to the course, according to participant interviews, impacts their continued motivation. According to one interviewee, it’s “hard to get students to think creatively, like outside of the box” (Anonymous participant 7 (M2), 2022, interview). For example, students who have extensive experience using Adobe InDesign might find a course on visual/document creation easier and more engaging because they do not have to add the extra weight of learning the tool itself. Students often come into courses with limited knowledge of the content, which is why it is so important to make clear the goals of the course. For example, sometimes students enter the class without a rhetorical foundation (unlike their PTC/TC counterparts); “half of my class sometimes is [made up of] graphic design people and they have a different idea about things. One is [that] they like aesthetics, a lot more than they like rhetoric…so I get a lot of things that look pretty but don't serve any rhetorical purpose” (Anonymous participant 8 (M1), 2022, interview). Furthermore, through analysis of course materials, it is clear that the goals and outcomes of many courses were unclear. Because of this, students do not actually know what they are expected to know. One participant explained the benefit of acknowledging varying levels of experience and comfort with the material: “it's okay to have a spectrum of different levels of experience coming into a course like this and that what they have to offer is valuable” (Anonymous participant 9 (M1), 2022, interview).
Technology

Technology is another theme, specifically the use of technology by students. There are a few questions that participants circled around with regards to technology, including:

- How are design tools included in the course?
- Should these tools be explicitly taught?
- How do you balance teaching the tool with everything else that needs to be covered in the course?
- How to justify teaching a specific tool when students might not be able to access it (either within the course or later on in their jobs)?

Participants explained that technology was a challenge in and of itself, and that many of their students enrolled in a technical communication major “struggle to understand tools…they don't always understand that they need to learn to teach themselves things” (Anonymous participant 4 (R2), 2022, interview). In addition to asking questions to problem solve, a lot of the technology and software available “makes so many design decisions for you” (Anonymous participant 2 (R1), 2022, interview). Other questions surrounding technology focus on the tools used, such as Microsoft Word or Adobe Suite. One instructor asked, do you “focus on a single technology or kind of have students understand the concepts behind them” (Anonymous participant 5, (R2), 2022, interview). This question highlights the struggle of teaching courses that rely so heavily on technology, but either not having the expertise needed or the support instruction for students to help them understand the tool itself.

Additionally, the challenge of access, specifically access to technology in all of its forms. Across the board, interviewees notes that navigating issues of access are central to how they operate their courses, whether it’s “...accessibility, continued access to high end software, access
to software all, even if you can get the software, the students don't necessarily have the hardware to run it on” (Anonymous participant 10 (R1), 2022, interview). Some participants note that they “don't have the money and the tools that they should have” (Anonymous participant 11 (M3), 2022, interview). Because of these issues of access, it was expressed that “[instructors] have to balance [their] expectations for the students to design certain things with technological tools that they have available to them” (Anonymous participant 11 (M3), 2022, interview).

However, now that challenges have been identified, what do we do with this information? For one, it means looking at course content and design and how it appears to students. For example, asking questions such as “Do these courses appeal to students? Do they have a clear design and connection to their other courses and careers?” If the answer is no, then students may not be motivated to take or engage with the course. Access to technology should also be considered—we must not only think through the technology we’re asking students to use, but our own understanding of it as well. Overall, critically looking at the way courses are built and how they serve students can mitigate many of these challenges.

**Conclusion**

When trying to answer the main questions of this study, it is difficult to include every piece of data. Specifically, with regards to the question of what the range of visual communication courses within TPC look like, there are a few things to note. The first, is understanding the ways courses are named and how these names can be intentional depending on the circumstances. Factors such as institutional policies, departmental input, and personal preference can all play a part in impacting course names. Secondly, the breakdown of core and elective courses provide insight as to what the field values. Because there are more visual communication courses that operate as electives, it can be suggested that these are not widely
seen as crucial courses to a degree program. Additionally, out of the courses that operate as electives the majority of them are design coded courses, meaning that they have more of a practice focus, rather than theory.

Because the data was organized starting with approaches and ending with challenges, it offers a throughline which answers the question of what these courses are teaching. Therefore, the answer to the question of what visual communication courses within TPC are teaching, can be answered by understanding the types of assignments that are commonly paired with instructors' approaches to feedback, reflection, student learning outcomes, technology, theory and practice. It is also key to understand their challenges to the course as well.

In the next chapter, I will use the data from this chapter to expand on the brief discussion of student learning outcomes and how theory and practice function within visual communication courses. To do this, I will use the topics discussed in this chapter to provide a revised visual communication course. This revised visual communication course will focus on key areas, such as SLO’s and main assignments, and will be expanded on in chapter 5.
Chapter 5: Discussion

Using the findings from chapter 4, this chapter will expand on the data from the previous chapter and provide a discussion of the student learning outcomes (SLO’s), technology, and how theory and practice operate within these courses. By using Schreiber and Melonçon’s (2019) continuous improvement model GRAM (Gather-Read-Analyze-Make), my hope is to understand what is occurring at the field level within technical and professional communication. After gathering all of the data, it is now time to expand on it and analyze the key pieces. I begin by analyzing some of the data that came directly out of interview questions, as well as themes that emerged through these conversations and the course materials gathered. In GRAM, since reflection is embedded into the process from the beginning, I consider this data before moving on to the final step: make. In this step, I propose what an effective visual communication course would look like based on the overall findings. It is through his final step that this chapter answers another main question of this project: What would an effective design course look like?

SLO’s

There has been an ongoing discussion as it relates to student learning outcomes within the field of TPC. Recently, there have been a few who have begun to look at outcomes across the field to try to understand what the values are across institutions (Clegg et al., 2021; Thominet, 2022; Griffith et al., 2022). The focus on outcomes within this project occurred because of a lack of alignment between course goals and assignments. Many of the course outcomes listed in the syllabi were either too broad to be useful or there were too many mixed together. The outcomes
gathered from course syllabi focused on specific skills, such as collaboration, technology use, and specific design or rhetorical skills. As noted in chapter 4, while looking through all of the syllabi, the course outcomes were gathered and separated into categories depending on their specific focus. While these skills as a focus are not bad, they need to be clear and purposeful for the outcome to be effective.

Clear and purposeful learning outcomes are a way to uncover the goals of the course and, by extension, help students understand their progression within the larger concepts of the course. This then helps to remove the barriers that are often built into courses—whether intentional or not. Outcomes should be used to both guide student learning and to uncover the concepts being taught. To do this, the SLO’s must be an important aspect of course design. As Clegg et al. (2021) noted, outcomes need to be student facing in order to be successful, which not only means a focus in the way they are written, but how they are presented and explained to students as well.

A clear and purposeful outcome is one that begins with an actionable, strong verb and matches what students will actually be doing in the course. It would also, ideally, match the overall program outcomes so students are able to see how the courses they take help them progress. For example, outcomes that begin with words such as “demonstrate” or “understand” are not clear because how are those words actually measured? How can students show that they are actually meeting these outcomes? Take the outcome from a ML institution: “Demonstrate an understanding of the cultural contexts and the social and ethical implications of how visuals are used for rhetorical purposes”. How would you evaluate this outcome? The outcome is too subjective for students to be able to understand what they’re supposed to do, and too vague for instructors to evaluate them. A better version of this outcome would split the original into two and focus on the separate skills, in addition to changing the beginning verb to a more concrete
word within the hierarchy\textsuperscript{4}. Therefore, the new outcomes would read: analyze the rhetorical situation within a visual context and examine the cultural contexts, as well as the social and ethical implications of visual design.

Another way to help outcomes be clear and purposeful is to focus on one goal. Many of the outcomes collected from course materials were embedded, meaning they were “single outcome statements that include more than one outcome” (Clegg et al., 2021, p. 4). An example of this is below:

“Students will identify the main characteristics of effective, reader-centered technical writing. Students will identify and implement the elements of the writing process, including defining objectives; planning communications for readers’ information needs; creating effective persuasive strategies; conducting research; drafting, evaluating, and revising paragraphs, sections, and chapters of work-world documents. Students will define and identify audience types and describe means of shaping readers’ attitudes.”

(#86 M1)

This outcome focuses on multiple goals and asks students to not only identify but define and implement strategies for the rhetorical situation as well as their own writing process. Including all of these expectations within one outcome is not useful because it makes it difficult for students to understand what is expected of them. Additionally, outcomes should reflect what is being taught in the course. For instance, in a course that balances both theory and practice the outcome should connect to how the course will do that. The example below provides a look at

\textsuperscript{4} Referring to the hierarchy of Bloom’s Taxonomy.
the outcomes for a Document Design course at an R1 (#32) institution, which mix both design and rhetorical theories:

- “Design with users in mind
- Discuss how the differences in design affect your message
- Apply and discuss principles of design
- Demonstrate an awareness and understanding of the impact of visual rhetoric on society”

The first outcome, “design with users in mind”, is great—it points students towards producing something that puts the user at the center. In this case, one of the assignments in the course is a usability test and report, which means this first outcome clearly reflects one of the course assignments. The second and third outcomes focus on design principles, which is a large portion of the course. Specifically, this course has design responses and discussions instead of reading responses, so these outcomes align with what the course is asking students to do. The final outcome, “Demonstrate an awareness and understanding of the impact of visual rhetoric on society”, is a bit unclear compared to the previous two. The use of the word demonstrate does not offer any concrete action for the students; is writing about it in a reflection enough or must they produce something with these concepts in mind? Words such as “critique” or “synthesize” offer an actionable goal. If carefully thought through and constructed, SLO’s can “help guide faculty and students in knowing what the course does” (Griffith et al., 2022, p. 15). Not only does this make it easier for students to understand, but using the SLO’s as a guide provides an avenue for them to “better articulate what they know and what they can do with writing and communication skills” (Griffith et al., 2022, p. 15).
On a final note, what was interesting about the outcomes listed in the course syllabi, was that there was little to no focus on ethics. This was similar to the findings of Griffith et al. (2022), which found that only 28% (n=22) of institutions had an outcome that focused on ethics. In fact, out of the syllabi gathered, only one institution (#62 M1) had an outcome that explicitly focused on ethics: “Demonstrate an understanding of the cultural contexts and the social and ethical implications of how visuals are used for rhetorical purposes”. Now, these are not courses with a specific ethical focus, but many aspects of design are intertwined with ethics and ethical decision making. As DeTora and Hinson (2022) noted, “as the number and type of people expected to navigate visual rhetoric have increased, ethical questions, and ethiotic ones, have increased in complexity” (p. 3), and so it is important to examine this complexity. Topics such as accessible design or technology usage (and many more) are all important when teaching students design considerations, and when writing outcomes it would be useful to include a focus on the ethical implications that are a part of design decisions.

Of course, it should be noted that how outcomes are written and developed are not always in the control of the instructor. While there are some courses being taught that are standardized by the department (and therefore more difficult to change the course goals), there are more courses that are flexible and can be updated to reflect what the course focuses on. What the takeaway should be is that not only should care and attention be taken when writing these from the start, but there should also be consistent reflection into if and how they should be updated as the years pass.

**Technology**

Technology is often assumed to be an easy thing for students to learn, or pick up, because of their age or generation's affinity to technology. Many scholars have written on the importance
of technological literacy (Self, 1999; Breuch, 2002; Hovde et al., 2017; Brumberger et al., 2013) and the concept of a “digital native” (Brumberger, 2011). From this study, it is clear that not only does technology, specifically technology used within a visual communication course, become a challenging aspect of the course for students, but it also becomes an issue for faculty as well. Whether or not students have an innate ability to learn new tech is not the focus; what is the focus is the difficulties that arise when including specific software and programs in a course that become barriers to learning. According to Brumberger et al. (2013), it is even more pressing to be both a “rhetorically and technologically skilled communicator” and nowhere is this more true than “in the area of visual communication, which is an integral part of both print and digital media” (p. 173). Technology was an unexpected area that came out of this study—both with how outcomes were written to include a focus on technology, as well as how interviews spoke about its use. For example, one outcome read “You will use and understand relevant software for creating visual technical communication” (#37 R2). What is considered the industry standard? And for which industry? Many participants claimed that Adobe tools were standard, whereas others focused on Microsoft Word, but this just highlights the disconnect between certain industry practice and personal expertise and opinion. Brumberger et al. (2013) describes this disconnect as it relates to production tools:

“...within many visual communication courses—particularly those with a production component (e.g., document design)—the end results of students’ thinking, collaborating, drafting, and revising are typically mediated by proprietary software packages, such as Adobe’s Creative Suite. This situation again raises the sticky question of whether and how we should teach the software tools explicitly as course content” (p.173)
Focusing on “industry standard software” is not necessarily a bad thing, however it does lead to the question of if we are expanding students' technological literacy or just teaching them how to use software? Many students have no technological literacy to begin with. In order for students to be technologically literate they must “demonstrate both a conceptual understanding of technology tools and an understanding of the ethical, social, and political aspects of those tools” (Brumberger et al., 2013, p. 179). According to Northcut and Brumberger (2010), technological literacy means “having not only the skills to execute a design via the computer, but also the understanding of why the technology is used, how it supports the communication task, and how it shapes the final product” (p. 461). This issue is complicated when you consider that many faculty are unsure of these tools themselves; “To teach technological literacy for technical communicators, faculty members need to understand its complexities” (Hovde & Renguette, 2017, p. 396). In this case, it would be beneficial for both students and faculty to have resources to be able to learn and experiment with this technology. In the case of students, this can be done by facilitating spaces for the class to share issues and solutions and providing them with external materials and resources that can help them learn. Another option would be incorporating credit for students to work through learning these tools as part of the class, but outside of the classroom. For example, one project could be a look at how to use a graphics editor, such as GIMP or Photoshop. Students complete this on their own time but have credit for working through this as they would a project. It’s key to help students learn how to ask questions to solve problems, not only to get answers, but to develop their ability to locate answers about systems they may not be familiar with. As noted by Blythe et al. (2014), “by knowing how to use an image editing program, [students] feel more equipped to participate fully in that discourse community and fulfill, to a greater extent, the goals they have for communicating a diverse range
of content” (p. 282). These classes must teach students how to find answers and work through problems, rather than instructions for specific tools.

Access was another consideration for interviewees when discussing technology. This led to the question: how can students be expected to use and understand different tools if they do not have access to them? There's also something to be said for teaching these tools to students who may not use them in their jobs, focusing so much on specifics in a course that has so much more in it. For example, while some designers use Photoshop and InDesign as a rule, teaching students these specific tools will only help them if that is the tool they use in their future jobs. Many departments and universities either do not have the budget or do not wish to allocate funds towards expensive software. Additionally, it becomes an issue for students who are in tight spaces financially—they cannot afford to participate. When students are able to easily access the technology, this helps to mitigate financial issues that arise—both for the department and student. Providing workarounds can be a way to help students understand how tools can be similar but have different interfaces. One such workaround would be to introduce the use of simple, free tools into the class, and giving students the option to choose which tool to use. Some of these technologies include the GNU Image Manipulation Program (GIMP), Canva, and Adobe Spark (a free version of Adobe Illustrator). This not only allows the student to take initiative with their learning, but it also provides more equitable ways of incorporating technology into the classroom.

Theory and practice

In addition to the institutional data and information gathered from syllabi, it is just as important to understand the perspective of the faculty teaching these courses. During interviews, the question of how instructors viewed the role of theory within visual communication courses,
which led to some interesting responses. While asking this question, I felt as though I should already know the answer—as if it was obvious. This was not because of my own understanding, but of the way participants spoke about the question. Participants would shift the focus from how they personally viewed the concepts of theory and practice operating within the course, to how their assignments fit into either category. Now, this disconnect could have absolutely been a result of my interviewing skills. However, it was interesting to see that across the board participants focused on assignment design, rather than their personal approach to the concepts as a whole.

Some participants focused more on the practical aspects of the course, explaining that they saw value in connecting students to things they will be expected to do in their future careers; "My goal as an instructor is to make everything that I can applicable…if something doesn't seem to have a practical application, I usually get rid of that" (Anonymous participant 7 (M2), 2022, interview). Others talked about how they value a blended approach to theory and practice: “I try to integrate both because I don't think you can just jump into the like practice without having any understanding of why you're doing what you're doing” (Anonymous participant 12 (BAC), 2022, interview). Some interviewees had similar thoughts on how to blend both theory and practice. For instance, one explained their approach focused on theory as “little T/ engaged theory” (Anonymous participant 3 (R1), 2022, interview), which focuses on theory as asking “how can we read theoretical principles and acknowledge the ways that they function and they work and why they exist, but also use them as a lever to do our own work?” (Anonymous participant 3 (R1), 2022, interview). This instructor highlighted the importance of finding nuggets students could grasp hold of to “take and put in their pockets and bring to conversations with humans and engage in their design practices in the work that they do” and that “they don't
have to read a heavy theory to do that” (Anonymous participant 3 (R1), 2022, interview).

As I would talk with participants, I began to see that this disconnect could have stemmed from their own reluctance to vocalize their answer. Miller's (1989) description of the relationship between “prescription and description” as being the difference between how theory and practice is used in different areas versus how it should be used is an ongoing tension between practitioners and scholars. It could be that this tension adds to the participants' reluctance to answer questions directly referring to this field wide discussion. Instructors, for the most part, had strong ideas about the concepts of theory and practice as it relates to their own courses. Most of this came from knowledge they have gained through their own teaching or through scholarship in their field. Based on this observation, I noticed that the participants' ideas on theory and practice, and how they operate within the classroom as a foundational concept, were largely based on how they were trained. The way theory and practice are thought about is dependent on how instructors and faculty were trained, therefore their approach to the course is also influenced by how the course is designed, whether by the instructor themselves or by a previous colleague. For example, when asked about their prior experience or training, one participant explained that they "didn't really have training and technical communication, but [they] had training and composition and literature" (Anonymous participant 17 (M1), 2022, interview). Another noted that before teaching their current course, they had "...only ever [taken] one class about visual design throughout [their] entire life” (Anonymous participant 4 (R2), 2022, interview). It is also key to note that many of those who teach these courses rely on theory because it's what is comfortable to them, which could also have impacted the data if the course was coded as design, but taught as viz. In many cases, it's what they have experience with or what they were exposed to in graduate school. As Northcutt and Brumberger (2010) note,
“instructors tend to gravitate toward the familiar” especially when they lack a “strong background in art, visual studies, or visual communication in some form” (p. 462). One participant voiced their own struggle with incorporating elements of both theory and practice within their courses, explaining that they “rely on the theory stuff because that's kind of the easy way to develop the course” but that they “don't want to do that because that's obviously not what the students need—they need that sort of practical element of it” (Anonymous participant 5 (R2), 2022, interview). This response in particular demonstrates the tendency of instructors to rely on theory.

However, this heavy focus on theory is not necessarily what students need. Undergraduate students need theory, yes, but they do not need heavy theory. For instance, they can learn principles of design and how they work to alter or create images and designs, without using the specific terms. In one of the responses, a participant noted that they “don't ask [students] to expressly…verbalize, remember or even reference theories…the principles are there, [the language] is just not common enough for them to be able to use it in practice” (Anonymous participant 13 (R1), 2022, interview). We need to think through what our courses are doing, what we are asking of students, and how each of us can better our own approaches. There is an immediate need to be reflective, critical practitioners and to improve, not only our programs, but our own practices as well. Based on the approach to course design, technology, and theory and practice found in the data, the following section details how an effective design course can be developed.

**Need for reflection and sustainability**

Reflection is highly developed in areas of writing, such as first year writing and composition, but this largely focuses on students and their own writing. For example, Yancey
(1998) explains her theory of reflection as three parts: reflection in action, constructive reflection, reflection in presentation—all of which are centered around student writing. She explains that “reflection entails a looking forward to goals we might attain, as well as a casting backward to see where we have been” (p. 6). Additionally, Taczk and Robertson’s reiterative reflective framework “give[s] students a series of opportunities to make decisions and create some means of understanding their writing as a means of engaging in reflective practice in a four part schema: look backward…look inward…look forward…look outward” (p. 46). In this framework, students “theorize about their own writing” and then are encouraged to “evolve, not just as writers, but as thinkers about writing” (p. 46). However, both Yancey and Taczk’s as well as Robertson’s work in reflection are still attached to the production of writing as its main goal. Reflection is mentioned at the administrative level, but a lot of that work focuses on “here's what I’m doing” rather than how reflection actually works.

TPC views reflection in similar ways, however there is not as much of a major focus on it as there is in writing studies as a whole. Reflection in TPC is limited to teacher reflections to “improve local practices” (Melonçon et al., 2019, p. 105) or student reflections (Bourelle, 2014). Within TPC, there has been limited focus on the need for productive reflection at the programmatic level. Bob Johnson’s (2003) work on program sustainability explained that productive reflection is a key part to sustainable programs; “to sustain means to think and to act, to contemplate and to practice” which means technical communicators have the “responsibility of constantly looking behind, to the sides, and ahead as we develop our disciplinary and professional identities” (p. 102). Johnson (2003) argued that this “multi-directional, active reflection” is a key part of the field of technical and professional communication. In fact, not only is reflection a key component to keeping a program (and field) alive, but he goes so far as to
say that the “charge to be continually conscious of the past, critically active in the present moment, and measured about our future actions is in the blood of technical communication professionals” (Johnson, 2003, p. 102).

This focus on sustainability pairs well with the Schreiber and Melonçon’s (2019) continuous improvement model: GRAM. This model allowed space to reflect and analyze materials gathered, with an eye towards productive change. Using GRAM as a way to direct program administration or create courses, requires a consistent reflective attitude. It is not different when applying this model to the field at large, for example, taking the data and using this information to direct programmatic and course level decisions. Reflection and evaluation can be used for creation and development processes, and should be a crucial part of improving programs and course design. We cannot continue to make decisions because of our own self-interest, we need to put students first. This means that with every decision, the question of “how does this impact, benefit, or harm the students” is asked and considered. Assignments, outcomes, and even how topics are explained should be re-examined on a regular basis to make sure it is still the best option. There has been some work in TPC on sustainability (Scott, 2004; Ericsson, 2009; Melonçon & Schreiber, 2018). For example, Melonçon and Schreiber (2018) argued that a field wide approach to program and course refinement where faculty are “actively and systematically analyzing these relationships” (p. 324) is necessary for sustainability. To continue to grow and improve, programs must have an eye towards sustainability; “sustainable suggests that maintenance and reflection are part and parcel of any forward movement we may be contemplating or actually practicing” (Johnson, 2003, p. 102). By doing this, reflection and evaluation of processes and practices becomes standard.
Model course(s)

Some of the major issues at the center of these courses include a murky understanding of design principles, the goals of the course, or how these goals translate into assignments. These courses are necessary because students need to both have an awareness and experience practicing design, in addition to strengthening their writing skills. Design is an important skill for students to have. According to Brumberger et al. (2013), “part of good writing is good design, and thus, visual communication is an inherently vital aspect of our writing programs” (p. 177). Through these much needed courses, students could hone their design skills, which would inevitably prepare them for their future careers. Not only do these courses build on what they already know about purpose and audience, but they also strengthen their problem-solving abilities. Additionally, Welhausen (2018) called for “increasing attention to visual rhetoric pedagogies” (p. 132) and claimed that the concept of aesthetics is “undertheorized in visual rhetoric pedagogical scholarship and oversimplified in textbook coverage” (Welhausen, 2018, p. 133). This continues to show that there is an increasing need to pay attention to how these courses are designed in order for students to be visually literate; “to be truly visually literate—capable of both reading and writing visual communication—students must be able to think visually and rhetorically, and they must be able to craft with technology” (Brumberger et al., 2013, p. 173).

There are many factors that influence the creation and design of courses, such as institutional and departmental policies, the expertise of the instructor, and how issues of labor intersect with the expected course. This is not to say that these are not real factors, but that as a field there should be some consistency in what is being taught within these courses.

The beginning to creating a course must start with the goals, or outcomes, of the course. These help to not only organize the course itself, but they also explain to the student the skills
they will be able to take away from the course. Generally, these should align with the program outcomes. Below are a few sample program outcomes that would fit in a TPC degree program. Students will be able to:

- Analyze and respond to rhetorical situations for purpose and audience.
- Use technology to create various documents for different purposes and audiences.
- Identify and engage with ethical situations, such as issues of how culture impacts language, information, and power.

In this example, knowing that some of the main outcomes for the degree program focus on rhetorical principles (purpose and audience), technology use, and ethics, I would choose to build out the outcomes for the course based on the ones already in use for the program. To do this, I would identify what is missing for the specific course. In this case, a design focused course should also include an understanding of design principles and theories. Using the program outcomes as a guide, the following sections will outline what a theory, practice, and blended (both theory and practice) visual communication course should look like.

**Theory course**

In a theory based visual communication course, the goals of the course are focused on analyzing and identifying how the concepts they read about are displayed in examples. This is a broad example, but it stands to reason that a majority of theory-based courses highlight visual analysis as a main component. To begin looking at how this particular course is created, it must begin with the programmatic outcomes. Using the program outcomes listed above as a guide, I expand on them to include additional goals below.

Upon completion of this course, students will be able to:
1. Examine principles of design, such as proximity, alignment, and color, in their use in various documents.

2. Analyze documents and visuals for their rhetorical contexts, including their purpose and audience.

3. Engage with design theory and rhetorical scholarship.

4. Examine how issues of power, accessibility, and user experience impact designs.

Each outcome highlights major aspects of the course. The first singles out design theory, “examine principles of design, such as proximity, alignment, and color, in their use in various documents”. The second, rhetorical theory, “analyze documents and visuals for their rhetorical contexts, including their purpose and audience”. The third outcome, “Engage with design theory and rhetorical scholarship” focuses on the ways in which students will be exposed to theoretical readings. The last outcome pulls directly from the program outcomes to focus on ethics: Examine how issues of power, accessibility, and user experience impact designs. Notice how the outcomes use active verbs and are therefore able to be measured. Additionally, because they are actionable and explicit, these outcomes operate as a roadmap of sorts to provide students with a clear picture of what they will take away from the course. To really imagine how these courses could work, I have provided an outline of a course map for a theory-based course (see figure 2). The projects are aligned to the course outcomes (listed above) and each assignment and exercise lists their corresponding outcomes. For this course, there would be three projects: reading responses, a visual analysis essay, a visual analysis of an advertisement, and a design issue scenario project. Finally, the course will be interspersed with readings that focus on aspects of

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5 I chose to insert the sample course map for each course (rather than as an appendix) to provide immediate context on the structure and assignments for the reader.

Table 9. Theory course map

<table>
<thead>
<tr>
<th>Content type/ Title</th>
<th>Task</th>
<th>Corresponding outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1: Project 1</td>
<td>Reading Responses (to be submitted throughout the semester) Students will find a relevant reading to the course and compose a discussion to be shared with the class critically engaging with the themes of the text. Note: This assignment is based on instructor preference--number of students impacts frequency of responses</td>
<td>1, 2</td>
</tr>
<tr>
<td>M1: Assignment 1</td>
<td>Reading Response (students provide reading) Find a reading relevant to our course. Then, come up with three discussion questions to be used in class.</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Module 2: Project 2*</td>
<td>Flyer or Ad Analysis Assignment Students will find and analyze a flyer or advertisement for their use of design and rhetorical principles.</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>M2 Exercise 1</td>
<td>Visual analysis In this exercise, you will analyze the rhetorical situation of the flyer or advertisement they have chosen for Project 2. Use the following questions as a guide: ● Who is the target audience(s)? ● How is the design tailored to the audience(s)? ● Explain what it is about the design that is not working and why?</td>
<td>1, 2</td>
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6 Although it is shown as an example here, I would not personally recommend or encourage a class without a practice element.
7 Sections marked with an asterisk were based off of courses developed for the PTC writing Program at the University of South Florida.
<table>
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<th>Table 9 (Continued)</th>
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<tbody>
<tr>
<td>M2 Assignment 1</td>
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<td>M2 Reading 2</td>
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<td>Module 3: Project 3</td>
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<td>M1: Assignment 2</td>
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<td>M3 Reading 1</td>
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**Table 9 (Continued)**

| M3 Exercise 1 | In this exercise, you will find two commercials and analyze them with the following questions:  
  ● What is the purpose of the commercial?  
  ● Who is the targeted audience?  
  ● Where was this commercial circulated? How does this impact how the visual is received?  
  ● What rhetorical appeals does the ad use?  
    ○ How are these made more or less effective due to the design principles used? | 1, 2, 4 |
| M3 Assignment 1 | Draft of Project 3  
Students will submit a draft of their Project 1. | 1, 2, 3, 4 |
| M3 Assignment 3 | **Submit Project 3 (final)**  
Students will submit a final draft of their Project 3. | 1, 2, 3, 4 |
| Module 4: Project 4* | **Design Issue Assignment**  
Students will identify an issue in a local context and examine possible solutions.  
Some examples include considering the accessibility of campus from different perspectives, evaluating space allocations for student work areas, or even convincing people to practice safe covid habits (hand washing, etc.)  
Then, students will come up with a report that proposes how this design issue could be solved. | 1, 2, 4 |
| M4 Reading 1 | Supra-Textual Design: The Visual Rhetoric of Whole Documents (1996) by Charles Kostelnick |
### Module 1

The first project in this module is one that lasts throughout the entire term. In this assignment, students are required to find a relevant reading to the course and prepare discussion questions to help direct the class (Module 1: Project 1). These are set as module 1 so that the instructor can choose how many of these reading responses they would like to include in the course. While small, this module helps set the tone for the type of critical reading and analysis tasks students will have to do later on in the course.

### Module 2

In the second project, the flyer or ad analysis, in module 2 has students complete a redesign or a flyer or advertisement of their choice (Module 2: Project 2). This project asks students to analyze a chosen visual (either a flyer, logo, or other type of organizational document) and write an explanation about how principles of design are being used within the document and how they

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<tr>
<th>Assignment</th>
<th>Reading Response (students provide reading)</th>
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<tbody>
<tr>
<td><strong>M1: Assignment 3</strong></td>
<td>Find a reading relevant to our course. Then, come up with three discussion questions to be used in class.</td>
<td>1, 2, 3</td>
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<tr>
<th>Assignment</th>
<th>Reading</th>
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<tbody>
<tr>
<td><strong>M4 Reading 2</strong></td>
<td>The Sword of Data: Does Human-Centered Design Fulfill Its Rhetorical Responsibility? (2010) by Erin Friess</td>
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<tr>
<td><strong>M4 Assignment 1</strong></td>
<td>Draft of Project 4 Students will submit a draft of their Project 4.</td>
<td>1, 2, 4, 5</td>
</tr>
<tr>
<td><strong>M4 Reading 2</strong></td>
<td>Cruel Pies: The Inhumanity of Technical Illustrations (2001) by Dragga and Voss</td>
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<tr>
<td><strong>M4 Assignment 2</strong></td>
<td>Progress Report Students will complete a progress report detailing where they are in the design process and what they still have left to complete.</td>
<td>3, 4</td>
</tr>
<tr>
<td><strong>M4 Assignment 3</strong></td>
<td>Submit Project 1 (final) Students will submit a final draft of their Project 4.</td>
<td>1, 2, 4, 5</td>
</tr>
</tbody>
</table>
could be made better. In this module, there are a mixture of readings and exercises to help students enhance their ability to analyze. For example, students complete a preliminary analysis, where they focus on the rhetorical principles within their chosen document (M2: Exercise 1). Students also engage with readings, such as *Verbal Versus Visual: A Word Is Worth a Thousand Pictures, Too* (M2: Reading 1) and *Making Memories: Writing and Designing More Memorable Documents* (M2: Reading 2).

**Module 3**

The third project, a commercial analysis, is located in module 3, and asks students to analyze a commercial advertisement (Module 3: project 3). The goal is similar to the second project in that it also requires students to analyze the content and explain how this could be improved, however it asks them to engage with more than just a static visual. In this module, students are exposed to readings that make them consider the ethical implications surrounding design (M3: Reading 1). Students are also asked to examine sample commercials in preparation to complete their draft of project 3 (M3: Exercise 1).

**Module 4**

The final project is located in module 4 and is called a design issue assignment (Module 4: Project 4). During this project, students will identify an issue in a local context and examine possible solutions. Some examples given include considering the accessibility of campus from different perspectives, evaluating space allocations for student work areas, or even convincing people to practice safe covid habits (hand washing, etc.). Students will then come up with a report that proposes how this design issue could be solved. The goal of this project asks students

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9 *Making Memories: Writing and Designing More Memorable Documents* (2016) by Eric Sentell
to consider who they are designed for, how they could design it considering their audience, and pitch a solution by providing a rationale for how they would redesign this issue. In this module, there are drafts (M4: Assignment 1) and progress reports (M4: Assignment 2) to keep students on task. There are also additional readings to help students begin to think through how to piece their report together, such as Supra-Textual Design: The Visual Rhetoric of Whole Documents\textsuperscript{10} (M4 Reading 1).

\textit{Practice course}

Using the program outcomes, I created the course outcomes by breaking them down into manageable skills. For instance, in a practice-based course, the goals of the course are different to those of a theory-based one. In a practice focused course, students are focused on production, rather than analysis. This is not to say that there cannot be overlap, but the goals of the course hinge on student production and creation. The course outcomes are listed below:

1. Practice relevant technologies that focus on skills used in pdf editors, word processors, and design and illustrations.

2. Produce digital and print documents using principles of design

3. Identify principles of design, such as proximity, alignment, and color use.

4. Analyze documents and visuals for their rhetorical contexts, including their purpose and audience.

5. Apply principles of design ethically and fairly, taking into account issues of power, accessibility, and user experience.

Similar to a theory-based course, most of the outcomes follow the same pattern and align with the programmatic ones. There is one, however, that adds a focus on practice using design

\textsuperscript{10} Supra-Textual Design: The Visual Rhetoric of Whole Documents (1996) by Charles Kostelnick
principles: “produce digital and print documents using principles of design”. This is because in order to produce something that follows or meets criteria based on design principles, students must first be taught those principles. This is different from the theory-based course, which does not ask students to create anything based on what they learn. In what follows, I will outline a course map for a practice-based course (see figure 3). Throughout this course, there are a handful of assignments that repeat. These assignments include the group critique (M2: Assignment 2, M3: Assignment 2, M4: Assignment 3) and a project justification (M2: Assignment 4, M3: Assignment 4, M4: Assignment 5). The group critique is used as a form of formative feedback, where students have time to critique their peers' design in order to give them an outside perspective. Occasionally called a final reflection, this assignment asks students to reflect on, communicate, and then justify the specific choices that went into their designs. The projects are aligned to the course outcomes (listed above) and each assignment and exercise lists their corresponding outcomes. In this course, students would begin with a series of microdesigns, complete a redesign of flyer, create their own logo, and then redesign a website for a client with multiple iterations.

Table 10. Practice course map

<table>
<thead>
<tr>
<th>Content type/ Title</th>
<th>Task</th>
<th>Corresponding outcome</th>
</tr>
</thead>
</table>
| Module 1: Project 1 | Microdesign Assignment (to be submitted throughout semester/ overlaps with other projects)  
Students will complete small design tasks in response to readings done throughout the course. | 1, 2, 3, 4 |

11 Sections marked with an asterisk were based off of courses developed for the PTC writing Program at the University of South Florida.
| M1 Assignment: Microdesign 1 | **Microdesign: Information graphic**  
Practice: Find and redesign a data visualization. The key for this redesign is to accurately portray the information while doing so in a way that is easy to parse through. This may also help when you go to represent information for Project 4. Provide the original and the redesign. | 2, 4, 5 |
| --- | --- | --- |
| Module 2: Project 2* | Flyers or Ad Redesign Assignment  
Students will find and redesign a flyer or advertisement, taking into account design and rhetorical principles. | 1, 2, 4 |
| M2 Exercise 1* | **Proximity and Alignment**  
Redesign the following advertisement using what you have learned about proximity and alignment.  
See image below: | 1, 2, 3 |

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**Table 10 (Continued)**

<table>
<thead>
<tr>
<th>M2 Exercise 2*</th>
<th><strong>Contrast and Repetition</strong></th>
<th>1, 2, 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Using the recipe below, redesign it with the principles of contrast (focal point, visual hierarchy) and repetition (consistency) in mind.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Recipe:</strong> Punjabi Chicken. This is a type of chicken curry in a thick gravy with a nice spicy flavor, but is not too hot. You may adjust the 'heat' by adding more Serrano peppers. Serve over rice, or with chapatti or roti. Ingredients: 2 tablespoons vegetable oil, 2 tablespoons ghee (clarified butter), 8 chicken legs, skin removed, 1 teaspoon cumin seeds, 1 onion, finely chopped, 5 cloves minced garlic, 2 tablespoons minced fresh ginger root, 1 small tomato, coarsely chopped, 1 tablespoon tomato paste, 1 tablespoon garam masala, 1 tablespoon ground turmeric, 1 teaspoon salt, or to taste, 1 Serrano chili pepper, seeded and minced, 1 cup water, ¼ cup chopped fresh cilantro. Directions Step 1: Heat the oil and ghee in a large pot over medium heat. Cook the cumin seeds in the oil until the seeds begin to change color. Step 2: Stir in chopped onion; cook and stir until onion has softened and turned translucent, about 5 minutes. Add the garlic and ginger; continue cooking until the onions brown, about 5 minutes more. Step 3: Mix in the chopped tomato, tomato paste, garam masala, turmeric, salt, serrano pepper, and water; simmer 5 minutes. Lay the chicken into the sauce; mix gently to coat the legs. Cover pan and reduce heat to medium-low. Cook until chicken is no longer pink near the bone, about 40 minutes. Garnish with cilantro to serve.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M2 Assignment 1</th>
<th><strong>Draft of Project 1</strong></th>
<th>1, 2, 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students will submit a draft of their Project 1.</td>
<td></td>
</tr>
<tr>
<td>M2 Reading 2</td>
<td>M2 Exercise 3</td>
<td>M2 Reading 3</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------</td>
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</tr>
</tbody>
</table>
| ● Chapters 3 and 5 in Visual Composing: Document Design for Print and Digital Media (2011). Kathryn Riley, Jo Mackiewicz  
In this exercise, you will analyze the rhetorical situation of the flyer or advertisement they have chosen for Project 1. Use the following questions as a guide:  
● Who is the target audience(s)?  
● How is the design tailored to the audience(s)?  
● Explain what it is about the design that is not working and why? | **4**  
| ● Design for Emotion (2017) by Daniel Ruston: [https://medium.com/google-design/design-for-emotion-7ba0cf40e05b](https://medium.com/google-design/design-for-emotion-7ba0cf40e05b)  
● 7 things Every Designer Needs to know about Accessibility (2015) by Jesse Hausler: [https://medium.com/salesforce-ux/7-things-every-designer-needs-to-know-about-accessibility-64f105f0881b](https://medium.com/salesforce-ux/7-things-every-designer-needs-to-know-about-accessibility-64f105f0881b) |
<table>
<thead>
<tr>
<th>Assignment Level</th>
<th>Assignment Description</th>
<th>Module Numbers</th>
</tr>
</thead>
</table>
| M2 Assignment 2  | **Group Critique (in class activity)**  
Students will present their work to their groups and receive critique and feedback on their work. Students will use the following questions to guide their critique:  
- What do you like about it?  
- What do you not like?  
- What is working with the way it is currently designed?  
- What isn't working?  
- What do you think the designer was trying to get across through this design? | 3, 4            |
| M2 Assignment 3  | **Submit Project 1 (final)**  
Students will submit a final draft of their Project 1. | 1, 2, 4         |
| M2 Assignment 4* | **Project 1 Justification**  
- Who is/are your target audience(s)?  
  How have you used specific design elements and principles to more effectively target your audience?  
- What is the goal of your design? How does the redesign of your documents achieve the document’s purpose?  
- Identify the specific elements and principles of design you have used in your drafts. Do these principles contribute to the goals each draft achieves? | 3, 4            |
| Module 3: Project 3* | **Logo & Branding Assignment**  
Students will create their own logos. These logos can be self branding for any purpose, but must consider both rhetorical and design principles. | 1, 2, 3, 4      |
| M3 Reading 1 | ● The Psychology of Color in Logo Design: [https://thelogocompany.net/psychology-of-color-in-logo-design/](https://thelogocompany.net/psychology-of-color-in-logo-design/)
| M3 Exercise 1 | In this exercise, you will examine the difference between a logo, logotype, and a logomark. First, read the article Logotype vs. logo mark vs. logo: What is the difference? (2020) by Matt Ellis: [https://99designs.com/blog/logotype-vs-logomark-vs-logo/](https://99designs.com/blog/logotype-vs-logomark-vs-logo/)

Then, find an example of each (try not to use the ones provided in the article) and analyze how each example impacts the message of the organization. | 4 |
| M3 Exercise 2* | To develop and design a logo, it is important to understand the underlying who you are designing for and for what purpose. But, when designing a personal brand, or persona it is more difficult because often the first step is to ask yourself what you want to convey. To help you get started, skim the following: PriceWaterhouseCoopers' Personal Brand Workbook: [https://www.pwc.com/c1/en/assets/downloads/personal_brand_workbook.pdf](https://www.pwc.com/c1/en/assets/downloads/personal_brand_workbook.pdf)

Then, respond to the following questions to help determine aspects of your brand:
What are your strengths?
What are you trying to accomplish (think about what the goal behind your logo is)
What are five adjectives that would describe you? | 4 |
| M1 Assignment: Microdesign 2 | **Microdesign: Typography**  
Read: Chapters 2 in Visual Composing: Document Design for Print and Digital Media (2011). Kathryn Riley, Jo Mackiewicz  
Practice: Using your draft of your logo, practice using different typography. In this micodesign, choose a typeface that conveys the following:  
• professional  
• excited  
• relaxed  
• quick  
Then, explain why you chose each one. | 1, 2, 3 |
| --- | --- | --- |
| M3 Assignment 1 | **Draft of Project 3**  
Students will submit a draft of their Project 1. | 1, 2, 3, 4 |
| M3 Assignment 2 | **Group Critique (in class activity)**  
Students will present their work to their groups and receive critique and feedback on their work. Students will use the following questions to guide their critique:  
• What do you like about it?  
• What do you not like?  
• What is working with the way it is currently designed?  
• What isn't working?  
• What do you think the designer was trying to get across through this design? | 3, 4 |
| M3 Assignment 3 | **Submit Project 3 (final)**  
Students will submit a final draft of their Project 3. | 1, 2, 3, 4 |
<table>
<thead>
<tr>
<th>M3 Assignment 4*</th>
<th><strong>Project 3 Justification</strong></th>
<th>3, 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>● How does your logo communicate your brand (strengths, skills, roles, values, and/or passions)? What specific design elements and principles did you choose to reflect your brand?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● What audience and purpose do your logo and logotype target? Does your brand target the same audience and purpose?</td>
<td></td>
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<tr>
<td></td>
<td>● In what contexts would your brand be effective? In what ways would it be circulated effectively?</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Module 4: Project 4</th>
<th><strong>Website Design Assignment</strong></th>
<th>1, 2, 3, 4, 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students will redesign a website based on a scenario. (Note: Instructors can also use this as an opportunity for a client project)</td>
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<tr>
<td></td>
<td>Students are responsible for redesigning the website and justifying their choices.</td>
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</tr>
<tr>
<td></td>
<td><strong>Scenario:</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>You work at a marketing agency, and your team has just been told that your next client is RiteAid, an American based drugstore company. The company's website needs a major update. This means that not only design aspects, but usability and accessibility as well. Your task is to reimagine the website and create a new design that features the company's main goals.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Website: <a href="https://www.riteaid.com/">https://www.riteaid.com/</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M4 Reading 1</th>
<th><strong>Inclusive Microsoft Design: Inclusive 101</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><a href="https://www.microsoft.com/design/inclusive/">https://www.microsoft.com/design/inclusive/</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Designing for Cognitive Differences</strong> (2016) Brandon Gregory:</td>
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</tr>
<tr>
<td></td>
<td><a href="https://alistapart.com/article/designing-for-cognitive-differences/">https://alistapart.com/article/designing-for-cognitive-differences/</a></td>
<td></td>
</tr>
</tbody>
</table>

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13 In the case of a client project, it is important to consider best practices of working within the local community, which is why there is an alternate scenario assignment.
<table>
<thead>
<tr>
<th>Assignment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M4 Exercise 1</strong></td>
<td>Consider limitations to the design you have created. List as many things that might cause difficulty for your solution (or people trying to use the solution). How can your solution adapt to these situational limitations?</td>
</tr>
<tr>
<td><strong>M1 Assignment: Microdesign 3</strong></td>
<td>Read: Eckstut &amp; Eckstut (2013). Secret Language of Color: Science, Nature, History, Culture, Beauty of Red, Orange, Yellow, Green, Blue, &amp; Violet Practice: Find an example that uses color as a tool in their design. Then, redesign your example using a different color. Consider the following questions: How does this change impact the audience? How does this change in color impact the goal of the document?</td>
</tr>
<tr>
<td><strong>M4 Assignment 1</strong></td>
<td>Draft of Project 4 Students will submit a draft of their Project 4.</td>
</tr>
<tr>
<td><strong>M4 Assignment 2</strong></td>
<td>Progress Report Students will complete a progress report detailing where they are in the design process and what they still have left to complete.</td>
</tr>
</tbody>
</table>
| **M4 Assignment 3** | **Group Critique (in class activity)** Students will present their work to their groups and receive critique and feedback on their work. Students will use the following questions to guide their critique:  
  - What do you like about it?  
  - What do you not like?  
  - What is working with the way it is currently designed?  
  - What isn't working?  
  - What do you think the designer was trying to get across through this design? |
| **M4 Assignment 4** | **Submit Project 1 (final)** Students will submit a final draft of their Project 4. |
Module 1

The first project, the micodesign assignment, is actually a series of projects (Module 1: Project 1). There are currently three microdesign assignments in the example course map, but more can be added as needed. In a micro design assignment, students may still read a theoretical or applicable text, but instead of responding through a traditional writing assignment, they complete a small design task. For example, a sample microdesign (M1 Assignment: Microdesign 3) may ask students to read a chapter from The Secret Language of Color\textsuperscript{14}, which mixes history, art, and physics in their explanation of different colors. Then, students would choose a brand to redesign according to a chosen color. In this, students would need to apply what they know about design principles (color theory), their brands’ goals (rhetorical theory), and be able to experiment with software to create the design (technology).

\textsuperscript{14} Eckstut & Eckstut (2013). Secret Language of Color: Science, Nature, History, Culture, Beauty of Red, Orange, Yellow, Green, Blue, & Violet
Module 2

Project 2, or module 2, focuses again on the flyer redesign assignment (Module 2: project 2). Similar to that of the theory-based course, this assignment takes it a step further and asks students to actually design a new version of the document, rather than just analyzing it. Module 2 highlights design principles, such as proximity, alignment, contrast, and repetition through smaller exercises that move students towards the goals of the project. For instance, one exercise has students redesign the layout of a recipe (M2: Exercise 2), which helps students practice the design concepts before they have to apply them to their later project. Students also engage with readings that focus on topics such as how emotion impacts design\(^\text{15}\) and the importance of accessibility\(^\text{16}\) when designing.

Module 3

Project 3, or module 3, is a logo and branding assignment (Module 3: Project 3). In this assignment, students are asked to design their own logos. The goal of this module is to give students practice at identifying where the theoretical concepts and the practice of design intersect. It also provides them with an opportunity to develop their own persona, which at the very least, is useful in helping them figure out what they want to convey to possible jobs or future clients. In this module, students learn about how design can be influenced (in both positive and negative ways) by things such as color (M3: Reading 1) and typography (M3: Exercise 2).

Module 4

For project 4, or module 4, students are asked to redesign a website (Module 4: Project 4). This project was originally designed to be based on a scenario (included in outline), however it can

\(^{15}\) Design for Emotion (2017) by Daniel Ruston: https://medium.com/google-design/design-for-emotion-7ba0cf40e05b

\(^{16}\) 7 things Every Designer Needs to know about Accessibility (2015) by Jesse Hausler: https://medium.com/salesforce-ux/7-things-every-designer-needs-to-know-about-accessibility-64f105f0881b
also be modified to be a client project. The reason why it is not originally a client project is because while useful for exposing students to real world situations, it can be difficult on the part of the instructor to facilitate and maintain a strong relationship with the community. The goal of this project is to give students practice analyzing what is not currently working within a design and then to be able to use the skills they are developing through the microdesigns to help them redesign it. This would work best as a group project, considering the lift in knowledge and labor that is required of the student—however that is also up to instructor discretion. This project could begin by having a class discussion on the rhetorical dimensions of the particular site: who the site is for, who can use it, what is the site trying to accomplish? Then, students spend time identifying areas that they can fix, such as page layout, colors used, along with other areas of accessibility and usability. In this module, students are asked to submit their design iterations in draft stages, along with progress reports (M4: Assignment 2). These stages of drafting would pair well with the exercise in the outline that asks students to consider the limitations they might have to their current design, specifically situational constraints that would impact the execution or implementation of their design (M4: Exercise 1).

**Blended theory and practice course**

As the data has shown, some courses combined both theoretical and practical approaches. Below is an example of how you would combine the two. In this blended course, you will notice that all of the original outcomes are listed with slight modifications. This is because this is truly how a visual communication course should function—it should pull from both theory and practice and give students ample opportunity to both learn the foundational principles and apply them to useful situations. The course outcomes are listed below:
1. Practice relevant technologies that focus on skills used in pdf editors, word processors, and design and illustrations.

2. Produce digital and print documents using principles of design.

3. Identify principles of design, such as proximity, alignment, and color use.

4. Analyze documents and visuals for their rhetorical contexts, including their purpose and audience.

5. Apply principles of design ethically and fairly, taking into account issues of power, accessibility, and user experience.

Some course assignments can be modified from the previous two examples. For instance, the microdesign assignment from the practice course can always be paired with readings and metacognitive exercises to get students to both practice the design and consider the reasoning behind their decisions. For the assignment from the theory course, analyzing a website, social media account, or even organizational document can all be made better by adding in an additional practice element, having students actually complete the request they are proposing for an improved design.

In what follows, I outline a course map for a blended theory and practice course. This course is set up with four projects, or modules, depending on how you’d like to think about it. There are three projects that are sequenced throughout the course (projects 1, 3, and 4), with one that overlaps throughout the semester (project 2). The projects are aligned to the course outcomes (listed above) and each assignment and exercise lists their corresponding outcomes. In projects 1, 3, and 4, there are additional project requirements. These remain the same for each project (1, 3, 4) throughout the semester to provide consistency and build a class rapport. These assignments include the group critique (M1 Assignment 1, M3 Assignment 2, and M4...
Assignment 2), which is used as a form of formative feedback, where students have time to critique their peers' design in order to give them an outside perspective. The second assignment is a project justification (M1 Assignment 1, M3 Assignment 4, M4 Assignment 4). Occasionally called a final reflection, this assignment asks students to reflect on, communicate, and then justify the specific choices that went into their designs. Each module is expanded on (below figure 4) for additional detail.

**Table 11. Blended theory & practice course map**

<table>
<thead>
<tr>
<th>Content type/ Title</th>
<th>Task</th>
<th>Corresponding outcome</th>
</tr>
</thead>
</table>
| Module 1: Project 1* | **Flyer or Ad Redesign Assignment**  
Students will find and redesign a flyer or advertisement, taking into account design and rhetorical principles. | 1, 2, 3, 4 |
| M1 Exercise 1* | **Proximity and Alignment**  
Redesign the following advertisement using what you have learned about proximity and alignment.  
See image below: | 1, 2, 3 |

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17 Sections marked with an asterisk were based on courses developed for the PTC writing Program at the University of South Florida.

M1 Exercise 2*  

**Contrast and Repetition**  
Using the recipe below, redesign it with the principles of contrast (focal point, visual hierarchy) and repetition (consistency) in mind.

**Recipe:** Punjabi Chicken. This is a type of chicken curry in a thick gravy with a nice spicy flavor, but is not too hot. You may adjust the 'heat' by adding more Serrano peppers. Serve over rice, or with chapatti or roti. **Ingredients:** 2 tablespoons vegetable oil, 2 tablespoons ghee (clarified butter), 8 chicken legs, skin removed, 1 teaspoon cumin seeds, 1 onion, finely chopped, 5 cloves minced garlic, 2 tablespoons minced fresh ginger root, 1 small tomato, coarsely chopped, 1 tablespoon tomato paste, 1 tablespoon garam masala, 1 tablespoon ground turmeric, 1 teaspoon salt, or to taste, 1 Serrano chili pepper, seeded and minced, 1 cup water, \( \frac{1}{4} \) cup chopped fresh cilantro. **Directions**  
Step 1: Heat the oil and ghee in a large pot over medium heat. Cook the cumin seeds in the oil until the seeds begin to change color.  
Step 2: Stir in chopped onion; cook and stir until onion has softened and turned translucent, about 5 minutes. Add the garlic and ginger; continue cooking until the onions brown, about 5 minutes more.  
Step 3: Mix in the chopped tomato, tomato paste, garam masala, turmeric, salt, serrano pepper, and water; simmer 5 minutes. Lay the chicken into the sauce; mix gently to coat the legs. Cover pan and reduce heat to medium-low. Cook until chicken is no longer pink near the bone, about 40 minutes. Garnish with cilantro to serve.

| 1, 2, 3 |
| M1 Reading 2 | ● Chapters 3 and 5 in Visual Composing: Document Design for Print and Digital Media (2011). Kathryn Riley, Jo Mackiewicz  
| M1 Exercise 3 | **Visual analysis**  
In this exercise, you will analyze the rhetorical situation of the flyer or advertisement they have chosen for Project 1. Use the following questions as a guide:  
● Who is the target audience(s)?  
● How is the design tailored to the audience(s)?  
● Explain what it is about the design that is not working and why?  
| 3, 4 |
| M1 Reading 3 | ● Design for Emotion (2017) by Daniel Ruston: https://medium.com/google-design/design-for-emotion-7ba0cf40e05b  
● 7 things Every Designer Needs to know about Accessibility (2015) by Jesse Hausler: https://medium.com/salesforce-ux/7-things-every-designer-needs-to-know-about-accessibility-64f105f0881b |
| M1 Assignment 1 | Draft of Project 1  
Students will submit a draft of their Project 1.  
| 1, 2, 3, 4 |
| M1 Assignment 2 | **Group Critique (in class activity)**  
Students will present their work to their groups and receive critique and feedback on their work. Students will use the following questions to guide their critique:  
- What do you like about it?  
- What do you not like?  
- What is working with the way it is currently designed?  
- What isn't working?  
- What do you think the designer was trying to get across through this design? | 3, 4 |
| M1 Assignment 3 | **Submit Project 1 (final)**  
Students will submit a final draft of their Project 1. | 1, 2, 3, 4 |
| M1 Assignment 4* | **Project 1 Justification**  
- Who is/are your target audience(s)? How have you used specific design elements and principles to more effectively target your audience?  
- What is the goal of your design? How does the redesign of your documents achieve the document’s purpose?  
- Identify the specific elements and principles of design you have used in your drafts. Do these principles contribute to the goals each draft achieves? | 3, 4 |
| Module 2: Project 2 | **Microdesign Assignment (to be submitted throughout semester/ overlaps with other projects)**  
Students will complete small design tasks in response to readings done throughout the course. | 2, 3, 4, 5 |
Practice: Find an example that uses color as a tool in their design. Then, redesign your example using a different color. Consider the following questions: How does this change impact the audience? How does this change in color impact the goal of the document? | 1, 2, 3, 4 |
|---|---|---|
| M2 Reading 1 | ● Visual-Rhetoric Ethics: Beyond Accuracy and Injury (2022) by Manning and Amare  
● Hiding Humanity: Verbal and Visual Ethics in Accident Reports (2021) by Dragga and Voss | --- |
| Module 3: Project 3* | **Logo & Branding Assignment**  
Students will create their own logos. These logos can be self branding for any purpose, but must consider both rhetorical and design principles. | 1, 2, 3, 4 |
| M3 Reading 1 | ● The Psychology of Color in Logo Design: [https://thelogocompany.net/psychology-of-color-in-logo-design/](https://thelogocompany.net/psychology-of-color-in-logo-design/)  
M3 Exercise 1* | In this exercise, you will examine the difference between a logo, logotype, and a logomark. First, read the article Logotype vs. logo mark vs. logo: What is the difference? (2020) by Matt Ellis: https://99designs.com/blog/logo-branding/logotype-vs-logomark-vs-logo/
Then, find an example of each (try not to use the ones provided in the article) and analyze how each example impacts the message of the organization. | 4 |

M3 Exercise 2* | To develop and design a logo, it is important to understand the underlying who you are designing for and for what purpose. But, when designing a personal brand, or persona it is more difficult because often the first step is to ask yourself what you want to convey. To help you get started, skim the following: PriceWaterhouseCoopers' Personal Brand Workbook: https://www.pwc.com/c1/en/assets/downloads/personal_brand_workbook.pdf
Then, respond to the following questions to help determine aspects of your brand:
- What are your strengths?
- What are you trying to accomplish (think about what the goal behind your logo is)
- What are five adjectives that would describe you? | 4 |
| M3 Assignment: Microdesign 2 | **Microdesign: Typography**  
Read: Chapters 2 in Visual Composing: Document Design for Print and Digital Media (2011). Kathryn Riley, Jo Mackiewicz  
Practice: Using your draft of your logo, practice using different typography. In this micodesign, choose a typeface that conveys the following:  
- professional  
- excited  
- relaxed  
- quick  
Then, explain why you chose each one. | 1, 2, 3 |
|---|---|---|
| M3 Assignment 1 | Draft of Project 3  
Students will submit a draft of their Project 1. | 1, 2, 3, 4 |
| M3 Assignment 2 | **Group Critique (in class activity)**  
Students will present their work to their groups and receive critique and feedback on their work. Students will use the following questions to guide their critique:  
- What do you like about it?  
- What do you not like?  
- What is working with the way it is currently designed?  
- What isn't working?  
- What do you think the designer was trying to get across through this design? | 3, 4 |
| M3 Assignment 3 | **Submit Project 3 (final)**  
Students will submit a final draft of their Project 3. | 1, 2, 3, 4 |
<table>
<thead>
<tr>
<th>M3 Assignment 4*</th>
<th><strong>Project 3 Justification</strong></th>
</tr>
</thead>
</table>
|                 | • How does your logo communicate your brand (strengths, skills, roles, values, and/or passions)? What specific design elements and principles did you choose to reflect your brand?  
• What audience and purpose do your logo and logotype target? Does your brand target the same audience and purpose?  
• In what contexts would your brand be effective? In what ways would it be circulated effectively? |
|                 | **Module 4: Project 4*** |
|                 | **Design Issue Assignment** |
|                 | Students will identify an issue in a local context and make a plan to design to promote change. Some examples include considering the accessibility of campus from different perspectives, evaluating space allocations for student work areas, or even convincing people to practice safe covid habits (hand washing, etc.) Then, students will come up with a deliverable that accomplishes the task of fixing or mitigating these issues. The deliverable can take any form, but must be suitable to the purpose and audience. |
|                 | **M4 Reading 1** |
|                 | • Inclusive Microsoft Design: Inclusive 101  
[https://www.microsoft.com/design/inclusive/](https://www.microsoft.com/design/inclusive/)  
• Designing for Cognitive Differences (2016) Brandon Gregory:  
[https://alistapart.com/article/designing-for-cognitive-differences/](https://alistapart.com/article/designing-for-cognitive-differences/) |
| M4 Exercise 1 | You and your team have proposed the use of solar powered lighting to address the problem of the campus being kept lit during nighttime hours. Knowing that your solution is specific to campus, and will be in operation at various hours of the day, this activity helps you think through some of the barriers that might arise. List as many things that might cause difficulty for your solution (or people trying to use the solution). How can your solution adapt to these situational limitations? | 5 |
| M4 Reading 2 | Cruel Pies: The Inhumanity of Technical Illustrations (2001) by Dragga and Voss |  |
| M4 Assignment: Microdesign 3 | **Microdesign: Information graphic**  
**Read:** Chapters 1 & 2 in The Wall Street Journal: Guide to Information Graphics  
**Practice:** Find and redesign a data visualization. The key for this redesign is to accurately portray the information while doing so in a way that is easy to parse through. This may also help when you go to represent information for Project 4. Provide the original and the redesign. | 2, 4, 5 |
| M4 Assignment 1 | Draft of Project 4  
Students will submit a draft of their Project 4. | 1, 2, 4, 5 |
| M4 Assignment 2 | **Group Critique (in class activity)**  
Students will present their work to their groups and receive critique and feedback on their work. Students will use the following questions to guide their critique:  
• What do you like about it?  
• What do you not like?  
• What is working with the way it is currently designed?  
• What isn't working?  
• What do you think the designer was trying to get across through this design? | 4, 5 |
M4 Assignment  | **Progress Report**  
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<td>Students will complete a progress report detailing where they are in the design process and what they still have left to complete.</td>
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M4 Assignment 3  | **Submit Project 1 (final)**  
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<td>Students will submit a final draft of their Project 4.</td>
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M4 Assignment 4* | **Project 4 Justification**  
|----------------|--------------------------------------------------|
|                 | - Who is/are your target audience(s)? How have you used specific design elements and principles to more effectively target your audience?  
|                 | - What is the goal of your design? How does the redesign of your documents achieve the document’s purpose?  
|                 | - How does your design address issues of accessibility and equity? In what ways have you designed with these principles at the forefront? | 4, 5 |

### Module 1

The first project, a flyer or ad redesign, asks students to choose one of these documents and redesign it using what they know about rhetorical and design principles (Module 1: Project 1). The beginning of the course focuses on giving students foundational knowledge that they will be able to apply later on. To help scaffold students to the first project, there are a few exercises that allow students to practice low stakes design tasks—before being asked to complete the project itself. For example, students are asked to practice with design principles (contrast, repetition, alignment, proximity) by redesigning an ad (M1 Exercise 1) and reorganizing a recipe (M1 Exercise 2). Module 1 also includes an exercise that asks students to analyze their own design choices, specifically the documents they plan on redesigning for project 1 (M1 Exercise 3). This helps students to critically think about how their choices will impact what they produce. In this
module, students will have readings that pull from textbooks as well as online resources. For example, mixing chapters from Visual Composing: Document Design for Print and Digital Media\textsuperscript{19} with Visual Design and Usability Yellow Brick Road\textsuperscript{20} (M1 Reading 1 and 2).

**Module 2**

The second project, the micodesign assignment, is similar to the practice course map in which the assignment is actually a series of assignments (Module 2: Project 2). There are currently three micodesign assignments in the example course map, but more can be added as needed. In this assignment, students are asked to complete a mini design task in response to a reading. The micodesigns are spaced throughout the course and each is themed to similar assignments in that module. For example, there is a micodesign task at the beginning of project 2 (M3 Assignment: Micodesign 2), and asks students to read the chapter on typography in Visual Composing and then asked to choose a typeface for their logo that represents different words (relaxed, professional, etc.). Some readings in this module prepare students to engage with color and the ethics of visual rhetoric. For example, in addition to a second micodesign assignment (Module 2: Micodesign 1), students are asked to read and analyze Visual-Rhetoric Ethics: Beyond Accuracy and Injury\textsuperscript{21} and Hiding Humanity: Verbal and Visual Ethics in Accident Reports\textsuperscript{22} (M2 Reading 1).

\textsuperscript{19}Visual Composing: Document Design for Print and Digital Media (2011) by Kathryn Riley & Jo Mackiewicz
\textsuperscript{20}Visual Design and Usability Yellow Brick Road (2012) by Tammy Guy
\textsuperscript{21}Visual-Rhetoric Ethics: Beyond Accuracy and Injury (2022) by Manning and Amare
\textsuperscript{22}Hiding Humanity: Verbal and Visual Ethics in Accident Reports (2021) by Dragga and Voss
Module 3

The third project, module 3, has students develop their own logo (Module 3: Project 3). The goal of this assignment is to encourage students to analyze their own persona and then create a design based on what they have discovered. Exercises in this module ask students to examine the differences between logos/logotypes/logo marks (M3 Exercise 1) and an analysis of their strengths and weaknesses to contribute to identifying their brand (M3 Exercise 2). Some readings in this module situate students around color and aesthetics by using online articles with theoretically focused work. For example, module 3 uses readings such as The Art of Visual Design\textsuperscript{23} and The Psychology of Color in Logo Design\textsuperscript{24} to get students to understand the connection between aesthetics and visual design (M3 Reading 1 and 2).

Module 4

The fourth project, module 4, focuses on a design issue that needs resolving in the local community (Module 4: Project 4). This project asks students to choose an issue relating to design found locally, for example on campus, and work to research and design a solution. The deliverable is up to the student (and instructor) and is intended to be broad enough to encourage a wide range of solutions. In this module, students are scaffolded to the assignment through exercises and readings. For example, one exercise asks students to respond to a scenario that places situational limitations on their design solution (M4 Exercise 1). This requires students to carefully consider how their design impacts the people around them. In this module, students are also responsible for another microdesign (M4 Assignment: Microdesign 3), where students read

\textsuperscript{23} The Art of Visual Design: The Rhetoric of Aesthetics in Technical Communication (2020) by Charles Kostelnick
\textsuperscript{24} The Psychology of Color in Logo Design by TheLogoCompany
the first two chapters of The Wall Street Journal: Guide to Information Graphics\textsuperscript{25} and then research and redesign a data visualization.

In each of these proposed course structures, the connection between outcomes, assignments, and exercises should be clear. These are all solid assignments, but it needs to be clear what students are expected to do and how they align with the goals of the course and their overall degree program. By scaffolding projects in this way, a combination of all of the outcomes is used to complete the project. This alignment should be explicit so that students can understand what the goals are and what they are walking away with.

\textbf{Conclusion}

Using the data gathered in this study, there were some patterns that emerged as notable findings. The first being the use of student learning outcomes within courses. Outcomes should not only be clear and explicit, but they should also align with the goals of the course and the program (assignment$\rightarrow$ course $\rightarrow$ program). Additionally, the use of technology must be conceptualized in these courses as more than just an added tool. Students (and some faculty) often have difficulty balancing learning how to operate the technology in addition to being unable to access it.

There is also a need to critically reflect on how courses and programs are being evaluated. In this case, GRAM offers a space for reflection and an avenue towards change, as seen in the proposed course structures. In the following chapter, I will present the final takeaways as well as additional implications for this study. I will expand on topics discussed in previous chapters and present opportunities for future research.

Chapter 6: Implications and Conclusion

This study began with questions that sought to uncover what types of visual communication courses are within the field of technical and professional communication and how these courses are taught. The data gathered from institutions highlighted the difference in naming practices, descriptions, and core focuses across the field. The interviews and additional materials made it clear that while there was distinction in the types of courses, many of them do not actually align with the goals of the course or program. Ultimately, it was shown that there were a number of factors that need to be considered when designing courses. For example, attention to the student learning outcomes and how they are used to align assignments. Another consideration is the use of technology and issues of access that follow. Finally, how the concepts of theory and practice are implemented within these courses, as well as how instructors and faculty understand these concepts. Brumberger and Northcutt (2013) set the tone of their edited collection by identifying the major patterns in current scholarship on visual communication and argued that while there is not a “finite set of best practices” instructors should be able to “answer questions about what we are doing and why” (p.6). By examining these aspects of the visual communication course, questions surrounding if our current practices are “well-motivated” (p. 6) can begin to be answered. The hope is that the data gathered from this study will lead to what Brumberger and Northcutt (2013) referred to as a “broader understanding of visual communication that will lead to more informed pedagogical choices and in turn, more effective teaching” (p. 3). In what follows, I will present implications of my study as well as those that
impact the field, such as concepts to focus on in courses, how to connect them to program goals, and the importance of supporting faculty in this process.

**Broader implications for the field**

In the beginning, the question of if a set of practices could be developed for different types of visual communication courses was asked, and really, the answer varies. While it would be great to provide a perfect map to how a course could be designed, it depends on so many factors: from the department to the institution to those teaching and developing the material. Therefore, this section will provide recommendations of things that should be considered when designing courses.

**Scaffolding degree programs**

As mentioned in chapter 5, programs need to improve their use of outcomes because meeting students where they are also requires alternative modes of assessment, such as using course and project outcomes to assess student learning and growth. Because each student comes into the classroom with different foundations of knowledge, needs, and goals, they need to be given explicit direction. Therefore, clear and purposeful learning outcomes are a way to uncover the goals of the course and, by extension, help students understand their progression within the larger concepts of the course. This then helps to remove the barriers that are often built into courses (whether intentional or not).

As a field, outcomes should be used to both guide student learning and to uncover the concepts being taught. As Brumberger and Northcutt (2013) note, by “demystifying design” we are also able to “demonstrate to students that, like writing, visual communication can and should be evaluated on explicit criteria rather than arbitrary preferences” (p. 5). SLO’s are a way to
begin this demystifying process. To do this, the SLO’s must make an important aspect of course design. As Clegg et al. (2021) noted, outcomes need to be student facing in order to be successful, which not only means a focus in the way they are physically written, but how they are presented and explained to students as well. If carefully thought through about and constructed, SLO’s can “help guide faculty and students in knowing what the course does” (Griffith et al., 2022, p. 15). Not only does this make it easier for students to understand, but using the SLO’s as a guide provides an avenue for them to “better articulate what they know and what they can do with writing and communication skills” (Griffith et al., 2022, p. 15).

In addition to a focus on writing quality outcomes, SLO’s should also be used to organize courses and programs. As shown in figure 5, the SLO’s are used to align the course assignments, readings, and exercises. Ideally, these course outcomes would also align with the programmatic outcomes.

![Figure 2. Modified purposeful design](image)

By using outcomes as a guide, it becomes easier to explain to students the skills they will be able to take away from the course. Course outcomes should align with program outcomes to better facilitate this transfer of skills. Knowing that some of the main outcomes for a degree program focus on rhetorical principles (purpose and audience), it would be useful to build out the outcomes for the course based on the ones already in use for the program. To do this, it is key to

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26 This purposeful design visual has been modified from Melonçon & Schreiber’s (forthcoming) work.
identify what is missing for the specific course. For example, in a visual communication course, there must be a focus on both design practice and theory. So, using the program base of rhetorical concepts and adding in a focus on design theory, here are some sample outcomes for the course that align with program goals:

- Produce digital and print documents using principles of design (design practice)
- Identify principles of design, such as proximity, alignment, and color use (design theory)
- Analyze documents and visuals for their rhetorical contexts, including their purpose and audience (rhetorical theory)

Because they are actionable and explicit, these outcomes operate as a roadmap of sorts to provide students with a clear picture of what they will take away from the course (see figure 5). Degree programs should operate in a way that each course builds off of another, and the skills learned within earlier courses helps prepare students for later ones. If there are multiple courses that have similar goals, then you would divide the material so that students have time to cover and engage with the material. For example, an introductory course would lay the foundation for introducing rhetorical concepts and the field at large. Then, later courses, such as Document Design or Visual Rhetoric, would build on rhetorical concepts by asking students to engage with responding or designing for different audiences and purposes. If an institution has a two design course sequence, then the first course students would take would focus on building the foundation of theory (both rhetorical and design), and then the second would expand on that foundation with a specific focus on practice. For example, at the University of South Florida, we have two separate courses in the PTC major sequence that attempt to do the work explained in this project. For example, at the USF, we also employ a split theory and practice course, however they do not look like the example courses presented in chapter 5. For example, one course, Writing
Technologies, is practice based and merges both design elements and developing students’ technological literacy in Adobe. Another course, Visual Rhetoric, is also mainly practice based, and has students complete similar assignments to the practice course outline (see figure 3, chapter 5). These courses have their strengths; however, they do not balance theory and practice well enough to fit the needs of the field. This is a core reason as to why this project is so necessary.

From this study, it has become clear that not only does this course have so many different concepts to cover, but it also must focus on other aspects, such as tools used to design, to adequately prepare students. As one participant explained, to keep students engaged, this course “has to stay broad enough so the students stay interested and can apply it to their own experiences” (Anonymous participant 14 (M2), interview, 2022). This course, similar to what technical communicators do every day, is not about creating from scratch. Rather, this course should show students how to “repurpose existing material” (Anonymous participant 15 (R1), interview, 2022) to pull everything together to “make a cohesive whole” (Anonymous participant 15 (R1), interview, 2022).

**Support**

Many faculty that participated in this study came into their departments and were handed a course. They did not have any input in the original design, or even know how this course fit into the program as a whole. In some cases, many faculty do not even have course specific expertise to contribute. As Brumberger and Northcutt (2013) explained, “most faculty members who are now asked to teach visual communication in their courses have little grounding—practical or pedagogical—in the field” (p. 3). They went on to say that most instructors have formal training in areas such as “professional writing, in rhetoric, in communication, or even in
literature”, but rarely in “graphic design or art or visual communication more broadly” (p. 3). Because of this, many faculty in the field fall back on their own “personal sense of aesthetics when evaluating visual design” (p. 4). During one interview, a participant noted that before teaching their current design focused course they had "...only ever [taken] one class about visual design throughout [their] entire life” (Anonymous participant 4 (R2), 2022, interview). Another noted that, not only did they not have experience with design, but that they "didn't really have training and technical communication” and instead they “had training and composition and literature” (Anonymous participant 17 (M1), 2022, interview).

Not only are instructors and faculty entering into these courses with little preparation, but they are often being asked to do this work unsupported. For instance, when it comes to program and course design, there are so many aspects that are left uncovered—from how a course fits into a program, how a course is actually developed, and the work that goes into creating effective assignments. Often, this is because this work is the job of a sole person within the department. This not only leads to an imbalance of labor on that one person, but it also makes it difficult for others to be involved.

While there are many who have experience in curriculum design, it is not an intuitive skill. Often, many faculty members enter into a job without having experienced administrative work of any kind, and then are left without support within their jobs. Melonçon (2022) developed purposeful design as a model to approach course and program creation, which uses outcomes as a guide to make the knowledge and skills that students will learn explicit. However, based on the data from this study, beginning to move towards effective course and program design needs to start at the very beginning. Part of what would make an effective design course, or design related course, would require both training and further support for instructors in these
roles. This support should also include training that helps instructors understand how courses are situated within the overall program, the goals of the program and course, and how each course operates within a larger program. This support should also make it clear that beginning to design these courses cannot happen without first considering who the students are that are being served, what other courses are already in play, and the expertise available to create these courses.

There is a need for a more critical approach to how instructors and faculty are trained to create courses. In order to do this, departments and instructors must be exposed to the inner workings of course and program creation. Which means, to create and design courses that are useful to students, we must continue to reflect on and redirect the decisions that let us create these courses. For example, a more thorough understanding and explanation of how courses work within a degree program, as well as how programs work in general. Additionally, the work done must be continually updated and revised to account for new practices. We cannot expect that after creating a course, we can forget about it for years to come.

Technological literacy

Within technical and professional communication, there has been discussion of how the field has included these skills into the curriculum (Cargile Cook, 2002; Hovde & Renguette, 2017; Brumberger et al., 2013; Carrington, 2015; Burnham & Tham, 2021). Cargile Cook (2002) argued for a different way of thinking about literacies in the field, and explained that “proficiency is only one component of technological literacy…technical communication students must also be able to serve as facilitators for the users of technology” (p. 14). Carrington (2015) presented a curricular showcase and argued that teaching technology should be based upon two main principles: 1) students need to learn to teach themselves new software and 2) technology instruction should not be divorced from writing, editing, and design principles” (p. 231). The
author emphasized that while there are many ways that courses within TPC have included instruction on technology, such as software tutorials, software workshops, or through dedicated courses (Carrington, 2015, p. 237), the fact remains that “students benefit from practicing this skill in their studies before they enter the workplace” (Carrington, 2015, p. 245). Hovde and Renguette (2017) examined the stages of developing technological literacy and developed a framework to help faculty design courses that encourage this skill. The authors argued that in order to effectively teach technological literacy to students, faculty must understand its complexities” (Hovde & Renguette, 2017, p. 396). Hovde and Renguette (2017) argue for courses designed with these four levels in mind in order to “guide curricular decisions to provide education that allows students to develop abilities at all four levels” (p. 396). The first level, functional, is seen as the “initial how-to” leave (Hovde & Renguette, 2017, p. 396). This level sets the foundation for the other three levels, and focuses on “using technology efficiently and effectively to complete technical communication work” (Hovde & Renguette, 2017, p. 397). The second level, conceptual, builds off of the functional and focuses on “understanding concepts that underlie the technology” (Hovde & Renguette, 2017, p. 397). The third level is the evaluative level. This level focuses on ”choosing tools to fit the requirements of situations or contexts” (Hovde & Renguette, 2017, p. 397). The evaluative level “combine[s] understandings of the functions and concepts of tools with other contextual criteria to evaluate options and select the best tools for specific communicative tasks” (Hovde & Renguette, 2017, p. 398). The final stage, critical, requires students to “understand how technology shaped communication practices as well as how communication practices affect technology” (Hovde & Renguette, 2017, p. 397). It is in this final level that students are encouraged to “think deeply about the first three levels and to advocate for users, and to behave in ethically and socially responsible ways”
What is important to take away from this framework is how many different levels students can enter the class with, as well as areas for building on skills they already have. Including these levels at varying stages within a curriculum, ideally in a scaffolded manner, would benefit students. Hovde and Renguette (2017) argued that programs cannot expect students to develop technological literacy on their own and, instead, “students may benefit from deliberate instruction either in stand-alone, tools-focused courses or in technical communication courses in which learning of tools is integrated into course objectives and activities” (p. 396). There must be a focus on technological literacy for students to be successful. Students need to be taught the skills to work with technology, not just the steps to use the technology itself. According to Brumberger et al. (2013), “students who are technologically fluent demonstrate both a conceptual understanding of technology tools and an understanding of the ethical, social, and political aspects of those tools” (p. 179). As seen in the data from previous chapters, both faculty and students find the use of technology to be a challenge. In both cases, this difficulty comes in the form of understanding how specific tools operate as well as having access to them financially. Additionally, students must be taught to understand that the tools they use “do not make the design” along with how design theory “undergirds the informed use of the tools” (Northcut & Brumberger, 2010, p. 461). This means that there remains a need for students to be taught the underlying principles around design, instead of just how the technology works. As Hovde and Renguette (2017) noted, “Technical communication programs serve students best if they teach them how to think about the contexts in which the tools are used, how to use and understand concepts that can be transferred to different contexts, and how to learn new tools quickly” (p. 399). By highlighting technological literacy as a necessary skill and making this
skill explicit in course goals and assignments, students are able to gain competency in a much needed area.

*Value evaluation over assessment*

The fourth, and final, implication is to highlight the need to focus on evaluation, rather than assessment as the main goals of programmatic research. Some scholars have begun to work towards this. For instance, Sonnenberg et al. (2022) took an evaluative approach and analyzed an information design assignment to examine areas of the assignment that were not working. The authors sought to “understand this assignment at the micro level of the specific course, and the macro level of pedagogical practice and program evaluation” (p. 4). This speaks to the focus on student learning as the main goal, rather than assessment as it is traditionally thought of. As Melonçon and Schreiber (forthcoming) note, the difference between programmatic evaluation and assessment is that evaluation “situates data, whereas assessment posits the data collected as the only data point” (p. 3). By doing this, the authors argue that by focusing on evaluation, assessment becomes “part of a conversation instead of a means to an end” (Melonçon & Schreiber, forthcoming, p. 3). Shifting the approach to bettering practices for students from assessment to evaluation promotes an “iterative and reflective approach to support student learning rather than as a means of programmatic assessment (Sonnenberg et al., 2022, p. 4).

As mentioned before, programmatic work is key to understanding the field and what it values. The assignments used, the design of the course, and how programs and degrees are structured all point to how what the field views is important. As shown in the model courses, the blended theory and practical course is a much more effective way of structuring these courses. It then follows that if the field values the concept of design as a learning outcome or necessary
skill, then the field must reflect on their own practices and work to enhance their own pedagogical approaches.

Future research

This study ultimately provides a baseline for future research, for example more work on specific types of courses from a field wide perspective and sustainable practices for TPC programs. As I am finishing this project, I want to highlight some areas where this research should be expanded on. The first avenue for future research is to focus more on individual courses, while still taking a field wide approach. Having more data on courses within TPC and discussing major patterns seen in each would help to establish consistency within the field. This consistency can also provide an opportunity for various disciplines within TPC to be involved without losing their individuality. Veltsos et al. (2021) discussed applied rhetoric in an attempt to explain how disciplines, such as business communication and technical communication, can come together without ignoring their individual aims. Applied rhetoric, according to the authors, includes using “rhetorical expertise in innumerable contexts to effect positive change in the world, including but not limited to our classrooms” (Veltsos et al., 2021, p. 202). In this case, applied rhetoric is “uniquely positioned to clarify ideas that help people accomplish things” and to “explicitly connect research to teaching” (Veltsos et al., 2021, p. 202). It should also be noted that applied rhetoric “creates a space for scholars to move from talking about rhetoric to actually doing rhetoric” (Veltsos et al., 2021, p. 210) by requiring scholars to inhabit a middle ground between an overreliance on either theory or practice to guide our judgment” (Veltsos et al., 2021, p. 211).

In addition to consistency, gathering and updating this data will require years of research—especially because programs are constantly changing. To begin to gather data for
other courses, it would be useful to begin similar to this study. This includes using a pre-set code to determine what types of courses are included in the category, and then expanding on them to generate a more detailed set. For example, expanding this current study could develop expanded codes off of the original codes (*design* and *viz*) used by Melonçon and Henschel (2013). These codes could account for the variations in courses, such as the amount of blended theory and practice courses.

Moreover, an aspect from the faculty interviews is that the field needs to do more sharing of pedagogical approaches to courses. The materials gathered, while representative in some ways, also lacked details that could provide additional clarity for faculty, program administrators, and students. For instance, while I was excited to learn from faculty in the field, I was disappointed to discover that there was so much hesitancy when it came to requesting materials for courses in particular. This reluctance, or hesitancy, was similar to that felt when I asked them about how theory and practice operated within their course—almost as if they were worried their materials weren’t “right” or finished enough to be useful. While I can understand that they might be apprehensive, how are others supposed to learn how to do this work and teach these courses if current faculty do not share what they know? Ultimately, what this research into visual communication courses suggests is that there is ample room (and need) for additional examination of specific courses within TPC programs. Clegg et al. (2021) identified both *design* and *technology* outcomes as being consistent among programs. Knowing that these are seen in programs across the field, but are described so differently, it can be understood that these courses continue to need more research. While the field as a whole has made strides towards sharing information on the TPC service course, it seems when it comes to courses in the major there is
some sort of secrecy. In the field of TPC, we need to cultivate a culture of being more open and sharing common teaching practices around courses.

In addition to sharing materials, I would also suggest that those in the field use this as an opportunity to begin to uncover their own understanding of how theory and practice operate in their own classes. While there has been discussion in TPC around the “theory practice binary”, I would ask, based on the data gathered in this study, is there truly as much of a split as we believe? I refer, specifically, to the interview participant's responses to the question, “How do you understand the difference between theory and practice?” This question had a tendency to promote responses that focused on how assignments were designed, rather than on their personal approach to the concepts as a whole. As noted in chapter 5, participants often shifted the focus from their personal views on the topic of theory and practice, to how the specific course assignments fit into either category. While many of these responses lacked direction on participants' own view of theory and practice, it was interesting to note that many of them advocated for a balance between these two concepts. This brings me to my final question, if instructors and those who design courses view the current curriculum as blending both, then why does there remain a focus on why (or if) this split exists? The students we teach need to have a thorough understanding of how theory informs practice or, as Odell explained, an “ongoing interaction between theory and practice” (Odell, 1993, p. 6), because “theory often figures prominently in efforts to bring about fundamental changes in practice” (p. 2).

Additionally, more research should focus on creating sustainable programs. To do this, there is not a one fits all solution. Building a sustainable program requires more than just keeping an eye towards student retention. It means keeping students centered in decisions and considering the ramification of program wide decisions. For example, dedicating time to creating
an aligned program approach that includes specific goals, rather than creating courses because faculty think they are interesting. Melonçon and Schreiber (2021) argue for critical reflection in order to develop a “sustainable collective identity through reflection and maintenance of components of TPC” (p. 10). They explain that both reflection and maintenance are the “cornerstones of sustainability” (p. 10) and this process “involves recognizing stable features of the assemblage as well as emerging in order to build and maintain a sustainable and rich TPC collective identity” (p. 10).

It is through this critical reflection that the field of TPC can “acknowledge the shifting and changing of its collective identity over time” (p. 13). Creating a sustainable program and course means that these are being reflected on and updated as the nature of the field changes. The taxonomy laid out by Melonçon & Schreiber (forthcoming), begins the process of continuous improvement. In Melonçon & Schreiber’s (forthcoming) taxonomy for research questions, my questions fell into the description and inquiry category. For instance, the first two questions that direct this study are: 1) What do the range of design courses look like in the field of TPC and 2) what are design courses teaching? These two questions fall into the description category because the goal is to determine what information exists within the field to establish a baseline of information for the field. Once answered, these questions can be used as a foundation to ask further questions, such as “why do courses use one method over another”. My third question in this study asks: What would an effective design course look like? This question falls into the inquiry category because the goal is to “reimagine or incorporate or develop new practices and approaches” (Melonçon & Schreiber, forthcoming, p. 10). In this case, this question aims to develop a new approach to visual communication courses in TPC. Identifying where your research questions fall into the taxonomy not only helps you to get an understanding
of what kind of data (answer) you’ll get, but it also provides a way to generate questions to ask in the future. The questions asked ultimately lead to further investigation, thereby contributing to the iterative process of GRAM. Future questions based off of this study could include those from the second and third categories: practice and impact. For practice, researchers could question the current methods for teaching specific design technologies, because the goal is to understand what is currently working (or not) in programs and courses (Melonçon & Schreiber, forthcoming, p. 8). For impact, we could question how courses structured through outcomes influence student understanding of assignments and goals, because this question tries to uncover the impact of TPC on student learning (Melonçon & Schreiber, forthcoming, p. 9). Overall, it is crucial to have an iterative and sustainable process, such as Melonçon & Schreiber’s taxonomy and GRAM, to evaluate the need of not just the field, but of programs and students as well.

Conclusion

We must be aware of who our students are and the knowledge they enter with. Understanding that in order for students to be successful, we need to acknowledge that students have varying degrees of knowledge and the key to their success is a supportive classroom where they can strengthen their skills. Expecting students to understand how to critically think, without giving them the opportunity to learn and practice does not help them. Taking larger concepts, breaking them down into manageable pieces and practicing them helps students build on their own knowledge while making connections to other areas of their lives. Clear and purposeful goals are a way to do this, specifically, assignment goals that align with course goals, and so on. Goals, or outcomes, for assignments, courses, and programs can all help in uncovering the reasoning behind writing courses and their tie to professional practice. By designing the course
and its outcomes in this way, students are able to gain knowledge based on what knowledge they began with.

And so, I return to my students and their questions about design principles (that I couldn’t answer). When I entered this project, I assumed that, if I researched diligently and asked the right questions and gathered enough data, I would be able to produce the succinct, practical answer my students needed. Turns out that’s not true. As this work attests, students are unique and programs need to be tailored to those unique needs. As it turns out, there is no one right way to teach a visual design course, and so what’s really important is that we have a process, iterative and sustainable that evaluates the needs of the institutions, faculty, and most of all students. In exploring how the field approaches visual design courses, we have uncovered how essential thoughtful, data-driven programmatic research is to student learning.
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Appendix A: Interview Questions

Institutional

● How many students are served in a year?

● Who primarily teaches these courses? Breakdown of faculty? (i.e., Tenured or tenure-track professions, continuing instructors, visiting instructors, graduate students, adjuncts)

● How are the student learning outcomes developed? Are they varied among courses? Do program outcomes influence the development of course outcomes?

● Who creates/develops courses (Committee curriculum decision or individual)?

● Is there a process for revising courses (i.e., outcomes, assignments, etc.) based on student or instructor feedback?

Program

● Can you describe your background and/or training as it relates to technical and professional communication? As it relates to the concept of design?

● What challenges have you faced when teaching these courses?
  ○ How did you overcome these challenges? What was your approach to facing these challenges?

● What is your approach to teaching these courses?
  ○ What works well?
  ○ If interviewee sent materials: Why did you choose the readings you did? What do they get students to do? What are the main assignments? What do you expect the students to do?
● How do you approach feedback and/or revision in your course?

● How do you approach reflection in your course?

● How do you view the role of theory within design courses?
  ○ How do you understand the difference between theory and practice? Does this play into your pedagogical or programmatic development? If so, how?
Appendix B: IRB Exemption Letter

December 13, 2017

Lisa Meloncon, PhD
English
4202 East Fowler CPR 303
Tampa, FL 33620

RE: Not Human Subjects Research Determination
IRB#: Pro00033052
Title: Curricular Practices in Technical and Professional Communication

Dear Dr. Meloncon:

The Institutional Review Board (IRB) has reviewed your application. This is Not Human Subjects Research because the information obtained is not about the individuals; therefore they are not human subjects. Syllabi would not be considered private information about the instructors. Because the USF IRB does not provide oversight of NHSR studies, please remove all references to the USF IRB and its oversight from any consent documents you may wish to use. As such, the activities do not meet the definition of human subject research under USF IRB policy, and USF IRB approval and oversight are therefore not required.

While not requiring USF IRB approval and oversight, your study activities should be conducted in a manner that is consistent with the ethical principles of your profession. If the scope of your project changes in the future, please contact the IRB for further guidance.

If you will be obtaining consent to conduct your study activities, please remove any references to "research" and do not include the assigned Protocol Number or USF IRB contact information.

If your study activities involve collection or use of health information, please note that there may be requirements under the HIPAA Privacy Rule that apply. For further information, please contact a HIPAA Program administrator at (813) 974-5638.

Sincerely,

Kristen Salomon, Ph.D., Vice Chairperson
USF Institutional Review Board