From theorizing to practicing multimodality: The prevalence and function of multimodal terminology in writing textbooks

by

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The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this dissertation. The Graduate College will ensure this dissertation is globally accessible and will not permit alterations after a degree is conferred.

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DEDICATION

For Kate and Oliver for their love and support.

I look forward to many more adventures with both of you!

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ABSTRACT

Writing studies scholarship over the past few decades indicates that writing programs and instructors face an increasing number of topics associated with digital and multimodal communication that need to be addressed in the writing classroom (Anderson et al., 2006; Arola, 2010; Clark, 2010; Robinson et al., 2019; Selfe, 2007; Shipka, 2011; A. F. Wysocki, 2004). Broadening the scope of writing and writing instruction creates new opportunities for writers and teachers to engage students, but the opportunities can be unwieldy and burdensome simply because of their number and variety. The multifaceted nature of writing studies disciplines may be a strength, but the differences in various areas of writing studies may also make it difficult to see where the commonalities lie. According to Derek Mueller (2017), studies that examine practices at the disciplinary level are valuable, especially during periods of change, because they can help clarify and strengthen connections in the field. One of the ways disciplines are mapped out is through an analysis of core concepts and language. To help educators of all types manage and plan for rapid changes, we need tools that reliably consolidate recent practices in writing instruction, resources like those described by Derek Mueller that can represent disciplinary trends. This dissertation uses distance reading techniques to identify the most frequently covered digital and multimodal topics in writing textbooks.

As writing instruction continues to adapt and accommodate new tools and genres, I argue that researchers and educators should consider the materials used to teach. Textbooks embody both content and pedagogical commitments, and as a substantial element of the ecology of writing instruction, textbooks can exert authority as innovative or resistant to disciplinary change. This dissertation establishes a methodological framework for monitoring changes in writing studies disciplines. Chapter 3 outlines a process that has three distinct stages: (1) a

specialized corpus of writing textbook indexes , (2) a frequency analysis of wordlists and co-occurring words, and (3) content analyses that examine the pedagogical treatment of digital and multimodal terms. The results, presented in chapter 4, include a list of the 50 most frequently used digital or multimodal words that appear in writing textbooks and the findings quantitative content analyses of passages containing the words *color*, *fonts*, *Facebook*, and *Twitter*. Collectively, the findings provide insight into the digital and multimodal topics that writing textbooks include and the limited treatment of those topics. Based on the findings, chapter 5 includes recommendations for instructors and administrators for managing change and meeting the goals of multimodal pedagogies.

CHAPTER 1.   INTRODUCTION: ARE WE TEACHING MULTIMODALITY?

> *It may well be that we have to rethink what we are teaching, and, in particular,*
> *what new learning needs literacy pedagogy might now address.*
> (The New London Group, 1996, p. 61)

Writing studies scholarship over the past few decades indicates that writing programs and instructors face an increasing number of topics associated with digital and multimodal communication that need to be addressed in the writing classroom (Anderson et al., 2006; Arola, 2010; Clark, 2010; Robinson et al., 2019; Selfe, 2007; Shipka, 2011; A. F. Wysocki, 2004). Learning management systems, digital textbooks, and a growing number of devices are all manifestations of the digital world in which we now write. Many of these scholars refer to the 1996 manifesto written by the New London Group that outlines a comprehensive re-imagining of literacy instruction.

In the decades since, writing program administrators and writing instructors have been faced with the task of altering the ways we teach writing in fundamental ways. A literal example of this redefinition came in 2006 when Andrea Lunsford offered a new definition for writing:

> A technology for creating conceptual frameworks and creating, sustaining, and *performing* lines of thought within those frameworks, drawing from and expanding on existing conventions and genres, utilizing signs and symbols, incorporating materials drawn from multiple sources, and taking advantage of the resources of a full range of media. (2006, p. 171)

Lunsford's new definition of writing is notable for its focus on a wide range of activities that may not even include traditional notions of writing as printed text. It seems that any form of communication, including speeches, video essays, podcasts, interpretive dance, architecture, video games, and more, fall under this definition of writing. Broadening the scope of writing and writing instruction creates new opportunities for writers and teachers to engage students, but the opportunities can be unwieldy and burdensome simply because of their number and variety.

Later, I further discuss the variety problem and the ways the field attempts to provide processes for making sense of and evaluating the innumerable approaches to the teaching of writing. What is clear, though, is that in the disciplines that make up writing studies we need to more fully and more regularly, measure, report on, and evaluate current practices. It is the goal of this study to understand the digital and multimodal topics that are being addressed in writing classrooms through systematic and replicable methods. Such an analysis will help scholars and educators address the need to adapt policies, curricula, and professional development needs caused by the increasingly technological nature of writing instruction. This ongoing challenge was recently highlighted by a recent study on the use of digital tools in which Robinson et al. concluded, "Our findings highlight a critical need to document the ways our field adapts to and deals with changes related to digital tools and pedagogy" (Robinson et al., 2019, p. 15). The article by Robinson et al. represents a type of scholarship that examines and characterizes disciplinary practices, a type of scholarship that can be used to make sense of a wide ranging and complex field of study.

According to Derek Mueller (2017), studies that examine practices at the disciplinary level are valuable, especially during periods of change, because they can help clarify and strengthen connections in the field. Mueller calls such studies forms of discipliniography, which he defines as "a genre that writes the field and is written by scholars in the field, and as such is a genre that is responsive to the growth of the field and its changing, contested state(s)" (2017, p. 13). In other words, scholarship that examines theories and practices at the disciplinary level is useful because we can compare more local experiences and theories about writing and writing instruction to broader trends. Scholarship that makes sense of diverse, expansive, and evolving intellectual landscapes are essential for the livelihood of a discipline because it creates shared

understanding about the subjects and values of a field of study, or at least it furthers the conversation in productive ways. Research that consolidates and aggregates information about a field of study is useful for scholars, teachers, WPAs, and graduate students new to the field or keeping up with current trends.

The multifaceted nature of writing studies disciplines may be a strength, but the differences in various areas of writing studies may also make it difficult to see where the commonalities lie. While writing may be a common factor in each area of writing studies, the expertise of practitioners comes from divergent histories and values that are embodied by composition, technical writing, and English for academic purposes. One of the ways disciplines are mapped out is through an analysis of core concepts and language. In a recent article in *College English,* Dylan B. Dryer shows that shared language (language about writing, audience, rhetoric, etc.) can come to hold incompatible meanings among seemingly related areas of specialization, and he makes a case about how overlapping and divergent understandings within our field should be a concern. He writes, "The personal cost to researchers of prematurely rejected manuscripts or unexpectedly hostile questions is high; the systemic cost of missed opportunities for the discipline to deliberate its disagreements is incalculable" (Dryer, 2019, p. 221). The problem is not that we disagree about the importance of writing and communication, but that we disagree in our visions of fundamental aspects of communication. Ideological differences among scholars may not seem particularly surprising or troubling; however, disagreements about how we view core concepts in our field has significant implications for the ways we teach.

The diversity of perspectives that make up writing studies disciplines is not a new phenomenon. While tracing the intellectual landscape of composition studies, Janet Lauer

described the field as 'dappled' as a metaphor for "complex and messy" (Lauer, 1984, p. 28).

The diversity of approaches and ideological commitments is a strength, but it also comes with

notable challenges. For any field of inquiry to sustain itself, there must be avenues for novices to

gain knowledge and experience in the pursuit of expertise. In the same article, Lauer wrote,

> *Because graduate students' research goals are often fluid, it is difficult to determine the kind of background and skills they will need. Should they emphasize rhetorical history with its requisite languages? Philosophy or linguistics and analytic skills? Should they take courses in psychology, sociology, or even biology and receive training in statistics and empirical research design? In short, if newcomers are to become both intelligent critics of existing work and qualified researchers, what should their graduate work encompass and emphasize? (1984, p. 27)*

As newcomers to the field, graduate students are faced with the daunting task of learning a wide,

complex, and challenging intellectual landscape.

In a similar observation, Peter Elbow observed that teaching writing requires an ability to

embody perspectives that are "contrary to each other, and thus tend to interfere with each other"

(Elbow, 1983, p. 327). In scholarly circles, diverse perspectives on genres, skills, and practices in

writing and communication may be an encouraging sign, an indication that the field is active and

addressing meaningful problems. However, when we consider the relationship between writing

studies scholarship and the ways we practice through teaching, we may see the importance of

establishing meaningful, stable models. Consider the novice graduate teaching assistant working

diligently to develop as a professional or the faculty committee working to update course

objectives and programmatic philosophy. Collectively, we rely on disciplinary maps to guide our

work.

As instructors and administrators work to enact practices that reflect modern notions of

literacy, many have expressed interest in or anxiety about who is qualified to teach such a broad

range of technologies and modes (Blakely, 2015; Eldred, 2006; Gerding & Johnson-Sheehan,

2016; Leverenz, 2008). When faced with broad calls to teach digital technologies and genres,

many writing instructors are unsure where to start, but there is also broad consensus that this wider perspective of literacy can't be ignored. Pursuing professional development opportunities, updating curriculum, or changing policies requires a clear understanding of a vast and shifting landscape. An administrator is unlikely to be expert in all tools and genres that are being integrated into writing courses, and a dominant hierarchy or heuristic has yet to emerge that establishes guidelines and selection criteria. To help educators of all types manage and plan for rapid changes, we need tools that reliably consolidate recent practices in writing instruction, resources like those described by Derek Mueller that can represent disciplinary trends. The methods that establish patterns in a discipline rely on large collections of data, such as journal articles and conference programs. In this dissertation, I use textbooks.

Analyzing textbooks is a form of textual analysis, which is a widely-practiced method for studying language and ideas in the humanities. Researchers and graduate students should consider textbooks as a useful set of artifacts to examine, reflect on, extend, or challenge ideas being discussed in disciplinary forums (e.g. journals and conferences). Textbooks may enact ideologies in a variety of ways, through the selection of content, tacit ideology, and their authoritative ethos. By systematically examining textbooks, many scholars have generated insightful questions about progress, practice, and writing research. Such studies highlight contested definitions and uncover ideologies that are important to the discipline. Methods of textbook analysis bridge theory and practice and allow researchers to both reflect and advocate, especially during or after disciplinary shifts.

Using textbooks as an object of study requires a framework for understanding their form and how readers, both teachers and students, use them. In this chapter, I provide a rationale for

analyzing textbooks as a way of understanding how multimodality has entered into current teaching practices. I do so by:

1. Describing some important characteristics of textbooks and their relationship to teaching writing at the college and university level
2. Positioning teachers and administrators as the primary audience of textbooks
3. Establishing ways consistent features in a single genre create the opportunity for systematic comparison in the form of thin description and distance reading

Textbooks and disciplinary research: A theoretical framework

> *On the one hand, textbooks have been used as indexes to the composition discipline's evolution and as chronicles of the discipline's history. On the other hand, textbooks are seldom considered worthy scholarship.*
> (Gale & Gale, 1999, p. 3)

Writing textbooks, as we use them today, have developed alongside the field of English composition. Writing instructors may consider and draw on a wide range of materials when teaching writing, but textbooks themselves present subject matter through pedagogically motivated strategies. That is to say, textbooks not only present information, they also attempt to guide the instruction and learning process. According to Robert Connors, the first textbooks, that is rhetoric books with explicitly pedagogical elements, appeared in the early 19th Century. The history of Blair's *Lectures on Rhetoric and Belles-Lettres* illustrates an evolution from books focused on rhetoric and theory to books produced with explicitly pedagogical aims. Earlier editions of the text presented a synthesis of rhetorical theory, while later editions included questions at the end of each chapter (Connors, 1986). Understanding how rhetoric books developed into textbooks can help scholars understand the connections between modern writing courses and traditional rhetoric. The history can also help us understand that textbooks themselves employ pedagogical strategies that may or may not align with our own perspectives on teaching and learning.

The genre of textbooks can be differentiated from other textual artifacts studied in the humanities (like the novel, short story, or poem) because textbooks have primarily pedagogical and utilitarian goals. Examining a variety of textbooks will reveal numerous approaches representing a range of pedagogical theories. The approaches to instruction embedded in the texts represent one layer of the inherent, tacit ideologies that can be addressed by researchers. Carefully attending to the ways textbooks articulate ideas can help scholars reveal points of disagreement or the limitations and misgivings encoded within. David Bleich, for example, argued that the ways textbooks address students, through the language of direct instruction, is antithetical to learning that is based on open inquiry. He explained, "textbooks in writing do not ask students to relate their own knowledge, experience, hopes, and wishes to the problems of writing and language use" (1999, p. 32). While many textbooks do now ask students to reflect, the ways in which textbooks function as authorities in both tone and function may encourage students to see ideas as complete or finalized as they are presented in the text. Instructors that prefer other approaches to teaching must, then, find productive ways to work against the text.

With a wider perspective, teachers and students might be able to situate textbooks into larger conversations about writing. Doing so could encourage a stance that sees the textbooks as embedded in socially constructed systems of knowledge. In an attempt to better understand textbooks as objects, Eleftherios Klerides wrote, "Using history textbooks as a case study, the article argues for an imagining of the textbook as discourse and genre: the textbook signifies the world from a particular perspective and constitutes certain modes of social interaction" (Klerides, 2010, p. 49). By examining history textbooks, Klerides developed ways of understanding textbooks that can help other researchers analyze textbooks or help authors think about the work of producing textbooks. By drawing attention to the social nature of textbooks,

Klerides is offering an alternative view to the idea that textbooks are static repositories of information, an argument that is familiar in scholarship about genre. Developing such a perspective in the classroom may be possible and would help both students and instructors approach the content of textbooks critically. The feasibility of such an approach, however, is beyond the scope of this study.

Not only can textbooks be understood based on the ways they are intertextual or bound by genre conventions; they should also be considered in the context of the environments they are read. Textbooks are one element of the classroom environment, and to understand how textbooks operate we can consider the overlapping interests of the teacher, the program, the materials, and the students (among other factors). Students rarely have the opportunity to directly influence the textbook choice of a course; instead they purchase the assigned textbook because they have been directed to do so. Therefore, it may be useful to position teachers as the primary 'consumer' of writing textbooks (Tibbetts & Tibbetts, 1982; Welch, 1987), but doing so only underscores the authority that students presuppose for the text. If the teacher selects the materials, then students can rightfully assume that their success is dependent on learning and accepting the information in the textbook. In other words, by default, students are likely to assume the authority of the teacher and the textbook are inter-related and potentially interchangeable. Textbooks, then, represent a useful opportunity for examining the tacit pedagogical values that we practice.

Target audience

> Drink my new process potion, and your students will never again write another fragment or develop nagging splicitis. Double bubble, PROCESS! SENTENCE COMBINING! HEURISTIC! Repeat the magic words, and all the pain of composing will disappear! And don't forget to send the box top and 25 cents to Carnegie-Mellon
> *(Tibbetts & Tibbetts, 1983, p. 732)*

Writing textbooks are written for multiple audiences, and acknowledging each text clarifies the constraints of the genre. From a common-sense perspective, textbooks are written for students. After all, students are the largest group of textbook readers, and the teacher has already proven themselves expert enough to teach the course. Studies examining textbooks can benefit from positioning students as the target audience. Thinking this way, we can understand why some textbooks make appeals to current popular culture and media—to keep the interests of students. Or we can examine passages to understand the levels of detail provided, the assumed knowledge of readers, and more. For the goals of this study, however, students are positioned as a secondary audience because students do not choose textbooks; they are assigned texts to read. Instructors and administrators select textbooks, which is one reason why publishers often build relationships with faculty—to learn about the preferences and expectations of teachers.

There are multiple reasons why we might want to analyze textbooks. Every semester, in fact, we are faced with the challenge of selecting appropriate materials for our students—which means we must choose a textbook (or perhaps a committee selects one for us). The responsibility can become a burden when comparing the full range of textbooks available. We can skim through dozens of textbooks trying to give each a fair chance at catching our attention, but after choosing there is still that lingering possibility that a better textbook is still out there or that we misjudged. Ideally, the textbook should be appropriate for the course, the teacher, the curriculum, and the cost while also representing the most current and significant information.

The responsibility for choosing, by ourselves for our own classes or by committee for large programs and everywhere in between, should also remind us that textbooks are often written for particular approaches to the classroom. Many of those approaches work at some institutions while not at others, as argued by Holly Hassel and Joanne Baird Giordano, who make

a strong case for the increased training and scholarship in the area of two-year colleges, highlighting the problem of standardized writing instruction. Writing instruction *must* take multiple forms, and our textbooks are most beneficial when they fit the context they are used in.

In order to assist with the process, some scholars have developed tools and strategies for analyzing textbooks during the selection process. Jean Malmstrom offers an updated "instrument for the analysis of language textbooks" based on the instrument published by Dora V. Smith. While introducing the instrument, Malmstrom explains how previous attempts at comparing textbooks ran into trouble in the attempt to quantify the strengths and weaknesses of the textbooks, and she explains that researchers had difficulty agreeing about how various aspects of the textbooks should be valued (1962, p. 39). Because teachers and researchers are likely to value different elements in a text, the prospect of quantifying the overall quality of a textbook seems like an unattainable goal. Instead, textbooks could, and perhaps should, be evaluated using numerous metrics representing a variety of possible goals and features.

Malmstrom accounts for this difficulty by creating an instrument that assists in comparing individual elements instead of striving for a holistic judgment. She explains that by comparing many textbooks using the same instrument, "the analytic form is offered as an intellectual aid to scrutiny rather than an arbitrary template for evaluation" (1962, pp. 39–40). Malmstrom provides ten categories, each with its own list of items to consider. For example, the category "Authority and Reliability of Author(s)" has a list that includes about the perspective, reputation, and goals of the author or authors. Likewise, the category "Motivation of Students" has items focused on the inclusion of information relevant to the interests of students, practicality of devices, and the likelihood for stimulating critical thinking. Overall, the goal of scholarship

like Malmstrom's article is to provide teachers and administrators with effective tools for analyzing the fit of textbooks.

One concern that researchers regularly have is about the relationship between textbooks and scholarship, especially since textbooks are a genre with social demands that differ significantly from the expectations of scholarship in the same field. In their discussion about the relationship between textbooks and scholarly research, Arn Tibbetts and Charlene Tibbetts remarked, "A textbook is a product. By this we mean that people design it, produce it, market it, sell it" and they are written not for the student, but for the teacher or committee that selects them for a course (Tibbetts & Tibbetts, 1982, p. 855). At the time of writing their article, Tibbetts and Tibbetts had written, by their count, 14 textbooks—some of which were second editions. They also remind us that many textbooks are not financially successful (Tibbetts & Tibbetts, 1982, p. 855). The pressure to conform to what the consumer wants is part of any economic endeavor, and writing textbooks is no exception.

Through the economic constraints of supply and demand, textbooks are unlikely to represent the *avant garde*, but are instead going to gravitate towards established practice and theory (even when scholarship indicates flaws). Tibbetts and Tibbetts go as far as to suggest that textbooks not only don't represent current scholarship, but *they cannot* represent the most current scholarship. They explain, "Teachers do not mainly want textbooks based on research in composition…*Teachers want what is familiar to them*" (Tibbetts & Tibbetts, 1982, p. 856). Many teachers may be suspicious about the validity of new methods or material that seems to break from established practice, seeing it as a gimmick or fad. Even if they believe the new scholarship, they may select a more familiar textbook anyway rather than change practices that

appear to be working. If a textbook begins to depart from established or familiar territory, teachers will need to adapt their curriculum.

While Tibbetts and Tibbets present a view of textbooks that might be frustrating to composition scholars seeking to change the discipline, scholars can take comfort knowing that textbooks themselves are more useful, then, for understanding how writing is being taught more widely. While textbooks are certainly an imperfect representation of complex systems, they are cultural artifacts that can help researchers gain insights into what teachers value and practice *in the classroom*, especially in a field that focuses so intently on pedagogical issues. And textbooks are not alone. Coursepacks also provide insights into the cultural values and beliefs of teachers as demonstrated by Pflugfelder. Pflugfelder discusses coursepacks as artifacts of study that reveal "multiple, competing ontologies—some on their way out the door, some on their way in, always revealing and concealing" (265). Examining curricular documents, like coursepacks or textbooks, can give us insight into the culture of writing instruction, as a theoretical and practical activity. Textbooks may not represent the most valuable and current research of a discipline, but they do represent attempts at articulating disciplinary knowledge in a structured and engaging way for learners and for experienced teachers. And examining our theories and practices through these concrete representations allows us to ground our critiques and inquiries.

While textbooks are written for a variety of purposes, they occupy a unique space in the classroom. While researchers that analyze textbooks often note the discrepancy between theory and practice, the content of the texts are not the only consideration. The text functions as a pedagogical force, one that may or may not align with the goals of instructors and students in the course. There are a lot of pressures in the classroom that may lead us to view textbooks as repositories of established facts. However, we also know that textbooks are written by real

people with varying values and interests. And even though it is the student who has the most knowledge to gain from reading a textbook, it is the teacher or textbook committee that is the real consumer. In this way, the textbook is more a tool for the teacher than it is for the student.

Textbooks as Artifacts

> *"Who buys these books with outdated theory? English teachers do. English teachers whose knowledge of composition theory is not up-to-date. In many cases, it has never existed.*
> (Stewart, 1978, p. 175)

Before thinking about textbook analysis as a method, it is worth considering the textbook as an artifact. The relationship between textbooks and writing instruction is not simple nor monolithic. As a genre, writing textbooks embody their own theories, ideologies, and preferred pedagogical approaches. As the primary audience or consumer, teachers and students may view textbooks as authoritative or antiquated, facilitator or counterpoint, necessity or extravagance. As an object of study, textbooks provide insight into the communities that rely on them. As artifacts, these texts may embody numerous value systems as they are produced and circulated, and it is important to consider more than the content, but also the various functions of these artifacts. Ehren Helmut Pflugfelder categorizes textbooks and coursepacks (cobbled together collections or texts and other media for teaching) as "pedagogical things" to suggest that as objects, they are understood very differently, ontologically, by people over time and with varying interests (248). By understanding how we produce, interact with, talk about, and use textbooks, or other pedagogical things, we can better understand the ways textbooks represent the teaching practices of writing classrooms. So, we can start with questions like what are the conditions that produce textbooks or determine the value of a textbook? What are the motivations that lead scholars to write them or teachers to select them?

The most generous, optimistic, and idealized view of textbooks relies on the idea that authors and publishers work tirelessly to produce the most current, engaging, and successful texts possible. As invested educators, we may like to see ourselves selecting and requiring the most well-researched and beneficial materials for our students. We may expect, at least, that an updated and popular textbook from a reputable publisher will ensure that our students are benefiting from current, well supported theories on teaching and writing. However, like most assumptions, the reality is more complicated, and scholars often note the disconnect between textbooks and contemporary scholarship. For example, after making a statement about the number and variety of textbooks that are published each year on the subject of 'freshman writing,' Kathleen E. Welch once observed, "the material presented in these numerous textbooks bears little relation to the large work on composition theory that is widely available" (1987, p. 269). She went on to explain that the information presented in the texts are based on "mostly unacknowledged theories" that she saw as representative of the tacit ideologies held by publishers and the majority of instructors (1987, p. 269). The relationship between our field's journals and textbooks have often been drawn into question, before and since Welch's observations (Alred & Thelen, 1993; Gale, 1999; Stewart, 1978; Tibbetts & Tibbetts, 1982). Welch's article is just one example of scholarship that examines textbooks and finds differences in theory and practice that are important for scholars and educators to be aware of.

Whenever new theories gain traction in scholarly publications, researchers have an opportunity to turn their attention towards questions of application and practice. While there are a variety of appropriate methods for examining common practices in a discipline (for example surveys, observations, ethnographies, or case studies), there are also benefits to examining documents that were generated for purposes other than research. Textbooks have functioned as a

focal point for scholarly disagreement for nearly the entire history of the discipline. Scholars in writing studies rarely select textbooks as an object of study for the purpose of better understanding textbooks, but instead they select textbooks to investigate and comment on teaching practices or writing theories. These disagreements include how we teach style in business communication (Hagge & Kostelnick, 1989), concrete language (Perdue, 1990), and interfaces (A. F. Wysocki & Jasken, 2004). More recently, textbooks have been studied to highlight the ideologies surrounding notions of academic language (Russell, 2018), usability (Chong, 2016), pathos (Jensen, 2016), and multimodality (Schiavone, 2017). These studies reveal an interest in how these topics are both conceived of by scholars, but also how they are presented in classroom contexts. Each of these studies focused on an issue of theoretical importance in writing studies and examined the ways in which textbooks present (or fail to present) the ideas.

Noting the importance of usability to the field of technical communication, Felecia Chong's analysis of introductory technical communication textbooks shows the types of questions and conclusions that are common in studies analyzing textbooks. In particular, Chong questioned the simplification of usability concepts and the absence of a rhetorical perspective. Chong demonstrated the kind of personal and professional questions that analyzing textbooks can lead us to: "As an instructor, I understand the rationale for assuming that teaching the simplified (arhetorical) usability methods to our technical communication students is 'better than nothing." But is it?" (2016, p. 23). The pointed question is a critique that highlights the chasm between the authority the textbooks hold and the limitations that the genre presents. But it also functions as a call for educators to consider the ways usability is being taught in their classes,

either through instruction or through other materials. Through the analysis and critique of textbooks, Chong was able to advocate for a more comprehensive approach to the topic.

Aubrey Schiavone (2017) published another recent study using textbooks to better understand the relationship between current theory and practice. Schiavone examined four popular textbooks on multimodal writing, as evidenced by their number of citations according to Google Scholar, their ranking on Amazon, WorldCat holdings, and reviews in scholarly journals. Schiavone collected a total of 1,629 prompts from within the four textbooks and coded them for their focus on production or consumption of text, visuals, or multimodal artifacts. Her analysis shows that these textbooks encourage the consumption of visual and multimodal texts more than their production, which she claimed also shows "a disparity between theories and practices associated with visual and multimodal composition" (2017, p. 376). By highlighting this disparity, Schiavone's article encourages readers to reflect on their own theories of multimodality, teaching practices, and the materials presented to students.

Again, these studies collectively demonstrate the ways textbooks function as a site for reflection. Each of the studies examined here used textbooks to ground discussions about practice and theory. The history of analyzing and critiquing textbooks illustrates both the process and benefit of doing so; like many research methodologies, methods of textbook analysis strive to deepen our understanding about a variety of topics. What these studies lack, however, is a claim of representativeness. The studies I have listed analyze a narrow selection of textbooks, and each associates the selected texts based on the contexts in which they are used or their apparent popularity; however, none of the analyses is broad enough to claim that the texts they examine represent the field at large. There are, however, methods for comparing the content of many more texts at once.

Textbook Features and Thin Description

"For indexing is indeed an art – wherein the fashionable machinery of the computer may be a useful slave but must never become the master – and it requires the highest degree of skill in those who practise it."
(Macmillan, 1979, p. 11)

Because textbooks structure and frame information for educational purposes, studying that framing can reveal pedagogical and ideological commitments. There are dozens of new textbooks available each year. Analyzing a small set of them can allow for some important discussions, but such an approach cannot, with confidence, support claims about the content or approaches the field (or an area of it) has embraced as a whole. To establish a more holistic picture, to strive for what Derek Mueller calls a "network sense" of the field, we can use computational methods of textual analysis based on consistent features across the texts. Studies about the practices of our field can be contextualized and augmented by changing the analytical scope from a narrow set of texts to a comprehensive corpus. Selecting and analyzing texts based on narrowly defined expectations can allow for deep and meaningful critiques, but such an approach cannot help us to understand the scope of the findings. As Mueller explains, network sense "mitigates the negative consequences of excessive specialization" (2017, p. 164). In short, thin description and distance reading are the tools that Mueller identifies for adjusting our scope of inquiry.

Research that facilitates the identification of patterns, the strengthening of connections, and an awareness of the broader network of activity in writing studies disciplines requires an approach to texts that reduces the focus to manageable units for comparison. Thin description relies on a reduction of texts and an intentional reliance on surface-level features of a text. Reducing and simplifying texts can take many forms, as Mueller writes, "everyday examples where distant reading and thin description do their thin-distant work…table of contents, indexes,

and the notes on a book jacket" (D. N. Mueller, 2017, p. 6). Features of texts that orient readers to the purpose, organization, and contributions of a text are designed to make the text more engaging and usable for readers, but such features can also serve as resources for distance reading. Well-established genres that consistently follow genre conventions are particularly well suited for distance reading methodologies.

Given the variety of lengths and ideological commitments, comparing textbooks could pose a challenge; however, the features within the texts can create productive points of comparison. Schiavone, for example, identified writing prompts across four textbooks. Others have examined the use of examples in textbooks (Chatterton, 1972; Hagge & Kostelnick, 1989). Consistently occurring features can be seen as serving common pedagogical purposes, including the table of contents, headings, readings, examples, and the index. The rhetorical or utilitarian choices in a textbook represent decisions about what is significant to include and which topics to emphasize. In the comparison of such features across a large enough sample, it is possible to look for patterns, points of emphasis, and discontinuities. Using computational methods, it is possible to analyze large collections of texts (corpora) in a way that is systematic and scalable.

The Focus of this Study

For this project, I have focused the analysis to a particular type of textbook that is created for and marketed for use in composition classes. Specifically, I have collected 'rhetoric' textbooks published in 2017-2019. Publishers often offer 3 categories of textbooks for writing classes: rhetorics, handbooks, and readers. Rhetorics are textbooks that go beyond mechanics or prescriptive models of writing, often focusing on argument, genres, process, and rhetorical theory in their presentation of writing. To identify the textbooks, I first identified textbook publishers, and then used their websites to filter their offerings based on the studies parameters. By focusing only on texts published since 2017, I have been able to avoid duplicate editions. In

theory, computational analysis of textbooks is scalable, and it would be possible to analyze all writing textbooks at once. Pragmatically, preparing for the analysis is time-intensive and the composition of the textbook corpus must be both meaningful and manageable. In future studies, I will expand the analysis to include additional formats and areas of emphasis.

To facilitate a targeted and meaningful analysis, I have narrowed my focus further. Because the goal of this study is to understand the digital and multimodal *topics* that are being addressed in writing classrooms, I have chosen to begin with the indexes as a feature for aggregation and comparison. The index, is, after all, a carefully composed and comprehensive list of topics covered in the textbook. A systematic analysis of a disciplines' texts could focus on the whole text or particular features, depending on the purpose of the analysis. As a utilitarian feature of a text, the index may be overlooked as an unessential, ancillary element, especially in a digital age when search engines and find functions have become the norm. However, the index serves important functions beyond locating words in a text, especially in a reference text that is unlikely to be read in sequential order. The index surely provides readers with a way to quickly find subjects that are important, but the index can also help readers understand how certain topics are distributed or associated in a text. As Harold Macmillan explained, "A good index can be much more than a guide to the contents of a book. It can often give a far clearer glimpse of its spirit than the blurb-writers or critics are able to do" (Macmillan, 1979, p. 11).

Indexes are sophisticated tools developed as a way of describing the contents of a book, and they are an element that increases the text's usability. As readers familiarizing themselves with the text, students and teachers may begin with the index as an entry point to better understand the internal logic of a text or how specific topics are addressed. In the process of collecting and reviewing texts, I reviewed a variety of online textbooks that omit the index while

providing a search tool as a way of quickly searching a text. While the search tool has its

advantages, it is not a replacement for an index. The index provides readers with a pre-selected,

comprehensive list of topics to scan. It also provides associations of topics through the structure

of headings, subheadings, and cross-listings. A search bar does not replicate these benefits.

Textbooks are often read out of sequence, as students read chapters or sections assigned by

teachers or they look up specific passages or terms that are relevant to a unit or assignment. The

index is one of the tools textbooks offer students and teachers to quickly find the content that is

relevant to their needs.

This study involves three distinct components: a corpus, a frequency analysis, and a

content analysis. The corpus of textbook indexes functions as the foundation for the project, and

the corpus is a resource that can be expanded in future research. The corpus of textbook indexes

for this study includes all 'rhetorics' textbooks focused on composition that I could identify that

were published between 2017 and the middle of 2019. In a sense, this corpus of textbook indexes

represents a meta-index of topics covered in first-year composition (FYC) courses. As a meta-

index, the language contained in the corpus facilitates the processes of identifying what topics

are covered, and it also enables the generation of composite indexes that locate terms indexed in

each index, including page numbers. Researchers with access to this corpus could quickly

identify texts and pages of any topic covered in these texts (based on the information available in

the indexes).

For this project, I began with frequency analysis, a common method in corpus linguistics

that uses programs to count the occurrence of words and word groups. There are multiple ways

to think about frequency. Frequency can measure each occurrence of a word in a corpus, the

occurrence per text, and dispersion can be considered to understand how widely a term appears

in a text (Egbert & Schnur, 2018; Gries, 2008). In this study, frequency represents the number of texts each word appears in. Because this study is designed to establish how widely certain subjects are being covered in writing courses, frequency in this text is a measure of the number of texts that each word appears in, not the number of times each word appears. Many programs exist to measure frequencies in corpora; however, I developed my own programs to count frequencies of co-occurring words. Because most corpus studies do not rely on structured text, the programs that are available are not designed to analyze a corpus of indexes. To meet the goals of this study, the program I developed counts each word only once per text.

The final component of this study is a content analysis of selected terms from the frequency lists. The content analysis further demonstrates the value of the corpus and frequency lists by illustrating the ways these methods support a systematic, empirical, and aggregable approach to analyzing pedagogical materials. The methods discussed in this dissertation meet the calls for systematic research about writing instruction and offer a sustainable approach to future investigations.

The Goal and Contribution of this Study

The research presented in this dissertation represents an attempt to understand the most pervasive and cogent elements of digital and multimodal writing instruction as it is practiced. Findings from this work has implications for theoretical discussions of multimodal pedagogy, curriculum revision, and professional development. In this study, I define digital and multimodal topics broadly to include genres, tools, and skills that are necessarily digital, visual, or oral. My definition may also include dependent features or concepts that are unavoidably connected to digital or multimodal modes of communication. This approach allows me to avoid the constraints of predefined categories so that the results emerge from the investigation of pedagogical materials. Because this study relies on a broad definition and does not begin with an established

list of expected topics or categories, the results represent the topics being covered in the textbook corpus.

This dissertation presents a systematic, replicable analysis of writing textbooks, a genre that represents disciplinary knowledge in practice. The results of this study include a comprehensive list of multimodal terms that represent multimodal topics that are commonly addressed in writing courses. The results also include an examination of textbook passages representing the most frequent multimodal terms to better understand how the terms are being presented in relation to critical, rhetorical, and functional notions of literacy.

Although this study is motivated to better understand multimodal language, the research here also opens avenues for further research into the topics and approaches represented in writing textbooks. The goals of this project also include establishing a sustainable, data-driven, extendible approach to discipliniography. The corpus and analyses in this project establish a data set that can ground discussions about the theory and practice of multimodal writing instruction, and to inform discussions about professional development and curriculum revision related to digital and multimodal communication.

Conclusion and Overview of this Study

This chapter has introduced the problems that this study attempts to resolve and established a theoretical framework for the study. I explained that this study is a response to a need to ground theoretical discussions about changes in writing pedagogy to help instructors and administrators navigate the pressures in writing studies to adopt a technological and multimodal perspective of writing. I also explained the reasons textbooks represent a well-suited site of inquiry for meeting the current need. In Chapter 2, I provide a review of relevant literature that expands on recent trends in writing studies, and based on the needs and theories of literacy outlined in the literature review, my research questions are:

RQ1. Which multimodal terms (terms representing skills, genres, or tools that are explicitly associated with visual, oral, and electronic modes) are appearing most frequently in writing textbooks?

RQ2. For selected multimodal terms, are the terms more often presented in passages focused on production (writing/designing/creating) or consumption (reading/interpreting/analyzing)?

RQ3. For textbooks that include selected multimodal terms, are the terms used to support critical, rhetorical, and functional forms of literacy?

RQ4. For textbooks that include selected multimodal terms, what percentage of textbooks provide definitions, description of use, examples, or connection to rhetorical concepts?

CHAPTER 2.   LITERATURE REVIEW: THE PRESSURES TO ADOPT MULTIMDALITY

In this chapter, I review literature relevant to the history of multimodal writing instruction, the emergence of a consensus around the necessity of digital and multimodal content in writing instruction, and the studies that have examined the uptake of digital and multimodal content. First, I establish the history and exigencies that surround integrating multimodality in writing classrooms. Then, I go over existing efforts to inventory core concepts and keywords in writing instruction and definitions of multimodality to establish the context for my first research question:

> **RQ1**. Which multimodal terms (terms representing skills, genres, or tools that are explicitly associated with visual, oral, and electronic modes) are appearing most frequently in writing textbooks?

Next, I discuss existing research about multimodal writing pedagogy. In doing so, I establish the need for additional research around ongoing areas of inquiry. The recent history of scholarship examining writing studies disciplines demonstrates the importance of systematic, empirical methods for examining disciplinary trends. It also highlights the importance of moving beyond questions of what content we should cover in writing courses and into questions about how we should treat digital and multimodal content. For this project, I focus specifically on what I call the consumption/production divide, which is the context for my second research question:

> **RQ2**. For selected multimodal terms, are the terms more often presented in passages focused on production (writing/designing/creating) or consumption (reading/interpreting/analyzing)?

Lastly, I discuss an existing framework, Stuart Selber's model of literacy, for approaching digital and multimodal literacy instruction. This model was selected to demonstrate how we can apply our theories of literacy and pedagogy to a systematic analysis of pedagogical materials. Selber's model also situates my third and fourth questions:

RQ3. For textbooks that include selected multimodal terms, are the terms used to support critical, rhetorical, and functional forms of literacy?

RQ4. For textbooks that include selected multimodal terms, what percentage of textbooks provide definitions, description of use, examples, or connection to rhetorical concepts?

Context and Exigence

Concerns about changes in technology and curriculum may center around the idea that multimodal composition is changing writing instruction, but multimodality has always been part of writing instruction. Jason Palmeri and Ben McKorkle's archival study of *College English* shows that the history of English and writing instruction is a history of multimodality, that writing instruction has always included a range of modes and technologies. Ball and Charlton make a similar point in *Naming What We Know*, where they explain that all writing is multimodal (Ball & Charlton, 2015). Ball and Charlton explain that the history of writing instruction reveals that multimodal instruction can be "traced from classical rhetorical studies of effective speech design including body and hand gestures to current concerns with infographics and visual rhetorics" (2015, p. 42). They go on to explain that multimodality is often distinguished from a view of writing that "*privileges* the linguistic mode" (2015, p. 43). The linguistic mode, often taking the form of traditional print genres like the college research paper, often has more established conventions for teachers and students to rely on.

A focus on visual, oral, or other modes of communication in the writing classroom means reconsidering the value of genres like the essay. Multimodality is not the only reason scholars have offered criticisms that question the central role of academic essays, for example Patricia Bizzell's (2002) argument about changing genres in academic communities; however, scholars have argued that multimodality requires the displacement of traditional genres. Adam Banks (2015) argued that the essay should be 'promoted' to emeritus status, meaning retired, because it

"if we are going to fly and find new intellectual spaces and futuristic challenges to meet our students and each other, we have to leave the comfortable ground we found with [the essay]" (2015, p. 273). To Banks, the 'comfort' and familiarity of the essay represents entrenched habits that prevent the kind of experimentation that is needed in our assignments. Scholarly discussions and advocacy does not seamlessly translate to practice, as Santosh Khadka and J. C. Lee have pointed out, "the pedagogical translation of those conversations has not reached the same level, particularly among instructors new to multimodal practices, who often struggle with the question of *how* to adopt multimodal instruction in their classrooms" (Khadka & Lee, 2019, p. 3). Following the growing consensus among writing studies scholars about the importance of digital and multimodal pedagogies, instructors and administrators are dealing with many practical questions such as what topics to cover, what genres to assign, tools to require, and skills to emphasize.

If the goal of writing instruction is to teach writing, then any changes in the ways writing operates or in the tools used to write can have significant impacts on the subjects and objectives of writing courses. An increase in infographics, for example, could lead to calls to cover infographics in professional writing courses (Toth, 2013), and the popularity of podcasting may lead to a call for using podcasts in the composition classroom (Bowie, 2012). The significance of the web can lead to an interest in interfaces, design, and ePortfolios (Arola, 2010; Bacabac, 2013; Blakely, 2016). The possible genres, forms, modes, and tools that have been addressed in the literature of writing studies disciplines are staggering, and for administrators and educators, these calls create additional complications for the design and delivery of our writing courses.

The history of writing studies scholarship is filled with interest in new tools, genres, and skills associated the teaching of writing or communication skills. The 1996 manifesto published

by the New London Group is particularly notable in the history of multimodal writing, signaling the start of a rapidly expanding body of scholarship on the topic. The New London Group addressed more than the need to move beyond print. Their article was written against a backdrop of globalization. They focused on the need for a more expansive notion of language, an awareness that teaching English is not enough with the increasing interaction between speakers of many varieties of English due to globalized trade, travel, and technology. Their use of the term multiliteracies was meant to "describe two important arguments…the multiplicity of communications channels and media, and the saliency of cultural and linguistic diversity" (The New London Group, 1996, p. 63). For the New London Group, the goal of literacy education should be to empower students in all areas of life and to become capable, confident 'designers' of communication, and their article represents a much broader conversation about rapidly changing literacy needs.

The members of the New London Group were not the first to suggest that new forms of literacy should be included in our understanding of literacy; however, their work represents a moment of substantial change that goes well beyond the innovative practices of isolated groups in the field. The New London Group was an interdisciplinary group of 10 researchers representing a wide range of disciplines and professional contexts. Their work challenged literacy educators to rethink what literacy means in an increasingly global and technological world as they argued for new ways of thinking about literacy instruction that empowers students to navigate the complex communication landscapes they will encounter.

In the late 1990's and early 2000's, the significance of digital and multimodal pedagogies may not have been apparent. As we go about our work and our lives, technologies can gain the appearance of being natural or that using them is a matter of common sense through gradual

acclimation. The potential for us to view our tools as natural, or to use technologies exclusively in ways that are familiar led to Selfe's famous warning that writing instructors must 'pay attention' to computers (Selfe, 1999). As a field, we have begun paying attention. Many scholars now recognize that all forms of writing are multimodal technologies. That is to say that literacy involves multifaceted, overlapping systems comprised of numerous forms and resources that we learn for the purpose of communication. Writing and the numerous related resources and activities are learned through exposure and practice over time. Members of writing studies disciplines may recognize this to mean that "writing is not natural," which has been identified as one of the threshold concepts of writing studies (Dryer, 2015). Of course, written language may seem like a natural part of human development and human interaction since we have been habituated in the use of printed forms of language. Dryer writes,

> Keyboards and other tools of inscription—pens, pencils, chalk, dry-erase markers, software for computers and cellphones—fade from consciousness through use, and it becomes hard to remember that even a stick used to scratch *L-O-V-E* in the sand is using a technology of conventionalized symbols for sounds. (2015, p. 28)

The written word is ubiquitous, and over the course of our lives we develop a range of literacy skills and practices that make writing feel natural, but writing is, in the end, a technology that we learn to use.

Defining writing as a technology has a number of important implications. If we accept this definition, then we can also recognize that the forms of our communication are tools and technologies developed over time. Additionally, if our modern conception of writing is technological, in the way that Dryer explains, then we can think about the rate at which we learn about, adapt to, and adopt new forms of writing in much the same way we think about the progress of technology. In other words, the more quickly our technologies and tools change, the more quickly the ways we engage with each other change.

This view of writing also makes it clear why traditional forms of writing pedagogy are inadequate. When considering the ways technologies have been treated in the classroom, Stuart Selber observed, "Technology, in a standard pedagogical approach, is either ignored or treated as an add-on to rhetorical thinking and conceptualization. Those who ignore technology hide behind the insights of the past to reject new configurations of rhetoric" (S. A. Selber, 2013, p. 4). In technological terms, an analogy to adhering to traditional forms of writing instruction (instruction focused entirely on the print page and essay format), would be insisting on using a landline over a cell phone or using a quill instead of a ball point pen while arguing that the outmoded tools are inherently more useful. Such a view may seem absurd, however, the communication and writing practices are intertwined with socially agreed upon conventions. The need to both update and rely on convention creates a significant challenge for educators in writing studies.

The New London Group's manifesto originally identified six distinct types of design (linguistic, visual, audio, gestural, spatial, and multimodal). Setting the scope of literacy to include so many potential areas of knowledge and practice creates new challenges. I call this the variety problem, by which I mean the challenge of appropriately selecting content and objectives from the seemingly endless variety of skills, tools, and genres that makeup modern literacy practices. Educators and administrators must choose what areas of writing instruction are most worthwhile, most beneficial. As the emphasis shifts, we all must consider the limits of our professional training. Many writing instructors may feel 'expert' in one or two of these areas, but few instructors have had substantive training in all of these areas. Few instructors understand the full range of communicative resources and conventions, and few have the time to endlessly study body language, dance, art, video production, audio recording, and so on. The variety problem is

particularly concerning when the field has not reached adequate consensus about how to incorporate or evaluate new approaches. Currently, it seems there is an emerging consensus about the importance of digital and multimodal approaches to writing instruction, but that agreement does not always lead to clarity about the details.

Disciplinary Policies and Statements

In recent decades, the efforts of scholars advocating digital and multimodal approaches to writing instruction have resulted in the establishment of disciplinary standards that indicate technology is not an option or an add-on, but is a fundamental component to writing instruction (CWPA, 2014; CWPA, NCTE, & NWP, 2011; Multimodal Literacies Issue Management Team of the NCTE Executive Committee, 2005). Position statements and guidelines produced by national organizations represent, in their own way, the progress of disciplinary discussions. The scholars that engage with disciplinary organizations and the scholarly discourse around various issues are responsible for proposing, reviewing, and revising these documents. When national organizations produce statements and guidelines, no program or instructor is immediately required to comply; however, these statements function as authoritative resources. Policies at the national and local level can help WPAs engage stakeholders, instructors evaluate pedagogical approaches, and graduate students learn about the discipline. In a sense, the national guidelines are a sign of disciplinary consensus.

Within their own institutional contexts, WPAs need well-established frameworks for analyzing and communicating the goals and values of their writing programs to successfully build consensus and navigate obstacles. Similarly, instructors can advocate and justify their own pedagogical choices by showing how they align with these resources. The history of the statement on first-year composition (FYC) outcomes, supported by the Council for Writing Program Administration (CWPA, is particularly well suited for illustrating the recent history of

digital and multimodal writing pedagogy. The first outcome statement, approved in 2000, included four categories:

1. Rhetorical Knowledge

2. Critical Thinking, Reading, and Writing

3. Processes

4. Knowledge Conventions

In 2008, CWPA approved a revision in which they added a 5th outcome to the list:

5. Composing in Electronic Environments

This new category was a way of recognizing the significant role of technology in the writing classroom, and the importance of explicitly addressing digital resources as we teach writing. Then, in 2014, the third version was approved, sometimes referred to as OS 3.0, in which the fifth category was removed.

The removal of the fifth category was a way of moving past the view represented in OS 2.0 that digital forms of writing could be treated as a separate set of skills and experiences. In OS 3.0, the introduction now says, "Writers' composing activities have always been shaped by the technologies available to them, and digital technologies are changing writers' relationships to their texts and audiences in evolving ways." The authors of the updated outcome statement decided that having a separate outcome focused on digital writing was untenable, and language about design and technology was integrated throughout the other four outcomes. This move to integrate technology into the other outcomes is an acknowledgement that the other outcomes (Rhetorical Knowledge; Critical Thinking, Reading, and Composing; Process; and Knowledge of Conventions) transcend mode and media.

Table 1: Outcomes for First-Year Writing in WPA OS 3.0 for FYC and mentions of design or technology

Outcome	Definition	Technology/multimodality
Rhetorical Knowledge	The ability to analyze contexts and audiences and then act on that analysis in comprehending and creating texts.	Understand and use a variety of technologies to address a range of audiences.
Critical Thinking, Reading, and Composing	The ability to analyze, synthesize, interpret, and evaluate ideas, information, situations, and texts.	Read a diverse range of texts, attending especially to…the interplay between verbal and nonverbal elements. Locate and evaluate….primary and secondary research materials, including journal articles and essays, books, scholarly and professionally established and maintained databases or archives, and informal electronic networks ad internet sources.
Processes	The ability to identify and adapt strategies used to conceptualize, develop, and finalized a project.	Use composing processes and tools as a means to discover and reconsider ideas. Adapt composing processes for a variety of technologies and modalities.
Knowledge of Conventions	The formal rules and informal guidelines that define genres, and in so doing, shape readers' and writers' perceptions of correctness or appropriateness.	Learn common formats and/or design features for different kinds of texts.

With the newest revision, each of the outcomes require the use of a range of technologies

and modes, but the specific technologies and subjects are left unaddressed. The policies reflect

disciplinary efforts to establish a consensus about how to enact the most relevant theories and

pedagogies. While policy statements and national standards do not necessarily mean educators

and scholars are all in agreement, they do signal a kind of critical mass or consensus. To the

extent that national guidelines represent thinking in the field, these statements signify an acceptance of the importance of digital writing. This acceptance and expectation does not, however, signal agreement about which tools, skills, genres, or modes are most effective or useful in writing courses, nor does the agreement clarify the kinds of expertise instructors need in order to effectively meet the standards. We are faced with the challenge of what to include to help students understand and use their writing tools.

As a guide, the WPA outcomes statements were written with the intention of respecting the autonomy of programs and instructors. The outcomes, described in Table 1, are meant to describe "types of results" and not "standards to measure students' achievement" (CWPA, 2014). According to Dryer, "Statement 3.0 remains the realization of a set of beliefs about what writing is and how it should and shouldn't be taught in the first year(s) of US postsecondary education" (2014, p. 136). Even where the field has recognized the importance of digital and multimodal writing, questions remain about specific topics, approaches, benchmarks, and standards. In other words, individual programs and instructors must navigate the details. Attached to these challenges are questions about the emerging set of skills and competencies needed by educators in writing and communication focused courses.

Even as the most recent outcomes statement, written by the Council of Writing Program Administrators, was being drafted, it became clear that many questions still surround the practical side of implementing the standards. According to its authors, they fielded questions from teachers and scholars across the country:

> What are the places of digital media in writing classes? When does the study of digital media cross over into aesthetics? Where will the time come from to teach this? How can we prepare faculty and students who aren't ready for this or who don't have access to advanced technologies? What about the fact that a considerable amount of writing instruction is done by contingent faculty? How much can reasonably be asked of teachers

and students working in technologically impoverished institutions? How do we assess

students' multimodal projects? (Dryer et al., 2014, pp. 132–133)

These questions show that implementing multimodal curricula involves attending to definitions

of writing, reframing of pedagogies, professional development, and labor. Updating a writing

curriculum has broad impacts, but these questions must be answered as we continue to adapt our

courses to current definitions of writing and literacy. Chase made this point well: "WPAs have

the unenviable task of serving many constituents, all of whom have different perceptions, and

often contradictory expectations, about the aims and goals of composition" (1997, p. 243).

Instructors and administrators involved in curriculum reform or professional development need

ways to manage the broad range of expectations. A comprehensive view of which multimodal

genres, tools, and skills are most salient within the field of writing studies can help establish

practical guidelines and parameters.

Inventorying the field

As all graduate students learn, newcomers to a discipline face a problem that seems

insurmountable. How can anyone acclimate themselves to active, ongoing discussions that are

rooted in a long history of scholarship and research? Histories of writing studies reveal the

challenge of identifying important milestones, core texts, and areas of consensus. The variety of

journals that are regularly publishing new scholarship reveal a wide, engaged scholarly

community (or sets of communities). Getting 'up to speed' in an area of our field is a daunting

task, and this challenge is what Mueller refers to as "the *reading problem*" (D. Mueller, 2012, p.

7). The same challenge is shared by scholars wanting to explore a new area of the field and by

instructors wanting to update their course. Administrators also face this problem when updating

policies or developing professional development opportunities. Operationalizing disciplinary

knowledge involves condensing substantial bodies of research, resolving conflicting perspectives, and recasting theory into comprehensible and actionable forms.

Fortunately for graduate students, courses are designed to facilitate initiation, and we have listservs where we can draw on the expertise of our colleagues. There are also areas of scholarship that are devoted to investigating and synthesizing important, defining elements of the discipline. Much of this kind of scholarship can be described as an inventory of the field, and these studies are about core disciplinary ideas or areas that have reached sufficient maturity as to be recognized by most scholars. Research of this type is vital for newcomers to the field, but also for keeping track of changes or grounding discussions about what current thinking (which views have value) in the discipline.

Measuring the Field

Strategies to gain a sense of current practices in writing instruction can take a variety of forms. For example, a WPA might post a question about ePortfolios on a listserv and get responses from colleagues at a variety of institution types about which platforms are best, how to scaffold assignments, or managing technical support for students and instructors. The responses will, undoubtedly, provide useful starting points or may even solve the original problem. However, researchers invested in characterizing writing instruction may examine pedagogical research and materials, conduct surveys and interviews, or make direct observations in classrooms. Each approach has its strengths and can provide some level of insight. Research using surveys have been successful in measuring writing studies comfort with, and use of, technologies in the classroom (Anderson et al., 2006; Reid et al., 2016; Robinson et al., 2019). Other approaches draw on experience and materials to consolidate and summarize disciplinary thinking.

Edited Collections

Generally, edited collections center around a particular topic, or area of the discipline, but there is a subset of edited collections that takes on the task of defining core ideas in our field. In this way, these edited collections function as an inventory of the field. One of the most notable examples of an edited collection functioning as an inventory of the discipline is *Naming What We Know* (Adler-Kassner & Wardle, 2015), in which authors define core ideas in composition and rhetoric. The authors call these core ideas 'threshold concepts' to indicate that mastery of these ideas signifies membership in the field and to show that some ideas in the discipline shape the way members think and understand the world. The text is the product of a collaboration between many of the top scholars in the field, names that are easily recognized for their published scholarship and service.

Approaches to categorizing and mapping writing studies knowledge, values, and trends often centers on key words or core concepts. The benefit of texts that focus on a single word or single concept is clear, as authors are able to offer well-considered definitions that are then contextualized through a careful investigation of the history or relevant applications of the concept. An example of this approach is the edited collection *Keywords in Writing Studies* (Heilker & Vandenberg, 2015), which contains a series of essays focused on a single word that has significance to writing studies. The essays are each written by a well read, established scholar that is able to apply their expertise to explain the importance of each word and expound on meaningful complexities. For example *Computer* is explained by Cynthia L. Selfe (2015) , *Network* by Jason Swarts (2015), and *Technology* by Jhondan Johnson-Eioloa and Stuart Selber (2015). The use of key terms to organize a collection allows scholars to trace ideas that have gained broad significance, as Melanie Yergeau (2015) does with her six-page chapter on *Design* in which she addresses the history of the idea of design and its connections to *writing*. In a short

space, Yegeau summarizes numerous points of contact between writing studies and *design* through computers, instructional design, the relationship between process and product, and universal design. Focused explications like these are invaluable for the discipline because they establish foundations for defining the knowledge and values of the field.

Scholarly collections present themselves as useful tools for mapping disciplinary trends surrounding significant and complex topics. These collections represent important resources for scholars, but also for graduate faculty and graduate students as they go through the difficult challenge of systematically reviewing important histories and scholarship. Heilker and Vandenberg explain that the terms in their collection demonstrate "that one of the great strengths of our field can be found in the contested, unsettled nature of its key terms" (2015, p. xi). The goal for Heilker and Vandernberg is to engage in the sort of work Derek Mueller refers to as "discipliniography." Taking another approach, Linda Adler-Kassner and Elizabeth Wardle introduce threshold concepts of writing studies in *Naming What we Know* to articulate essential disciplinary concepts that represent the ways of thinking in writing studies. The information in these collections serves the purpose of defining and measuring the content of writing studies through dense, yet approachable explanations of disciplinary knowledge.

For both outsiders and insiders, these collections can be useful for understanding the subjects and views that constitute writing and composition scholarship. These collections are impressive and authoritative because of the ways they were composed. These texts are important for the discipline because they help the field declare important disciplinary knowledge, and they provide effective entry points to complex areas of scholarship. Their strength comes from the expertise of the authors, who are able to articulate these core ideas because of their deep knowledge of the field. However, by relying on established scholars, these scholarly projects

may not be as useful in mapping the full landscape of disciplinary activity. These collections

represent the expert evaluations of well-known experts, but other approaches to inventorying the

field may help text, corroborate, or further complicate the expert judgments of individual

scholars.

Material approaches and keywords

One approach to inventorying a field is to establish a principled list of keywords.

Keywords are valuable because they hold meanings that reveal the interests and values of a

subject area, often a set of overlapping and changing meanings (Dryer, 2019). There are two

distinct approaches to establishing a keyword and explicating its meaning. The first relies on a

highly qualified expert who carefully explains the meanings and uses of the term, often

referencing notable examples of the term in use resulting in a keyword essay like those found in

Keywords in Writing Studies, or as Dryer explains, "highly compressed accounts that rely on the

informed sensibility of a well-read reviewer" (Dryer, 2019). An alternative approach to

identifying and explicating keywords is to apply empirical and computational methods.

Computationally, it is possible to identify words that occur frequently or that are

statistically more likely in on group of texts than another. Text mining and corpus linguistic

methods and tools make it possible to analyze hundreds or thousands of texts at once. Analyzing

a large body of text using computational methods allows researchers to identify trends and

patterns in a text through repeated features, such as word forms and phrases. Dryer's 2019 article

is one example of an empirical approach to inventorying the field grounded in materials. Others

include Mueller's (2012) examination of citations in *College Composition and Communication*

and Aull's (2015) comparison of texts written by students in FYC courses with published

academic writing. By identifying commonly occurring words, it is possible to get a sense of what

topics are important within a collection of texts.

The available computational methods, through text mining and corpus linguistics, offer another solution to the reading problem, a solution that is quite different from the traditional reliance on expert scholars to synthesize disciplinary knowledge. While it may be tempting to position the two methods at odds, such a line of thinking will inevitably lead into an ideological and methodological quagmire. A more productive stance is to see the two approaches as working together, either as complementary or as a way of checking interpretations.

The Reading Problem and the Variety Challenge

Defining the core elements of digital literacy is a challenge because the tools change, as do the ways the tools are being used. Identifying the most relevant technologies is a challenge for many individual instructors designing their courses each semester, but for conversations about disciplinary standards, careful academic deliberation has been outpaced by social and technological changes. When the first WPA Outcomes Statement for First-Year writing was drafted, the language about technologies was "strategically ambiguous" in part because "the Outcomes Collective…recognized that any specific technology would soon be obsolete" (Dryer et al., 2014, p. 130). Educators looking to disciplinary guidelines are then left with ambiguous advice, and educators that spend time using and learning about new tools are left with the additional challenge of justifying the choices they make without the consensus represented by disciplinary documents.

Jeffrey M. Gerding and Richard Johnson-Sheehan suggest that WPAs ought to rely on our colleagues to seek ways to balance innovative approaches and the dangers of experimentation, and they offer a framework for doing so by understanding the difference between innovators, early adopters, and late adopters of technologies (Gerding & Johnson-Sheehan, 2016). In their framework, they point out that some technologies have become so ubiquitous that all instructors should be familiar with their use (technologies like electronic

feedback, email, mind mapping, presentation software, etc.). They argue that some technologies have become common enough, and important enough, to the work of teaching, and WPAs can, therefore, expect instructors to be familiar with them. To extend this notion of technology to multimodal writing, then, we ought to be able to identify multimodal tools, skills, and genres that have become so common to the discipline that we can label them as essential to the discipline instead of innovative or novel.

Methods have been developed to measure language patterns in large collections of texts. I am suggesting that corpus linguistic methods are particularly well suited to the goal of better understanding the extent to which writing textbooks are "about" digital and multimodal writing. Corpus linguists have argued that a well-designed corpus study can characterize the 'aboutness' of texts (Scott & Tribble, 2006b, 2006a; Warren, 2010). Keyword analysis in textbooks, for example, can help us characterize the knowledge domain and bring our attention to the ideologies embedded within (Fraysse-Kim, 2010; Leung, 2016). Both Frayesse-Kim (2010) and Leung (2016) use textbooks as a site of inquiry, and through keyword analysis, they are able to present data and arguments about the texts' ideologies. Using keyword analysis, researchers can go further to characterize the content and provide insights about an entire corpus of disciplinary texts (Biber & Jones, 2009). Malavasi and Mazzi (2010), for example, used keyword analysis to analyze the disciplinary epistemology of history and marketing through the analysis of research article corpora. The same strategy should be used by composition and rhetorical scholars interested in the current paradigm shift toward multimodal communication. The lack of consensus about the scope, function, and value of various technologies related to the teaching of college-level writing courses has implications for many aspects of writing instruction, including assessment, curricula reform, professional development, and program administration. A detailed

look at the current language used in our pedagogical materials can help inform these

discussions.

Defining Multimodality

Because existing scholarship does not adequately reflect the practice of multimodal

writing instruction, we need to pursue methods that can systematically capture and measure

information about writing practices. Such methodologies will help "provide a grounded

statement against which competing perspectives on disciplinary activity [can] be compared" (D.

Mueller, 2012).

Because of the need to establish more clarity about practice of multimodal instruction,

this study's first question is:

> **RQ1**. Which multimodal terms (terms representing skills, genres, or tools that are
> explicitly associated with visual, oral, and electronic modes) are appearing most
> frequently in writing textbooks?

The Production/Consumption Divide

The presence or absence of certain topics is only a starting point, and educators, scholars,

and administrators must also carefully consider the role of diverse forms of communication in

the classroom. One of the questions that scholars have been interested in is the question of what

students make. As writing instructors, we understand that writing classrooms are places that

encourage both the analysis of texts and the production of original work. Some instructors may

emphasize writing more than reading, and others may spend more time looking at models before

asking students to write, but both reading and writing play essential roles in writing courses. The

need for exemplars in learning contexts can be traced through *imitatio,* an early strategy in a

rhetorical education (Terrill, 2011). In studies focused on digital and multimodal pedagogies,

scholars have begun examining how often educators are expecting students to produce

communication in modes other than writing.

Examining collections of disciplinary texts can allow researchers to compare calls to consume or calls to produce digital and multimodal artifacts. Palmeri and McCorkle's (2017) article uses data representing 766 articles published in *English Journal* between 1912 and 2012 to trace discussions of numerous technologies. In the article, they explain that one of the codes they used separated articles into two groups: 'media production' or 'media reception.' They use the data to track the conversation about 'production' and 'reception' over the hundred year period, and they explain "media reception tended to predominate over media production in most years until the 1980s, the era of the personal computer" (2017). Later in their article, Palmeri and McCorkle indicate again that more recent articles, which are associated with computers, commonly encouraged production. Their findings differ from the findings of Schiavone's (2017) study analyzing four popular textbooks that shows prompts containing visuals and multimodal content focus on consumption at a much higher rate than production. Schiavone's demonstrates a disconnect between how often students are asked to produce text and other modes in writing textbooks.

The apparent imbalance between production and consumption described by Schiavone and Palmeri and McCorkle is important to the ongoing advocacy work aimed at increasing the adoption of digital and multimodal pedagogies. In an introduction to a special issue of *The CEA Forum*, Mary K. Assad points to Schiavone's work as a call to action, writing "Schiavone's work suggests that writing instructors need to find creative and innovative ways to incorporate multimodal composition into the classroom since textbooks may not offer extensive guidance in this regard" (Assad, 2017, p. 171). Assad introduces an assignment that requires students to produce research-based comics, and the project was designed to integrate multimodality into the curriculum in a way that meets a variety of traditional outcomes. As instructors and scholars

continue to discuss the treatment of visual, digital, and multimodal content in terms of production and consumption, additional strategies for measuring and analyzing the balance are needed. Studies like Palmeri and McCorkle's that focus on scholarly discourse offer one level of insight into the production/consumption divide, but it is unclear how closely academic journals represent instructional practices. Schiavone's focus on prompts is one strategy, but the treatment of concepts in the expository portions of the text can augment and extend her work.

Because of the need to further understand the production/consumption divide, this studies second question is:

> **RQ2**. For selected multimodal terms, are the terms more often presented in passages focused on production (writing/designing/creating) or consumption (reading/interpreting/analyzing)?

Beyond Critical

Writing programs cannot avoid digital technologies. Digital technologies have already had a substantial impact on writing and writing instruction, which also means a change in the expertise involved in administering a writing program that responsibly balances the needs of its many stakeholders. The need to expand the kinds of communication that students are expected to produce is grounded in calls for multimodality, but multimodality is neither new nor novel (Ball & Charlton, 2015; Shipka, 2011). Scholars have gone as far to suggest that a WPA can, and should, be invested in the development of local technologies. Jeff Rice, for example, suggested that faculty in writing programs ought to actively develop necessary local technologies alongside their efforts to prepare new instructors and administer the program. He explained, "I am arguing that we equate technological know-how with the rhetorical, literary, cultural, and other intellectual pursuits that drive our profession" (2007, p. 105). This holistic view that includes technological knowledge as an integral component of overlapping domains of knowledge is similar to the expertise suggested by Michael Day (2009) when he described the WPA as a

"Technorhetorician," and it is related to what Rochelle Rodrigo and Julia Romberger (2017) have characterized as "Writing Program Technologist." Developing such an expertise may be possible, but WPAs need ways to prioritize their efforts. To develop and maintain a sustainable, technologically rich writing program, the WPA must plan carefully and set clear goals.

When it comes to making programmatic changes, there are inherent benefits and constraints that WPAs must contend with when suggesting, encouraging, or disapproving of technologies and initiatives in a writing program. "Technorhetoricians," WPAs that have a well-developed critical awareness and practical understanding of multiple technologies, will be better positioned to make informed decisions. For example, technological innovations in both writing and education have resulted in a variety of commercial products that are marketed to universities and programs. The appeal of many such innovations is clear, and automated tools for managing courses and content can help a WPA feel in control and 'with the times.' However, many common technologies that come in the guise of easy solutions merit deeper analysis and criticism, especially when a commercial entity is responsible for developing, administering, maintaining, updating, and ensuring legal compliance (Rice, 2007; Selfe & Selfe, 1994; Vie, 2013). A technorhetorician is more capable of navigating the assumptions and ideologies embedded in these technologies and more capable of aligning technologies with the values and outcomes of their program because of their familiarity with the functionality of overlapping systems.

An additional danger of developing a technologically rich environment is the need for ongoing support and professional development. Program administration is a dynamic form of work that is both forward looking and responsive. Reacting to each new need and each new technology may leave writing programs many years behind, so proactive measures should be

taken to develop a supportive culture capable of adapting. To set goals and anticipate challenges, a technorhetorician or multimodal WPA should understand and monitor the local context and emerging disciplinary expectations. Ultimately, having a rhetorically informed theory of technology that recognizes the systems of knowledge, values, power, and labor can help WPAs make informed decisions about the steps that can (and should) be made in a responsible, sustainable fashion. However, an understanding of theory can be further refined with an understanding of practice. In this dissertation, I am arguing that a systematic analysis of textbooks can play a role in supporting curriculum revision and professional development efforts. Writing textbooks sit at the intersection of scholarship, pedagogy, and practice, and a sufficient review of a discipline's textbooks can reveal insights into current standards. WPAs need an understanding of theory, policy, and practice to meet the demands of an evolving literacy landscape.

Students need to be able to understand, analyze, critique, evaluate, plan, design, draft, revise and produce various genres and modes. In *Multiliteracies for a Digital Age*, Selber outlines three categories of literacy that encompass the full range of literacy activity: functional, critical, and rhetorical literacy. Each of the three categories are important, Selber argues, and the categories help us meaningfully integrate new literacies as complete practices. Selber's categories of literacy are part of his argument about the role of technology in writing instruction, one in which technology is an integral part of writing instruction. Selber's categories of literacy (Table 2) and the WPA OS 3.0 represent similar challenges to educators in writing studies disciplines. Both OS 3.0 and Selber's categorization of functional, critical, and rhetorical literacy highlight the full range of activity that are involved in developing literacy, no matter the domain or mode. Our courses must provide ample opportunity to learn about and reflect the full range of

literacy activities if our students are to gain mastery over the genres, skills, and tools that we deem valuable.

Table 2: Selber's categories of literacy (Selber, 2004, p. 25)

Category	Metaphor	Subject Position	Objective
Functional Literacy	Computers as tools	Students as users of technology	Effective employment
Critical Literacy	Computers as cultural artifacts	Students as questioners of technology	Informed critique
Rhetorical Literacy	Computers as hypertextual media	Students as producers of technology	Reflexive praxis

Because instruction serves different areas of literacy instruction, the last two questions of this study are:

RQ3. For textbooks that include selected multimodal terms, are the terms used to support critical, rhetorical, and functional forms of literacy?

RQ4. For textbooks that include selected multimodal terms, what percentage of textbooks provide definitions, description of use, examples, or connection to rhetorical concepts?

Conclusion

This chapter provides a comprehensive review of literature relevant to the presence of multimodal ideas in writing instruction. It establishes the benefits of systematically examining disciplinary texts as a method for understanding disciplinary trends. It then shows the need for examining the ways multimodal concepts are being used to prepare students to analyze or produce multimodal texts. Finally, this chapter establishes the need to understand the association of multimodal terms with different elements of literacy

Writing studies disciplines are vibrant communities of scholars and teachers with rich traditions. The 'dappled' nature of the scholarly landscape is a reflection of the subject and its importance. However, the characteristics that represent the vitality of writing studies disciplines also increase challenges associated with technological change and disciplinary consensus. The research questions listed in this chapter are focused on the gaining insight into common and established topics related to digital and multimodal writing present in FYC textbooks. These questions represent the wider need for methods that systematically examine teaching practices to ground our theoretical discussions and examine our interpretations and assumptions.

CHAPTER 3.   METHODS FOR EXAMINING DISCIPLINARY TEXTS

As I discussed in the previous chapter, researchers have examined the current state of writing instruction and digital and multimodal literacies using a variety of methods, and Derek Mueller refers to this type of research as "discipliniography" (2017, p. 13). There is still substantial need to study the content and changes of composition study, especially in the context of discussions about the role of technology, new media, and multimodality. Much of the research related to FYC has been criticized as qualitative or anecdotal, limiting the generalizability of the findings and arguments (Anson, 2008; Charney, 1996; Haswell, 2005; Takayoshi, 2018). While the methodological variety of writing studies research may be one form of the field's strength, collectively we must find effective ways to evaluate and refine some of the larger claims made by the field.

Most notably, scholars have used surveys to investigate the adoption and use of technology in writing instruction (Anderson et al., 2006; Reid et al., 2016; Robinson et al., 2019). These studies have provided substantial insights into the ways instructors have been trained and the ways they think about their work. Surveys are limited by a few factors, however, such as response rates. Fortunately, surveys are not the only option, and researchers can extend, complement, or complicate survey results by examining the artifacts related to the act of teaching. Methods involving text-mining focused on disciplinary texts have become more popular in recent years as scholars have begun using computational methods to track trends in writing studies scholarship (Dryer, 2019; D. N. Mueller, 2017; Palmeri & McCorkle, 2017). Using publications related to teaching writing has proven effective at tracking patterns in scholarly discourse across large collections of texts.

My study uses quantitative, empirical methods in an attempt to ground discussions about digital and multimodal writing instruction in evidence produced by the discipline. In this dissertation, I take a text-mining approach that involves three distinct stages.
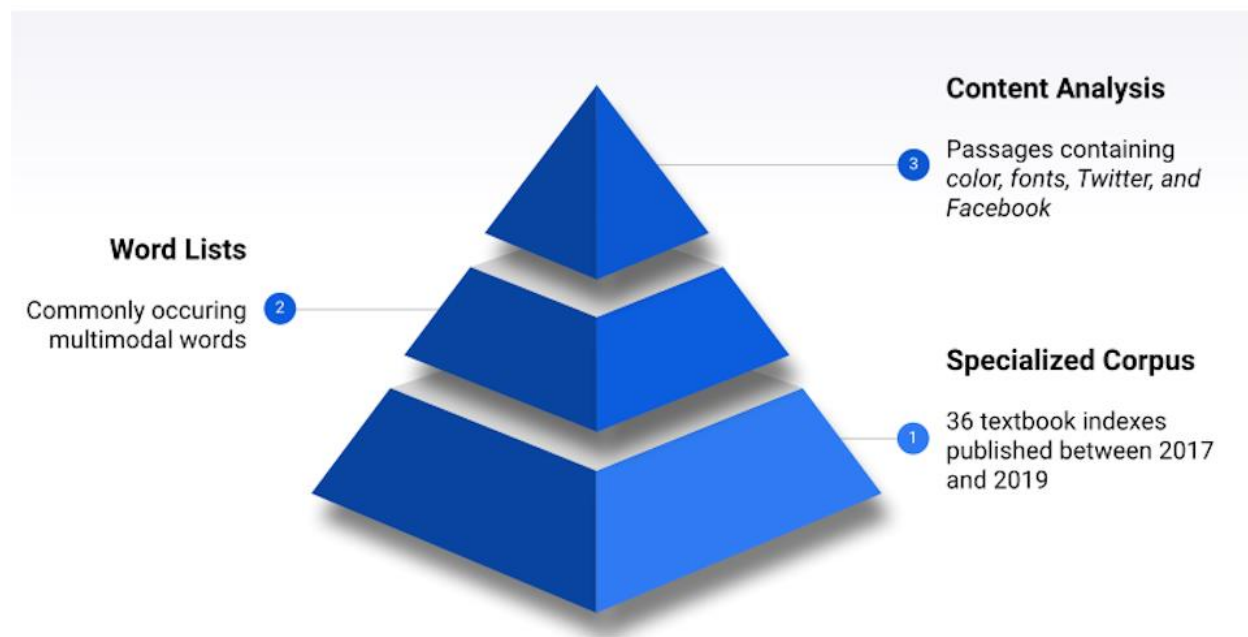

Figure 1: The methodological phases of this dissertation.

1. The first phase involved the identifying a principled collection of textbooks that were used for the development of a specialized corpus of indexes. The first phase is the basis for claiming that the data sets used throughout this dissertation are representative. During the first phase, I identified textbooks meeting the selection criteria and mined the indexes to develop a specialized corpus of topics covered in first-year composition.

2. The second phase began with the generation of an initial frequency list of all indexed terms. Using human raters, I refined the comprehensive list into frequently occurring words representing multimodality. The resulting multimodal wordlist answers RQ1.

3. In the third phase, I examine a selection of passages using quantitative content analysis to better understand how the selected terms are used by the text to meet pedagogical goals. The content analyses are used to answer RQ2-4.

The methodologies used in this project are designed to meet the standards of RAD scholarship (Haswell, 2005) (replicable, aggregable, and data-driven) and to ensure that future projects can seamlessly build on the work presented here. Each stage involves the development of data sets that are used for this dissertation but can also be used for additional future research. Collectively, the processes employed here represent a replicable process for mapping disciplinary knowledge through an examination of its textbooks.

Phase 1: Corpus Development

For this study, only print textbooks marketed for undergraduate composition courses as a rhetoric guide were included. The three types of textbooks commonly used in composition courses are rhetorics, handbooks, and readers. Rhetorics are the category of writing textbooks that teach writing from a theoretical perspective, focusing on topics like audience awareness, argument, and the writing process. Readers and handbooks were not included in this study because the goals and contents of readers do not align with the goals of this study and because handbooks primarily function as reference material for formal style guides. The sample also only included textbooks originally published between 2017 and the Spring of 2019 (the time of collection). While future studies may include a longitudinal analysis, the goal of this study is to examine the subject matter covered by recent texts because of the evolving nature of multimodality. Restricting the time frame ensured that multiple editions of the same text could be avoided, and the sample would be manageable for the purposes of this study.

The initial list of current FYC rhetorics was compiled by visiting the websites of academic textbook publishers Cengage, Macmillan Publishers, Pearson, Fountainhead Press, and

W. W. Norton & Company. Online texts, course packs, and open education resources are worth examining; however, the systematic comparison of these texts is complicated by the format differences. Each publisher website lists textbooks by subject area, and additional refinement options are presented to distinguish between handbooks, rhetorics, and readers. Collection of the texts began in January of 2019 and continued into June. Some of the texts were immediately available on my own shelves, those of my colleagues, or the university library. For texts that I did not have access to, I requested copies through interlibrary loan. No texts were added after the collection period ended. The final list of texts was used for the study includes 36 textbooks (APPENDIX A.   ) and the distribution of the texts per year and per publisher are listed in Table 3 and Table 4 respectively. If a corpus is carefully developed so that it represents a type of discourse, it is then possible to make claims about the discourse being represented. Because the corpus used in this study includes all textbooks that met the criteria, it is reasonable to claim that the corpus is representative.

Table 3: Number of textbooks per year.

Year	Number of Texts
2019	6
2018	16
2017	14

Table 4: Number of textbooks by publisher.

Publisher	Number of Texts
Macmillan	16
Cengage	8
Pearson	6
Fountainhead	3
Norton	2
McGraw Hill	1

During the initial review process, several books were excluded because the publication date was older than indicated on the publisher's website. Accurately identifying publication dates

for specific editions can be difficult due to inconsistent practices in reporting, so dates of

publication were determined using information acquired using Zotero's "Add by Identifier"

feature, which searchers for metadata through the Library of Congress and Worldcat when given

an ISBN. Other texts were excluded because they were variations of the same text (brief, with

readings, with handbook, etc.). Where possible the version that included all of the rhetoric

content without the extraneous material was selected; although, a few of the texts remaining in

the sample include readings because no other version was identified. An additional two texts that

met the initial criteria were excluded because they did not contain an index.

The final step to phase one of the study was the development of a specialized corpus of

indexes. The process, which I explain briefly here, involved a combination of automated and

manual collection. Each index was scanned to generate image-based PDF files, converted to a

TXT file through Adobe Acrobat Pro's OCR (optical character recognition), and manually

reviewed for accuracy and formatting. The manual review involved an extensive process of

correcting errors such as misidentified characters and incorrect word order and manually setting

the indent level for subentries in the index. Adding a tab to each indent line made it possible for

computer aided analysis to distinguish between headings and subheadings, and it ensured that

each line was reviewed for accuracy. The final corpus is a collection of 36 TXT files containing

the index content from each of the 36 textbooks. The corpus was used to support phase 2 and 3,

but the composition of the corpus has implications that go beyond the questions asked in this

dissertation. The index corpus can be searched to identify the location and prevalence of topics

related to any subject area within writing studies.

Phase 2: Frequency Lists and Aboutness

To answer the first question, I first used computer aided frequency analysis of individual

words and co-occurring words. Then, I enlisted the help of two experienced writing instructors to

help me identify which words represented digital and multimodal concepts. Frequency analysis

is used in corpus linguistics to study language use and language variation for a variety of

purposes. For the purposes of phase 2, to establish frequently occurring terms, the unit of

analysis is the corpus of 36 textbook indexes. Using a corpus as a unit of analysis comes with

some important methodological considerations. Biber and Jones (2009) explain that in corpus

studies, there are three types of studies that can be identified based on the unit of analysis. Type

A selects each occurrence of a feature as a unit of analysis, Type B selects individual texts as a

unit of analysis, and Type C uses the complete corpus as a unit of analysis. Based on the unit of

analysis, researchers can work to answer different types of questions and apply different types of

statistical analysis. The questions driving this project are about a field of study, and the

observations being made are about the whole corpus making it a Type C study. The types of

observations that can be made in a Type C study are limited, and studies that employ a Type C

design typically make only 2-3 observations about each corpus. One of the goals of Type C

studies is to strategically compare the content of corpora to deepen the analysis; for example,

comparisons can be made between fiction and academic prose (Biber & Jones, 2009, p. 1301).

While this study does not make comparisons between two subcorpra, the establishment of similar

specialized corpora in other areas of writing studies will allow for such comparisons in future

projects. While using the corpus as a unit of analysis comes with significant limitations, the

ability to aggregate topics across a wide range of disciplinary texts can open up opportunities to

characterize disciplinary content.

Corpus linguists use keywords to make observations about "aboutness" and textual

organization (Bondi, 2010, p. 8). "Aboutness" in corpus studies refers to the subject matter of

texts that can also point to underlying ontologies. A few studies that have employed corpus analysis to characterize content include:

- Martin Warren's (2010) study on the content of engineering texts

- Soon Hee Fraysse-Kim's (2010) work with Korean textbooks

- Ray C. H. Leung's (2016) work with ideologies in German textbooks

- Jo Mackiewicz's (2016) study of writing center discourse

In these studies, frequency analysis is used to characterize the content of the corpora for the purpose of characterizing subject matter and underlying assumptions represented by the textual features. The goal of phase 2 is to answer RQ1, which is a question focused on the 'aboutness' of writing textbooks in regard to digital and multimodal content. In other words, the wordlists generated through a frequency analysis of the textbook indexes provide insights into what the discipline means when it is referring to multimodal writing instruction.

Computer Aided Wordlists

To establish the initial list of terms and report their prevalence, the corpus was analyzed using python scripts that generated word counts. Word frequency and dispersion could easily be measured with freely available (or commercial) tools such as AntConc, WordSmith, or Voyant Tools. However, the nonstandard grammatical structures in indexes make these tools less reliable when trying to examine the language in context. Additionally, the ability to manage the data structures and the format of output is important for creating an interface and data-driven visualizations, both of which are long-term goals for this line of research. For these reasons, I developed my own programs, and I used AntConc (3.5.8) to validate findings where appropriate.

My program was used to process the TXT files in a few distinct steps. First, the program established a dispersion count for each word by counting how many texts (index files) each word

occurred in, ordering the word list from most to least. That means that the number defining the most commonly occurring words in this study is a measure of the number of texts, not the total number of mentions. The decision to measure frequency based on the number of texts ensures that index conventions, such as cross referencing and subordinating, do not skew the results based on repeated mentions in a single text. The goal of the study is to measure the prevalence of terms at a disciplinary level, and the decision to count each term once per text ensures that the frequency count is an indication of how widely the term is used.

Indexes are unique textual artifacts, and traditional measures of frequency are insufficient and potentially misleading. To generate wordlists from a corpus of indexes, I created a word list for each index that ignored the number of words per index, and then counted the number of indexes each word appeared in. Prevalence in this study does not mean the number of occurrences but is instead a measure of the number of indexes that each word appears in (out of 36 possible instances). Typically, frequency counts are reported based on the number of occurrences of a word in a corpus, which can be misleading because the number doesn't indicate how many texts a word appears in. In some cases, a single text can skew a simple frequency count by using a word repeatedly. To help mitigate this problem, frequency is often paired with a measure of dispersion to show how evenly distributed the occurrences are.

I established a count that represents the number of indexes that each word type (each unique word) appears in. Linguists distinguish between word types (a category) and word tokens (an individual occurrence) to differentiate between a list of each unique word that occurs and the total number of times that each word occurs. When reporting counts, then, word types represents the variety of words in a text and word tokens represent the total number of words, including repeated instances (for example, types would count *the* once and *tokens* would count each

instance of *the*). Table 5 explains the composition of the textbook index, including the number of

word types and word tokens.

Table 5: Textbook Index Corpus

Textbooks	36
Word Types	10,290
Word Tokens	141,028

While it is possible to indicate the number of tokens to show that some texts use words like

visual more often, I am not reporting token frequencies for each word. Within an index, the

number of occurrences of a word (its total number of tokens) does not represent its significance

in the same ways it can in the body of a textbook. In an index, some words are cross indexed,

repeated, or paired with subheadings in ways that undermine the reliability of frequency data.

While an analysis of an index can indicate that a topic is covered, additional strategies need to be

developed to understand the ways an index can indicate importance through numbers of

subheadings, page numbers, and cross-referencing.

In addition to measuring the frequency of individual words, my program counted the co-

occurrence of words by counting the number of times two words appeared in the same index

entry. Frequency analysis can focus on individual words through an analysis of types and tokens,

but it can also be used to examine pairs or groups of words based on their co-occurrence in texts.

In linguistics, n-grams and lexical bundles are often analyzed, but I was unable to identify any

that study them in indexes or other structured texts. In order to study word associations through

indexes, I relied on the index entries as contained units. Entries are made up of single lines or

combinations of headings and subheadings, so my program used the structure of the indexes to

identify each possible entry to count co-occurrences.

Another important consideration was word order. In this study, co-occurrence cannot be measured using syntactical order because indexes are structured forms of text that do not follow standard language conventions, and instead the co-occurrence is most similar to aboutgrams as described by Warren (2010) in a study of engineering texts. Aboutgrams are based on concgrams, which differ from other methods of measuring co-occurrence such as n-grams. Other methods for identifying co-occurrence rely on identifying a word and then looking for other words within a set number of spaces. Concgrams are calculated differently so that word order and intervening words are not considered. The first example used by Warren involves the words *structural* and *design* to show that the two words often occur close to each other, but in different orders and with intervening words. The association of *structural* and *design* is illustrated through concgramming and the association highlights the ways that important terms in a discipline may not follow predictable organizational rules. Even so, there is a clear relationship between the words in the texts examined that can help a researcher gain insight into the aboutness of the texts. Warren explains the ways concgramming can be used to identify word pairs (aboutgrams) that characterize ideas in a specialized discourse. Once the program had completed its counts of individual and co-occurring words, I used the word lists to identify the most frequent digital and multimodal terms.

Multimodal Refinement

To establish a list of multimodal terms, I analyzed the single-word frequency list along with two independent coders looking for necessarily multimodal terms. Each coder is an experienced educator with formal training and teaching experience related to digital and multimodal writing courses. The final list is composed of words that all three raters identified as multimodal. For this process, multimodal words include concepts, skills, processes, or elements

of communication that are primarily visual, aural, or digital. This process was a refining process that involved a binary decision for each term: does the word represent multimodality or not?

The complete frequency list was placed in an excel file, organized by most to least frequent. Raters used the criteria listed in Table 6 to examine the list, starting with the most frequent words, marking instances of multimodality. After I completed an initial rating by identifying 60 multimodal words, I set an initial cutoff for the other two raters. Raters were asked to rate the first 637 words. After the additional two raters completed their evaluation, we found agreement among all three raters of exactly 50 words that appear in 15 or more texts.

Table 6: Rules for including and excluding items on the multimodal term list.

Include if the word	Exclude if the word
• Refers to a communicative product that is necessarily visual, oral, or digital • Refers to a communication process that requires visual, oral, or digital • Relates to core definitions of multimodal writing (e.g. design, mode, media)	• References something that is not related to communication • Applies to traditional definitions of alpha-centric print (sentence, paragraph, formatting, print genres, etc.)

The rating process involved a few challenges based on the possibility of multiple meanings and the boundaries between print and other modes. Meaning associated with individual, decontextualized words, are not always clear. To help support the process, raters were provided access to a second file containing the complete list of co-occurring words to help clarify the uses of words. Additionally, raters were encouraged to use their judgment about the likely primary use of the word based on their experience as writing instructors. Another issue is the question of boundaries between traditional print and other modes (for example *typography* and *spacing*). While print is necessarily visual, the distinction between alpha-centric print and decisions about visual components in this study were addressed based on the rater's judgement

about the significance of the term's relationship to theories of digital and multimodal writing instruction. Using these strategies, the rating processes yielded a list of multimodal terms.

For the purposes of this dissertation, the results of phase 2 are the multimodal word list and the list of co-occurring words. In the results section, I report on the final list of digital and multimodal terms and their co-occurring words along with some analysis. A complete list of the top 50 multimodal words and their most common co-occurring words can be found in APPENDIX B.   The initial, comprehensive wordlist containing 10,290 unique word types is not reported in this dissertation due to the research focus and the length restrictions, but it could be used for future studies following many of the same methods described here. For example, studies interested in analyzing the presence of rhetorical terms, the stages of the writing process, or genres could review the word lists.

Phase 3: Content Analyses

The final phase is designed to provide answers for the second, third, and fourth research question. The results from phase 2 provide evidence of the presence or absence of topics while phase 3 provides insight into how selected terms are treated by the textbooks. Using the list of multimodal terms that resulted from phase 2, I selected the words *color*, *fonts*, *Facebook*, and *Twitter* for further investigation. The other words could be analyzed in future studies; however, these four were selected because they represent prototypically digital and multimodal topics. Many of the frequent terms identified in phase 2 appear to function as broad categories (such as *visual*, *digital*, *multimodal*). *Color* and *fonts* were selected as representative of visual design, and *Facebook* and *Twitter* were selected to represent social media. While more frequently occurring terms were identified, these terms were selected because they represent specific design resources and specific tools.

Following the identification of multimodal terms, I collected passages from textbooks containing selected multimodal words to conduct content analyses. To identify passages to be used for content analysis, I wrote a program that searches the index corpus for a target term and returns a list of all index entries that contain the target. The results from the target searches are in APPENDIX C.   Using the list of index entries (and the textbooks that contain the target terms), I identified and scanned all the passages containing the target term. All mentions of the target term in an index were collected into a list of pages to be scanned for each textbook. Within each textbook, all passages were scanned and saved into a single PDF file that was processed using Adobe Acrobat's OCR (optical character recognition) function to help with searchability in the document. All passages referencing a particular term within the same textbook were combined into a single PDF document to give coders the ability to evaluate how the terms are treated within each text as a whole.

Initially, the plan was to scan the pages identified by the index; however, the page numbers were not adequate on their own to identify discrete passages. Often the index indicates a page where the term is mentioned; however, the section begins on an earlier page and extends to later pages. To ensure that adequate context was available during the coding process, the target terms were found in the identified page and section headings were used as boundaries for the scanned passages. Some of the passages are only a few sentences, indicating the term is isolated in the textbook through section headings, while others are multiple pages. All passages from a single textbook were stored as a single file with a page inserted between sections indicating to coders the different passages in the text.

The Codebook

In an attempt to begin with an *a priori* design, as discussed by Neuendorf (2016a), the codebook for this pilot study has been developed from existing models and scholarship before

any analysis of catalog course descriptions has been conducted. Additionally, the codes

emphasize explicit connections because the goal of the analysis is to learn more about the ways

these terms are situated and taught. Raters were asked to only count an instance if they could

identify the exact location in the text where the code could be found.

The codebook has three sections, and each corresponds to a research question. The first

section in the codebook, which was designed to answer RQ2, asked the raters to evaluate the

passages from each textbook for production and consumption. The distinction between

production and consumption in these codes is similar to the distinction made by other scholars

investigating multimodal instruction (Palmeri & McCorkle, 2017; Schiavone, 2017). Raters

made two separate observations about production and consumption. First, they decided if they

could identify instances where the focus was on production and instances where the focus was on

consumption. They were told to count each as follows:

> **Production if** the passage is emphasizing the term as a resource for making (planning, drafting, writing, drawing, designing, producing, revising, remixing, etc.)

> **Consumption if** the passage identifies the term as a resource for understanding (reading, analyzing, interpreting, evaluating, critiquing, etc.)

Then, they were asked to determine the emphasis in each textbook towards one or the other (a

mutually exclusive decision). The decision about emphasis was a holistic judgment that each

rater made based on the totality of each textbook as follows:

> **Production OR Consumption** to indicate the primary emphasis of the text in relation to the target term. The text may do either, both, or neither but you must decide if the text leans to either production or consumption for this code.

Raters noted some difficulty deciding between the two with some texts, especially in texts that

only referenced the target term briefly. As reported in the results section, the codes with the least

reliability where the decision about emphasis.

The second section of the codebook, which corresponds to RQ3, asked raters to identify passages that explained the target term from a functional, critical, or rhetorical literacy perspective. The three forms of literacy were first explained by Selber (2004) and are summarized in chapter 1 of this dissertation. To operationalize the codes, raters were asked to identify sections within the textbook passages that represented each form of literacy. The literacy codes were not treated as mutually exclusive, so raters could identify all three forms of literacy for each term in each textbook. When reviewing, raters were instructed to count the literacy codes as follows:

> **Critical if** the text presents an explanation of the term that involves the history and/or social contexts in which it operates.

> **Rhetorical if** the text explains the ways the term can serve specific rhetorical goals. The text must tie the target term to a purpose to mark this code.

> **Functional if** the text provides practical instruction on the application of the target term. Mark this code if the text provides recommendations or instructions (about production, not about argument or persuasion).

Instances where the term was present with a vague association were not counted. In other words, simply mentioning a reader should consider audience, context, or argument when choosing color is not enough to say that the text is providing critical, rhetorical, or functional instruction. For example, a broad assertion such as "the use of color can help contribute to an argument" is insufficient while the additional explanation of "by selecting hues associated with particular themes or emotions" provides specific guidelines and connections.

The final section of the codebook, which answers RQ4, asked raters to identify specific pedagogical moves, strategies for teaching, about each target term. I generated the list of pedagogical moves as an additional measure of the ways multimodal terms are taught in writing textbooks. By looking for these moves, or noting their absence, we can better understand the

assumptions we are making about what students know or need to learn about digital and

multimodal topics. Raters were asked to consider each code as follows:

> **Definition** **if** the text provides a definition or functional explanation of the term. The definition may be a general definition or an explanation of components. A definition only needs to directly explain what the term refers to. Do not mark for explanations of use, examples, or instructions—the definition must provide an overview of characteristics or a clear statement of what the term refers to.

> **Description of Application** **if** the text provides a set of instructions or an overview of the process of using the concept. Look for steps or a decision-making process that helps the reader understand how to use the target concept.

> **Examples** **if** there is a passage, image, or other component that demonstrates the use of the target concept. Note, an explanation or list of possible uses does not count as an example. The example must illustrate/demonstrate the idea.

> **Rhetorical Concepts** **if** the text makes an explicit association between the target concept and a rhetorical concept. Commonly, this may refer to ethos, pathos or logos. It may also refer to specific decisions about persuasive goals.

Coding and Intercoder Reliability

I recruited two coders familiar with quantitative coding to conduct the content analysis.

The coders are experienced writing instructors, and we followed the process of coder training

and codebook revision outlined by Neuendorf (2016b). I developed training materials that

provide specific definitions and sample units representing each code. Coder training proceeded

in three stages. First, we began with a session designed to introduce the process and discuss the

codebook, practice coding, and codebook clarifications. While I participated in rating during the

norming process, my codes were only used for norming purposes. After we practiced and refined

the codebook, coders began with a subset of passages to code, which I reviewed. Once an

acceptable simple agreement was reached between my ratings and the rater, they proceeded with

the rating. We will discuss their independent practice and make any additional adjustments to the

codebook that are needed. Finally, coders were given a pilot subsample for reliability purposes.

Once an acceptable level of agreement was reached, they proceed to the final coding. The coding

process resulted in descriptive, nominal data. The frequency of the variables represents observations about the field's approach to teaching multimodal terminologies and the presence (or lack) of instructional elements. After coding, Cohen's Kappa was calculated using SPSS to determine intercoder reliability.

During the coding process, coders had some difficulty isolating the term in passages that combined multiple, related concepts. This was especially true with instances where the target term was used as an example or to explain another concept. For example, in many texts *Facebook* and *Twitter* were used to introduce audience awareness and the ways academics enter into ongoing conversations. In such passages, the target terms were not part of the pedagogical objectives, even if they were being connected with important concepts. Another area where raters noted challenges was in deciding if a textbook privileged production or consumption. In some texts, the target term was not discussed enough to make a confident assessment, and the results show that the production/consumption category of codes had a lower reliability.

Conclusion

This chapter contains an overview of the methods for this dissertation and the three major stages: the corpus development, the identification of multimodal words, and the content analyses of select terms. Collectively, each stage represents a repeatable set of methods that can be replicated and extended in future research; future projects can build on the corpus, multimodal list, and the content analyses to develop additional insights into the topics covered in writing studies textbooks. Data collection and descriptive statistics are the primary focus of the methods used in this project, but the results have significant implications in the context of writing studies pedagogy, professional development, and curricula revision. In the final chapter, the findings will also be discussed in context of the scholarly trends highlighted in the literature review. Ultimately, this project is an attempt to provide insights into the ways multimodal content has

been integrated into the practice of writing instruction. While textbook indexes and selected

passages cannot provide a complete picture, the methods and data represent a starting point for

additional research.

CHAPTER 4.   RESULTS

In this chapter, I present the results from the analysis of the textbooks I examined. The organization of the results follows the order of the research questions, and each section focuses on one stage of the analysis. Because the first phase of this dissertation was the development of the corpus and does not answer a research question, I begin with the results from phase 2 by reporting on the composition of the index corpus, then the frequency wordlist, the multimodal wordlist, and the co-occurrences. Following the frequency results, the findings from phase 3, the four content analyses (*color*, *fonts*, *Facebook*, and *Twitter*) are then presented. Each content analysis section includes an overview of the sample, the findings from the content analyses, and a representative selection of the ways each term was discussed.

Phase 2 Results: Wordlists and Frequencies

The initial word list contained 10,290 unique words. In this project, frequency is measured by the number of textbook indexes that each term appears in. An initial frequency count showed only seven words appear in all 36 textbook indexes (*and*, *for*, *in*, *of*, *sources*, *to*, and *writing*). Figure 2 shows the distribution of words based on their relative frequency. There are 5,723 words that appear in only one textbook index while 4567 words appear in two or more of
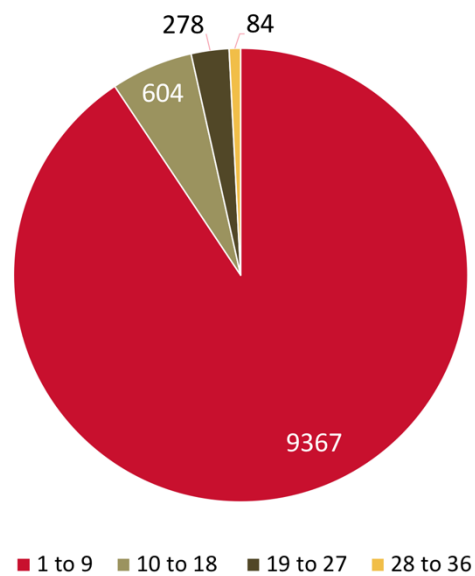

Figure 2: The frequency of terms per quartile.

the texts. Only 3.5% of the unique words in the corpus appear in half or more of the textbook

indexes.

Answer to RQ1

The starting point for the research project was an analysis of words that frequently occur

in FYC textbook indexes to answer the first research question, which asks about the frequency of

multimodal terms:

> **RQ1**. Which multimodal terms (terms representing skills, genres, or tools that are
> explicitly associated with visual, oral, and electronic modes) are appearing most
> frequently in writing textbooks?

Three raters reviewed the initial frequency list evaluating each word as multimodal or not. The

initial frequency list ranked frequency based on the number of texts that each word appears in,

and the rating continued until raters agreed on at least 50 words. The final multimodal frequency

list is presented in Table 7 and graphed in Figure 3. Based on the frequency analysis, the most

frequently occurring multimodal term is *visual*, appearing in 31 out of 36 textbook indexes.

Following *visual* is *online* in 30 textbooks. The most frequently occurring digital and multimodal

words, shows a wide range of topics that are commonly included in FYC textbooks and, as by

proxy, the range of topics addressed in FYC classrooms.

Table 7: Frequency of Multimodal Terms by Number of Textbooks

| #	Term	#	Term	#	Term	#	Term	#	Term
31	visual	24	electronic	20	searches	17	film	15	boolean
30	online	24	google	20	sites	17	maps	15	cartoons
29	databases	23	television	19	art	17	multimedia	15	color
29	images	22	charts	19	engines	17	oral	15	database
29	media	22	presentations	19	white	17	twitter	15	films
29	web	22	wikipedia	18	clustering	16	multimodal	15	fonts
27	internet	21	sound	18	photographs	16	audio	15	graphs
25	design	21	speech	18	software	16	mapping	15	prezi
25	digital	21	video	18	visuals	16	music	15	powerpoint
24	blogs	20	presentation	17	facebook	16	websites	15	radio
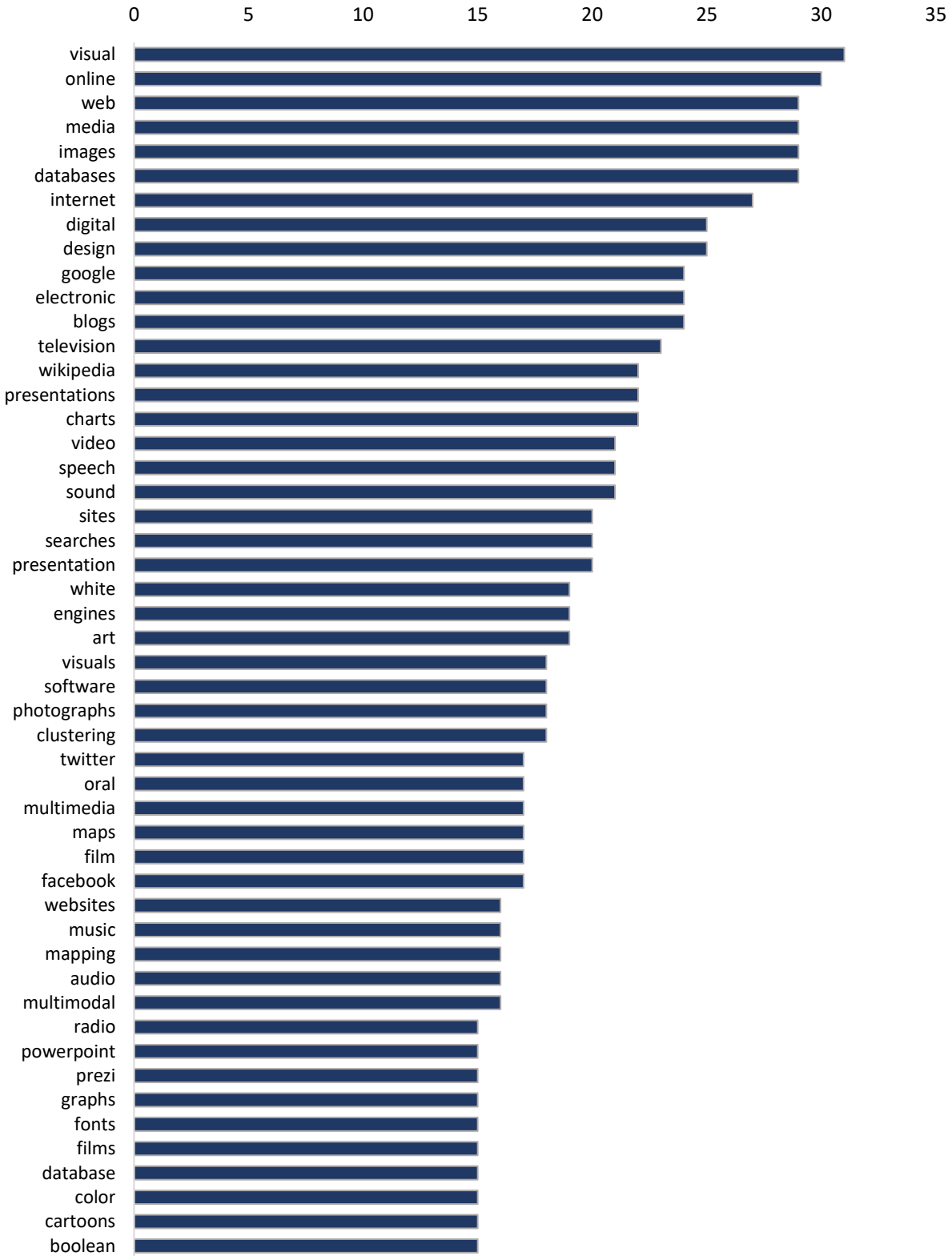
Figure 3: Top 50 digital and multimodal words sorted by frequency

Scholarship about multimodality emphasizes that communication occurs in many forms, including spoken speech and recorded sounds. The frequency data and the review process revealed that the most common multimodal word is *visual*, appearing in 31 of 36 textbooks, or 86%. After visual, *online* appears in 30 of 36, or 83% of the textbooks. Many of the most frequent words that were identified are broad terms or have multiple meanings. Further down the list there are more specific categories that emerge, and grouping and categorizing the terms could happen in a variety of ways. For example, the most frequent platforms and tools are *Google*, *Wikipedia*, *Facebook*, *Twitter*, *PowerPoint*, and *Prezi*. Numerous terms associated with visual design appear *charts*, *photographs*, *maps*, *cartoons*, *color*, *phots*, and *graphs*. Among the most common terms identified through this analysis, the majority are related to digital or visual formats; however, terms related to aural communication are also well represented (*presentations*, *speech*, *sound*, *presentation*, *oral*, *audio*, *music*, and *radio*).

Considering coverage

One of the implications of the multimodal wordlist is that it can be used to consider the subjects that are covered by our curriculum and our courses. We can compare the topics that are emphasized in a set of materials to the patterns in the corpus to determine where there is alignment and where there are gaps. Additionally, we can use the data to examine the textbooks themselves. To illustrate, I have used the multimodal wordlist to identify how many of the multimodal terms appear in each textbook, and I ranked the textbooks by their frequency in Figure 4.
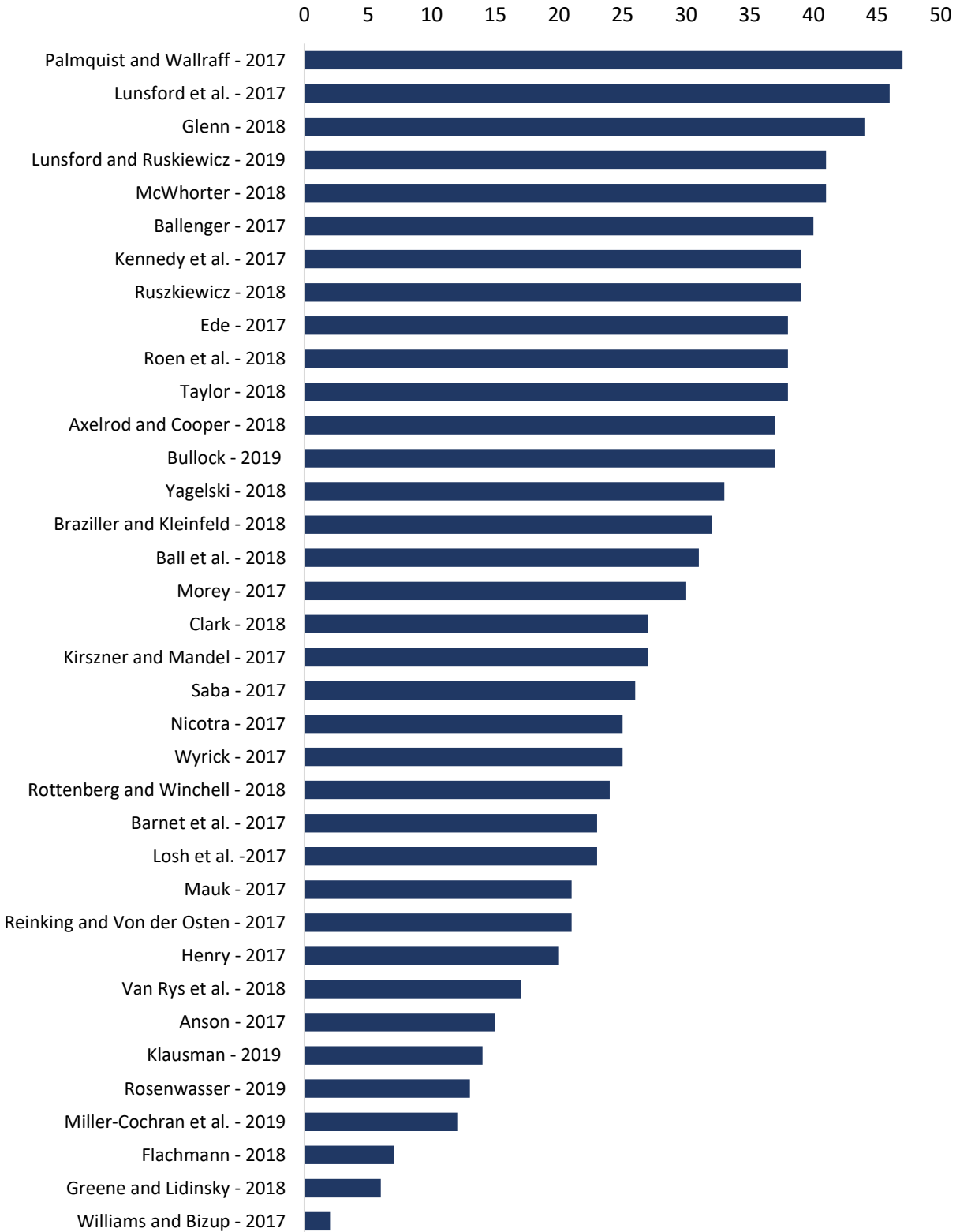
Figure 4: Number of top multimodal terms per textbook

The hierarchy of the most and least multimodal texts opens an additional avenue of analysis for understanding the prevalence of multimodal terms. Table 8 shows the distribution of digital and multimodal words among the most multimodal texts, as determined by the number of multimodal terms in each text. Examining which terms appear frequently and infrequently at the top and bottom of the textbook list in the diagram above provides additional indicators about the field's consensus about certain terms and the divide between texts that embrace digital and multimodal content and texts that do not.

Table 8: The number of multimodal terms that appear in the top 5 texts.

Number of texts	Number of terms
2 of 5	1
3 of 5	6
4 of 5	16
5 of 5	27

27 of the multimodal words appear in all five of the 'most' multimodal textbooks, showing some consistency. All 50 of the terms appear in at least two of the 'most' multimodal texts. Further analysis in future research could investigate the extent and nature of the overlap. The least represented term among the top five is *mapping* which appears in only two of the top five texts, followed by *cartoons*, *Google*, *maps*, *speech*, *websites*, and *Wikipedia* which each appear in only three of the top five.

In the five texts with the least number of multimodal terms, an inverse trend occurs. Two of the terms appear in three or more of the bottom five while the majority appear in one (23) or none (20) of the bottom five texts. The most represented terms in the bottom five textbooks are *visual*, which appears in four indexes, and *databases*, which appears in three. Additionally, *blogs*, *google*, *images*, *speech*, and *white* each appear in two of the corpus indexes. The distribution of multimodal terms among the most and least multimodal texts highlights the

divided view within writing studies about the place of digital and multimodal content in writing

studies pedagogy. Based on the index, 4 out of the 5 most multimodal texts include 43 of the

digital and multimodal words while the least multimodal terms include 13 or fewer each with

nearly no overlap.

Examining the presence or absence of individual words creates the opportunity to identify

patterns in the collection of textbooks, but incorporating additional textual features can help

validate and complicate the patterns. To better understand the meanings of the terms and the

implications of the list, I conducted additional analysis and examined the co-occurring words.

Co-Occurrence Frequency Data

Viewing the common words in context and with the commonly co-occurring words

provides additional information about the ways the words are being addressed in each text.

Understanding the context and usage of individual words can be accomplished by examining

frequently co-occurring words or by viewing entries containing a particular word. Words that

commonly co-occur are associated through grammatical or semantic relationships, and

uncovering those relationships can help clarify the usage of common terms. My program created

a list of associated words for each word in the corpus and ranked the association by frequency.

Associated words occur together in an index entry, including the heading and the subheading,

and frequently co-occurring words can be tracked based on the number of texts that the two

words are associated within. Table 9 shows information about the words that co-occur with the

first six terms. For a more complete list of words co-occurring with the multimodal words see

APPENDIX B.

Table 9: Associated words for top six multimodal terms. The co-occurring words appear alongside the target word in five or more textbook indexes. A full list can be found in APPENDIX B.

#	Target Word	Associated Words	5 or more Co-occurrences
31	Visual	407	images (12), writing (10), arguments (9), texts (7), elements (7), design (7), analysis (7), mla (6), rhetoric (5), photographs (5), multimodal (5), charts (5)
30	Online	444	sources (20), mla (18), style (16), apa (15), research (12), references (11), works (10), on (9), internet (9), electronic (9), cited (9), writing (8), list (8), documentation (8), books (8), video (7), government (7), evaluating (7), articles (7), websites (6), web (6), sites (6), search (6), print (6), journals (6), documents (6), reference (5), media (5), databases (5)
29	Databases	134	sources (11), searching (8), research (8), mla (8), library (7), apa (7), style (6), from (6), articles (6), with (5), periodical (5), online (5), general (5), finding (5), academic (5)
29	Images	274	visual (12), design (7), visuals (5), style (5)
29	Media	398	social (20), writing (10), mla (9), on (8), style (7), sources (7), rhetorical (7), communication (6), online (5), medium (5), design (5)
29	Web	321	sites (14), sources (12), mla (10), page (9), internet (9), apa (9), pages (8), style (7), site (6), research (6), online (6), on (6), evaluating (6), writing (5), with (5), based (5)

Just as frequently occurring terms, word pairs provide an additional pattern of usage that can be used to characterize the aboutness of the corpus. Beyond topics, however, the most highly associated terms can provide information about the relationship between topics. In Table 10, the percentage indicates the percentage of textbooks in which the two terms are associated at least

once. The strength of co-occurrence, measured as a percentage of indexes that contain the target

word and the co-occurring word in a single entry, reveals pairs of words that are commonly

indexed together in writing textbooks. For example, *search* and *engines* appear together in 100%

of the textbooks in which *engines* appears. The two terms may appear independently in index

entries, but they appear together at least once in the 19 indexes containing *engines*. My program

found 30 instances of words that co-occur in 50% or more textbook indexes.

Table 10: Words that co-occur with multimodal words in 50% or more of the textbook indexes.

	Target	**Co-occurrence**		**Target**	**Co-occurrence**
100%	Engines (19)	Search (19)	65%	Television (23)	Style (15)
87%	Radio (15)	MLA (13)	63%	Electronic (24)	Sources (15)
80%	Boolean (15)	Operators (12)	60%	Graphs (15)	Charts (9)
73%	Radio (15)	Programs (11)	60%	Cartoons (15)	MLA (9)
71%	Oral (17)	Presentations (12)	60%	Online (30)	MLA (18)
70%	Sites (20)	Web (14)	60%	Films (15)	Style (9)
70%	Searches (20)	Keyword (14)	60%	Films (15)	APA (9)
70%	Television (23)	MLA (16)	57%	Television (23)	APA (13)
69%	Media (29)	Social (20)	56%	Audio (16)	MLA (9)
69%	Websites (16)	Style (11)	56%	Websites (16)	APA (9)
69%	Websites (16)	MLA (11)	55%	Presentation (22)	Oral (12)
68%	Digital (25)	Object (17)	54%	Google (24)	Scholar (13)
67%	Online (30)	Sources (20)	53%	Online (30)	Style (16)
67%	Films (15)	MLA (10)	52%	Digital (25)	Identifier (13)
67%	Radio (15)	Style (10)	52%	Internet (27)	Sources (14)

Common word combinations emerge in list of frequently co-occurring words either

because the words are used to express a single topic or because the text is making a connection

between separate ideas. *Search engines*, *Boolean operators*, and *social media* are strongly

associated because the word combination is descriptive of a single topic and the words are likely

associated in other contexts. However, the association also shows that some words are associated

for pedagogical purposes, at least those associated with citation or source management. Based on

the strong relationship of many of the terms, a primary goal of writing textbooks, when it comes to many of these terms, is to teach students how to find, evaluate, and cite source material.

A deeper examination of co-occurring terms helps reinforce the findings about research and source management and provides some additional insight into the usage of some of the words. Both *digital* and *electronic* appear alongside words that emphasize a research focus of these topics, appearing with words like *object*, *identifier*, *sources*, and *online*. There are a few implications that need to be considered based on the finding that the words that most frequently co-occurred with *digital* and *electronic* indicate a focus on sources and source management. Notably, it is important to recognize that these words do not, on their own, indicate a focus on digital genres or multimodality. In fact, *digital* and *electronic* rarely co-occur with terms that do not directly focus on research. In many contexts, research may privilege a focus on traditional forms of literacy, especially in instances where credibility and authority are tied explicitly to academic journals.

As categorical terms that expand notions of writing, the contrast between the appearance of *design* and *multimodal* is also revealing. In academic texts, multimodality has been discussed frequently; however, design appears to be more consistently used in textbooks. Out of 36 texts, *multimodal* appears in 16 while *design* appears in 25 and co-occurs with 29. The frequency of co-occurring multimodal terms with *multimodal* (

Figure 5) and *design* (

Figure 6) also shows that more texts relate a wider range of digital and visual concepts with *design*. Both are associated with a high number of digital and multimodal terms, but *design* is the more prevalent term. A future study should more closely examine and analyze the usage of these two terms in both academic and pedagogical materials.
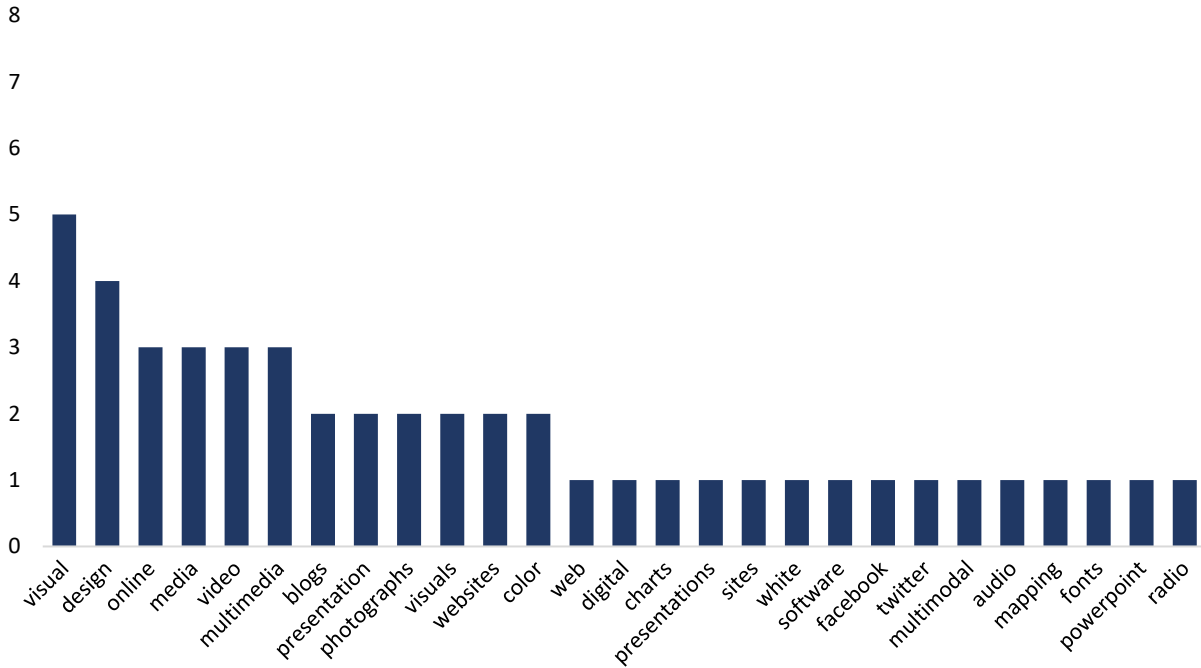
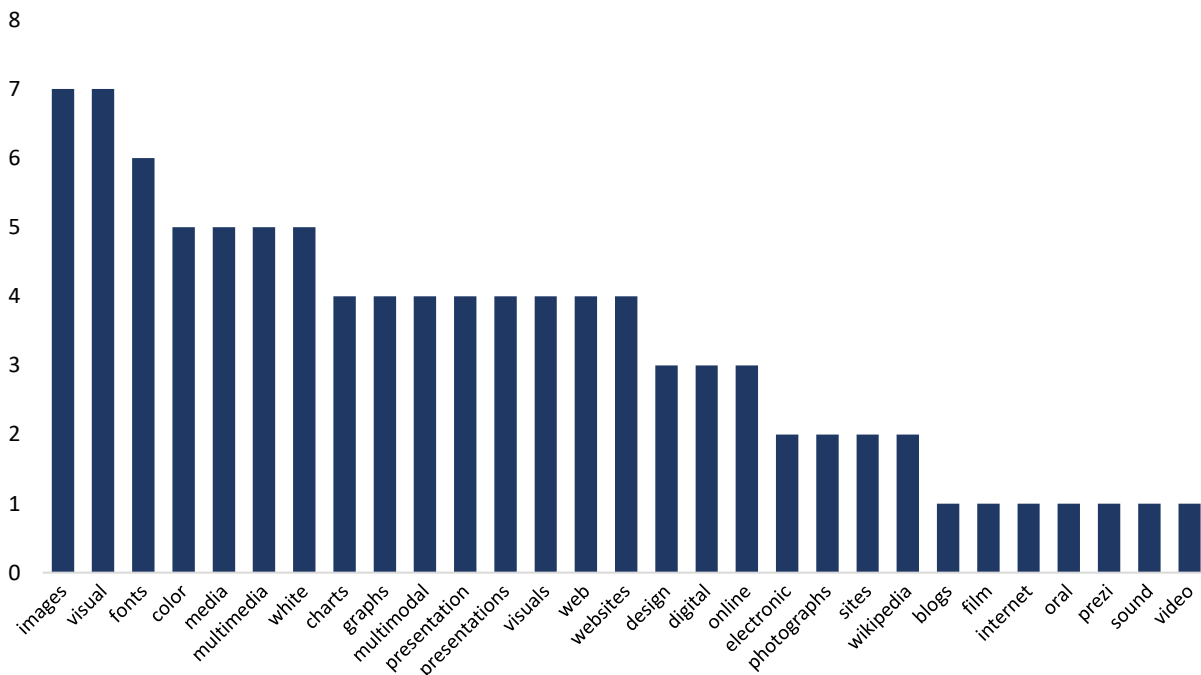*Figure 5: Frequency of multimodal terms that co-occur with multimodal.*

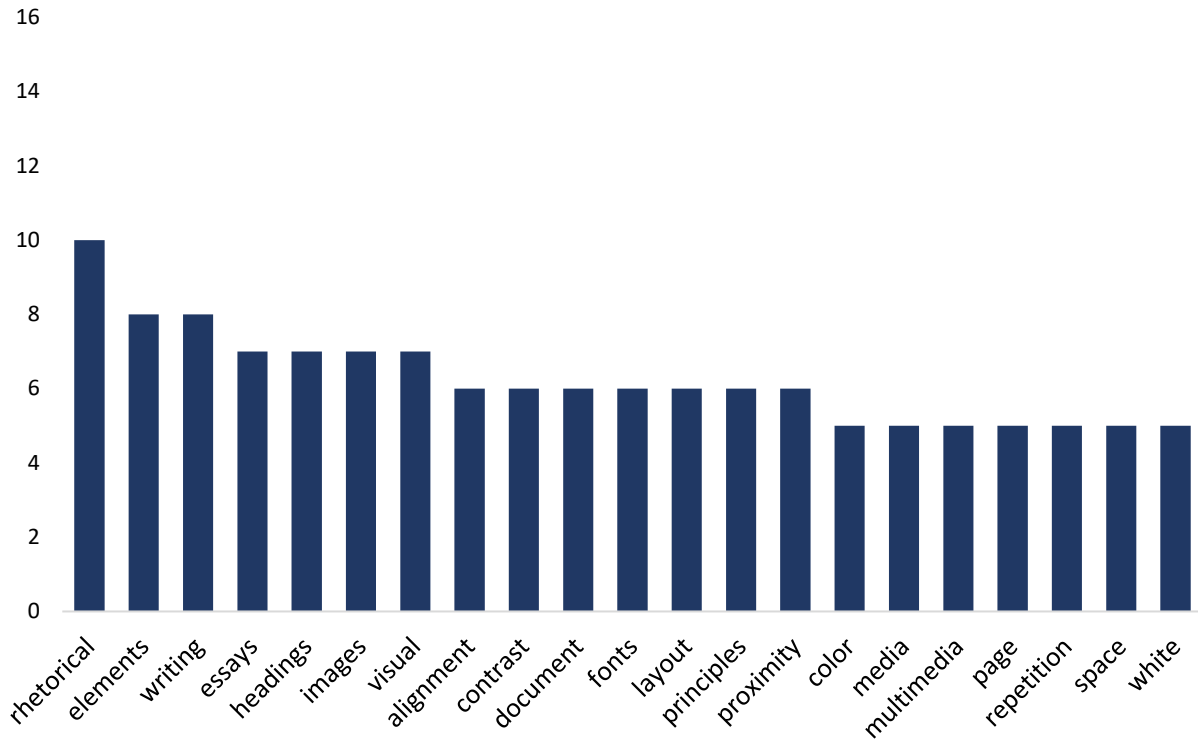*Figure 6: Frequency of multimodal terms that co-occur with design.*

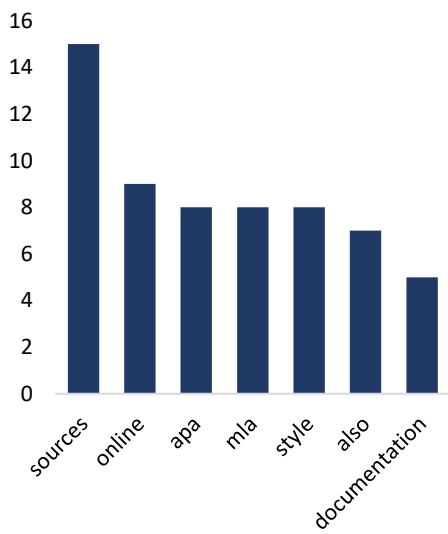*Figure 7: Words co-occurring with design (n=25).*

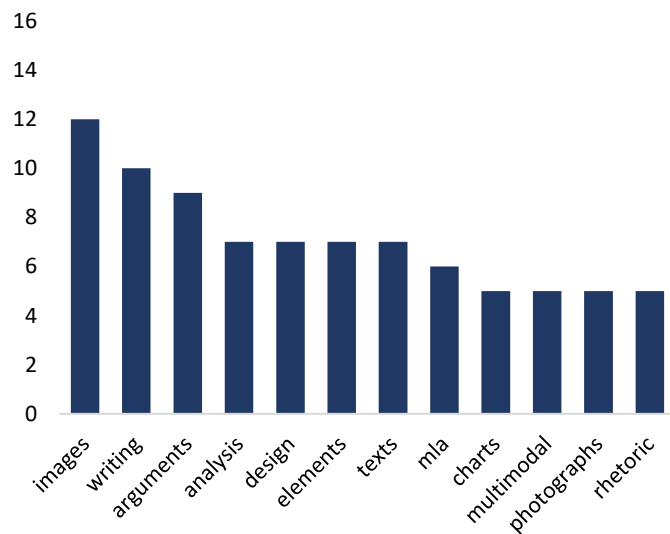

Figure 8: Words occurring with electronic (n=24).

Figure 9: Words occurring with visual (n=31).

A closer look at words that co-occur with *design* shows that many texts associate design with traditional topics in FYC curriculum. The association of design with rhetoric reinforces the scholarly discussions about the place of design in writing instruction. Like *design*, *visual* and *electronic* are terms that can function as categorical. *Visual* has a similar trend in co-occurrences, displayed in Figure 9, with arguments and analysis appearing frequently. However, *rhetoric* only appears with *visual* in 5 of 31 texts. Collectively, the co-occurrences reveal a pattern of the limited treatment of digital and multimodal topics in relation to communication goals outside of research and source management.

An Emphasis on Research

The most frequent words and their co-occurrences reveal an emphasis on research and source management. For example, the word *online*, which occurs in 30 of the corpus texts, appears with *sources*, *MLA*, *style*, and *APA* in more than half of those texts. The word that most frequently co-occurs with *radio*, for example, *is MLA*. Similarly, *television* is indexed with *MLA* in 70% of indexes containing *television*. Additionally, *databases*, *web*, and *internet* are topics that appear with co-occurring words that indicate their research focus. These words have a clear association with information literacy. Databases are essential for finding academic research through the library, and the internet is a common tool that students turn to without fully understanding the implications. The high frequency of these terms reinforces the idea that for students in FYC contexts, learning ways to identify, gather, and manage source material is important. This finding reinforces Sheffield's (2016) finding that digital literacy requirements were most commonly associated with objectives and outcomes related to research. The relationship between technology and research underscore the importance of critically evaluating the ways we integrate technology to support a wide range of literacy skills. While research skills and information literacy are essential in writing studies curricula, calls for integrating technology into writing courses extend further.

The trend towards an association between digital communication and research suggests that the presence of digital and multimodal topics is not sufficient evidence of digital and multimodal pedagogy. The use of computers, library databases, and social media platforms for gathering information is a very limited version of digital literacy, and one that is barely recognizable when compared to the multimodal project and pedagogies suggested by scholars. For educators looking for materials that ask students to engage with multimodal genres, the presence of digital and multimodal topics is not enough. The use of digital tools for research purposes is certainly valuable, and important, but the results of this analysis indicate that among FYC courses, the use of technology in the classroom centers on research practices.

Additional Context

While co-occurrence provides some insight into the usage of words, the information is limiting. Another way to view the context for the frequently occurring words is to examine the full index entries for selected terms or pairs of terms. It is possible to compare topics indexed in the textbook corpus across multiple levels and examining terms in context helps open additional avenues of inquiry. Many studies that report word frequencies also provide KWIC (key words in context) lines to show the usage of particular items. This dissertation uses index entries, so the context for key words includes the index structure of headings and subheadings. Table 11 illustrates an additional level of analysis that is available through the methods described in this dissertation. It demonstrates the potential of using frequency and key word analysis on structured texts by showing a complete listing of index entries that contain both *visual* and *images*.

Table 11: Index entries containing both visual and images.

Text	Examples with *Visual* and *Images*
Ball et al. - 2018	images see also visual elements visual mode
Ballenger - 2017	reading images the grammar of visual design kress and van leeuwen

Table 11. (continued)

Barnet et al. - 2017	images as arguments
	see also visual rhetoric
	visual rhetoric
	images as arguments
Kennedy et al. - 2017	action in images visual analysis and
	arrangement of images visual analysis and
	artistic elements of images visual analysis and
	background in images visual analysis and
	composition of images visual analysis and
	design of images visual analysis and
	elements in images visual analysis and
	feelings generated by images visual analysis and
	function of images visual analysis and
	images see visuals
	images analysis of see visual analysis
	language in images visual analysis and
	mood of images visual analysis and
	objects in images visual analysis and
Kirszner and Mandel - 2017	images as visual arguments see visual arguments
Lunsford et al. - 2017	images see visuals
Lunsford and Ruszkiewicz - 2019	images see also visuals
	in emotional appeals
	as quotations
	in visual arguments
McWhorter - 2018	images see visuals
Nicotra - 2017	visual rhetoric analysis of
	images in texts
	placement circulation and distribution of images
	stand alone images
Rosenwasser - 2019	method the heuristic
	for visual images
	visual images
	using doing on strategy on
	using the method strategy on

Table 11. (continued)

Ruszkiewicz - 2018	graphics see visual images
	illustrations see also visual images
	    reports using
	    sources evaluated using
	images see visual images
	visual images
	    in arguments
	    digital
	    document design and
	    evaluations and
	    inserting in word documents
	    in literary analyses
	    presentation slides and

Saba - 2017	images see also visuals
	    communication through
	    design image tech tip
	    imagist poems
	    themes in portraits
	visual design see also design communication and visuals see also images
	    in evaluations and reviews
	    graphics and v j day in times square

Taylor - 2018	purpose visual images and
Yagelski - 2018	visual elements in document design images

In this example, viewing each entry, composed of headings and subheadings, containing both terms reveals that the association of visual and images occurs for cross-indexing purposes, as it does in Ball et al., for example. *Images* also stands in as an instance of visual communication or as an example for analyzing argument as seen in Barnet et al. and Kirszner and Mandel. The similarity between the entries across the full set also underscores the established use of images for teaching argument and rhetorical principles. In many of these texts, visuals are a pedagogical resource for teaching traditional rhetorical skills instead of being the primary topic. While visual topics are prevalent, there is little indication within the indexes that

production is an emphasis. The language in the indexes do not indicate the process of producing images or the tools involved.

Based on the corpus and programs I developed for this dissertation, it would be possible to create many more tables identifying words and word pairs for further analysis. The methods here, then, could support a type of close reading to extend and deepen the results of the distance reading conducted in this project. Additional tables could be created representing any set of target words to view what topics are indexed and to identify textual passages for closer examination. The ability to search a complete body of pedagogical materials for any topic has implications that extend beyond the scope of this dissertation but are worth noting.

Phase 2 Summary

The multimodal wordlist developed in the second phase of this study answers RQ1 with the 50 most common multimodal words appearing in the indexes of FYC textbooks. The list also shows the relative frequency with which each word appears, showing a steep decline. With only 29 multimodal words appearing in half or more of the textbooks. The most common term *visual*, and the high number of visual based words, indicates that visual communication is addressed more frequently than other communicative modes. The frequency list and the co-occurrence table also show that the primary focus for many of the digital and multimodal concepts is related to information literacy and source management. Distinct from the goals related to research in writing courses, the word lists also show a frequent connection to design, although it is unclear from the phase 2 findings, how students are asked to engage with these topics. Still, the data from phase 2 reveals the limited treatment and minimal consensus surrounding identified digital and multimodal terms. While there are a wide range of co-occurring terms, only a small number of digital and multimodal words appear in the majority of the textbooks examined, and most of the terms that do appear frequently represent broad categories.

Phase 3 Results: Content Analyses

Each section below presents the data from the content analyses that were conducted and some initial interpretations and analysis of the findings for each individual term. The findings are reported in three sections; each section is an answer to research question 2, 3, then 4. After the findings for each content analysis is presented, the collective findings are discussed to answer the research questions.

Overall Intercoder Reliability

For each of the target terms, Cohen's κ was run to determine if there was agreement between the raters on whether the passages reflected the possible codes. Agreement ranged from substantial for Color and Fonts (.729 and .759 respectively) to perfect for Facebook and Twitter (.817 and .859 respectively). To further understand the agreement of the raters and their application of the codebook, Cohen's κ was run for categories of the codebook, and the results are reported in the sections below.

Table 12: Intercoder Reliability for Each Term

Term	Simple Agreement	Cohen's Kappa
Color	86.43%	.729
Fonts	86.92%	.759
Facebook	90.83%	.817
Twitter	94.62%	.859

Color

The Sample

The initial results indicated that 16 indexes included the word *color* in the index. After I reviewed the entries from the 16 textbooks, multiple indexes were found to contain the phrase *people of color*, and this use of color was determined to be unrelated to design. For the content analysis, two texts were not included because the only indexed uses of color were outside the

focus of the study. Passages from the remaining 14 textbooks were collected for the content analysis.

Reliability

For the analysis of passages containing *color*, Cohen's κ was run to determine if there was agreement between the raters on whether the passages reflected the possible codes. Overall agreement was substantial, κ = .729. For the codes in the Production/Consumption category there was moderate agreement κ = .605. There was substantial agreement for the codes in the Literacies category, κ = .755, and for the codes in Pedagogical Moves category, κ = .786.

Table 13: Intercoder Reliability for Color, by Codebook Category

Category	Simple Agreement	Cohen's Kappa
Production/Consumption	80.95%	.605
Literacies	88.10%	.755
Pedagogical Moves	89.29%	.786

Results

Production or Consumption (Q2)

The analysis revealed that 8 of 14 texts treated color as a resource for production and 9 of the 14 texts treated color as a resource for consumption indicating that more texts include passages about how to read or interpret color. However, when asked if the text favored production or consumption (a mutually exclusive decision), 8 texts were coded for production and 6 for consumption.

Color: Production and Consumption

Emphasis on Consumption or Production
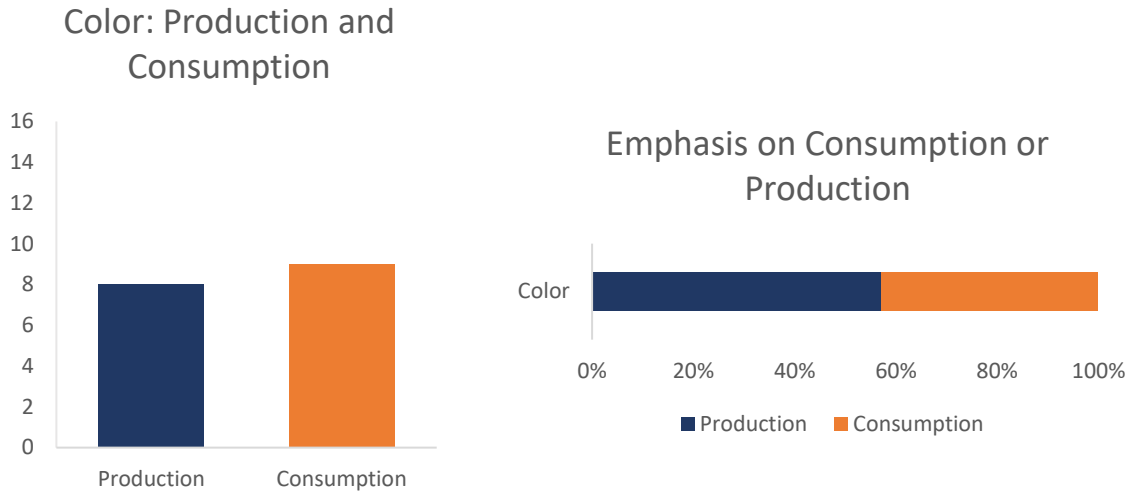
Figure 10: On the left, a comparison of passages discussing color and with a focus on production and consumption (not mutually exclusive). On the right, passages discussing color and emphasizing production or consumption (mutually exclusive).

Literacy (Q3)

Color is most commonly addressed from a functional perspective, although a critical perspective appears in many of the texts. For the literacy codes (*n=14*), 1 textbook treats color from a rhetorical perspective, 6 from a critical perspective, and 10 from a functional perspective.

Color: Literacies
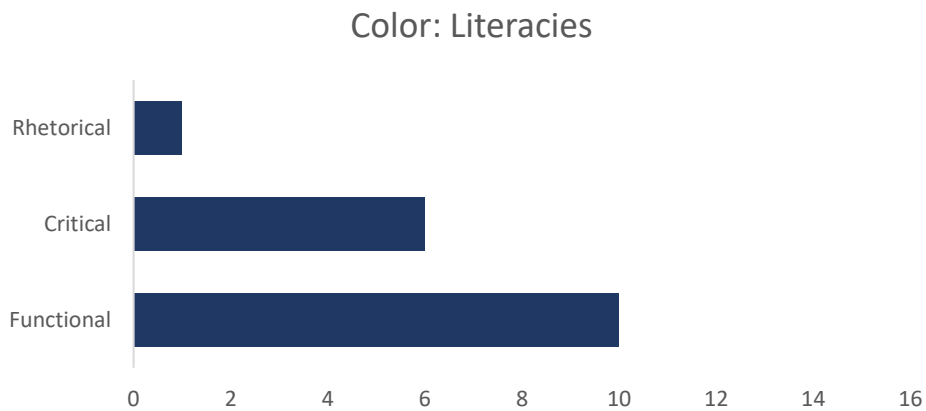
Figure 11: Types of literacy in passages discussing color.

Pedagogical Moves (Q4)

Color is not defined in any of the passages identified for this analysis. However, 9 texts contain passages that describe how to apply color and 8 texts include examples of color being used. Out of the 14 textbooks examined, 9 made an explicit association between *color* and a rhetorical concept, and all 9 texts reference pathos or emotion as the rhetorical concept.
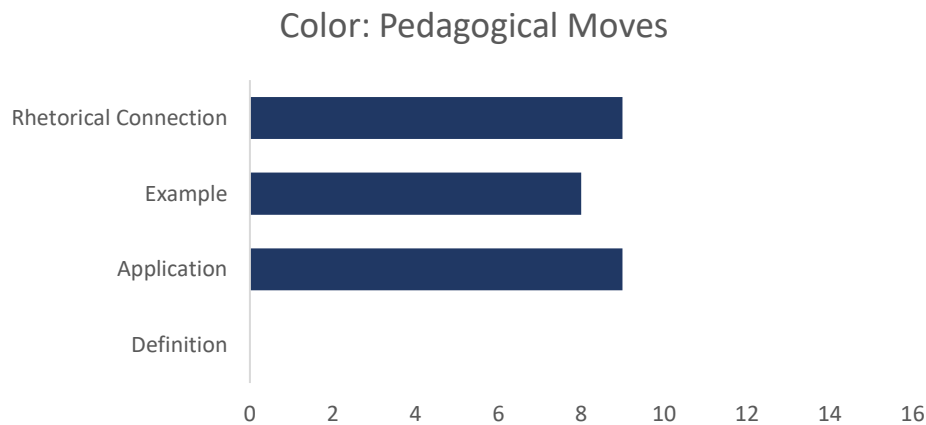
Figure 12: The frequency of pedagogical moves made by textbooks when discussing color.

Fonts

The Sample

The initial frequency count indicated that 15 indexes included the word *fonts*. Two entries from one of the texts referred to style guide information, and they were excluded. While the two entries were excluded, all 15 texts contained at least one passage that met the criteria for inclusion. The remaining passages from all 15 textbooks were collected for the content analysis.

Reliability

For the analysis of passages containing *fonts*, Cohen's κ was run to determine if there was agreement between the raters on whether the passages reflected the possible codes. Overall agreement was substantial, κ = .759. For the codes in the Production/Consumption category there

was moderate agreement κ = .568. There was perfect agreement for the codes in the Literacies category, κ = .816, and for the codes in Pedagogical Moves category, κ = .801.

Table 14: Intercoder Reliability for Fonts, by Codebook Category

Category	Simple Agreement	Cohen's Kappa
Production/Consumption	79.49%	.568
Literacies	92.31%	.816
Pedagogical Moves	88.46%	.801

Results

Production or Consumption (Q2)

During the rating process, the category of codes that received the least agreement were the production and consumption codes for fonts passages. One rater indicated that 15 of 15 texts treated fonts as a resource for production and 1 of the 15 texts treated fonts as a resource for consumption (see Figure 13) indicating that all of the texts that address fonts emphasize the production process and are unlikely to address the ways fonts should be considered while
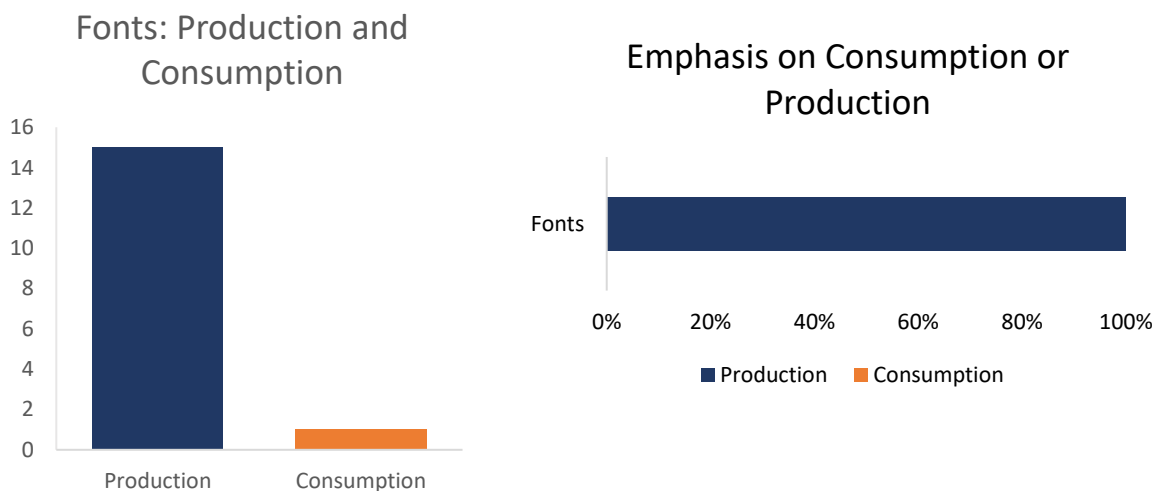
Figure 13: On the left, a comparison of passages discussing fonts and emphasizing production and consumption (not mutually exclusive). On the right, passages discussing fonts and emphasizing production or consumption (mutually exclusive).

reading, interpreting, or evaluating a text. The other rater indicated that 14 texts treated the fonts

as a resource for production and 5 as a resource for consumption. When asked to decide which

was the primary focus, rater 1 indicated production was the primary focus in all 15 texts and rater

2 indicated that production was the primary focus in 13. While there was a lower agreement

between the raters, they both clearly indicated that the texts favored production over

consumption.

Literacy (Q3)

The clear emphasis for passages containing the word *fonts* is on functional literacy. Of

the 15 textbooks containing *fonts*, 14 use a functional perspective while only 1 provides a critical

view and 1 a rhetorical view.
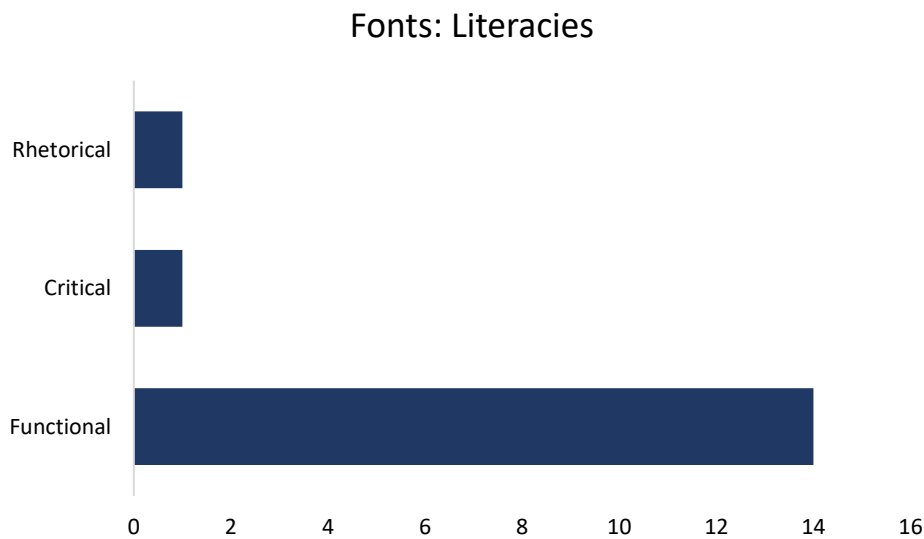
Figure 14: Types of literacy in passages discussing fonts.

Pedagogical Moves (Q4)

The instructional moves made in the passages were direct explanations and illustrations. 14 textbooks containing *fonts* provided brief explanations of how to select fonts and 12 provided examples. Only 1 textbook related fonts to a rhetorical concept (ethos) and 2 texts provided definitions.

Fonts: Pedagogical Moves
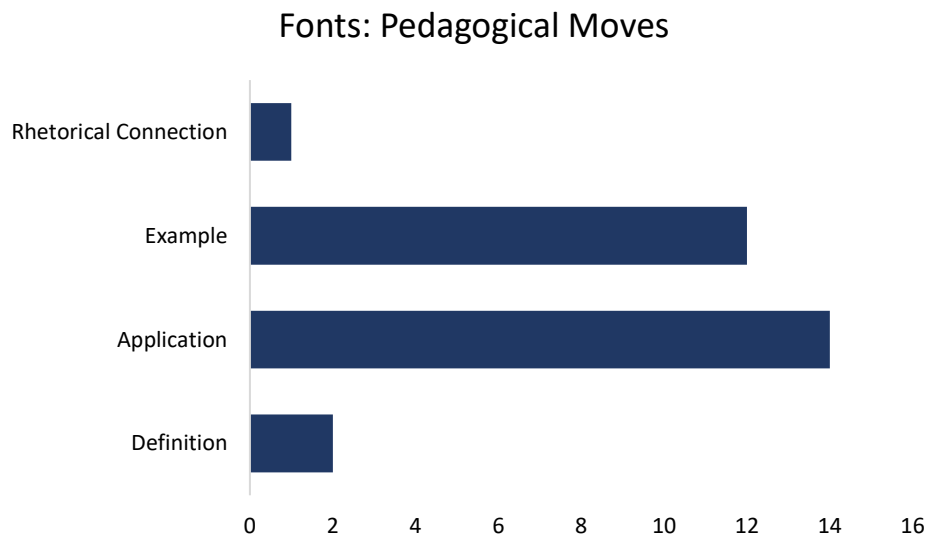
Figure 15: The frequency of pedagogical moves made by textbooks when discussing fonts.

Facebook

The Sample

The frequency results indicated that 16 indexes included the word *Facebook*. During collection, 4 textbooks were found to only include readings referring to *Facebook,* with no instructional content containing *Facebook.* The readings were not included in the content analysis, leaving 12 textbooks. Passages from the remaining 12 textbooks were collected for the content analysis.

Reliability

For the analysis of passages containing *Facebook*, Cohen's κ was run to determine if there was agreement between the raters on whether the passages reflected the possible codes. Overall agreement was substantial, κ = .817. For the codes in the Production/Consumption category, there was substantial agreement κ = .706. There was perfect agreement for the codes in the Literacies category, κ = .943, and there was substantial agreement for the codes in the Pedagogical Moves category, κ = .785.

Table 15:Intercoder Reliability for Facebook, by Codebook Category

Category	Simple Agreement	Cohen's Kappa
Production/Consumption	89.36%	.706
Literacies	97.22%	.943
Pedagogical Moves	89.58%	.785

Results

Production or Consumption (Q2)

The analysis indicated that 8 of the 12 textbooks discussed Facebook with a focus on and 10 of the 12 discussed Facebook. Half of the textbooks examined include instances of both. However, when asked if the text favored production or consumption (a mutually exclusive decision), the emphasis was split.

Facebook: Production and Consumption

Facebook: Emphasis on Consumption or Production
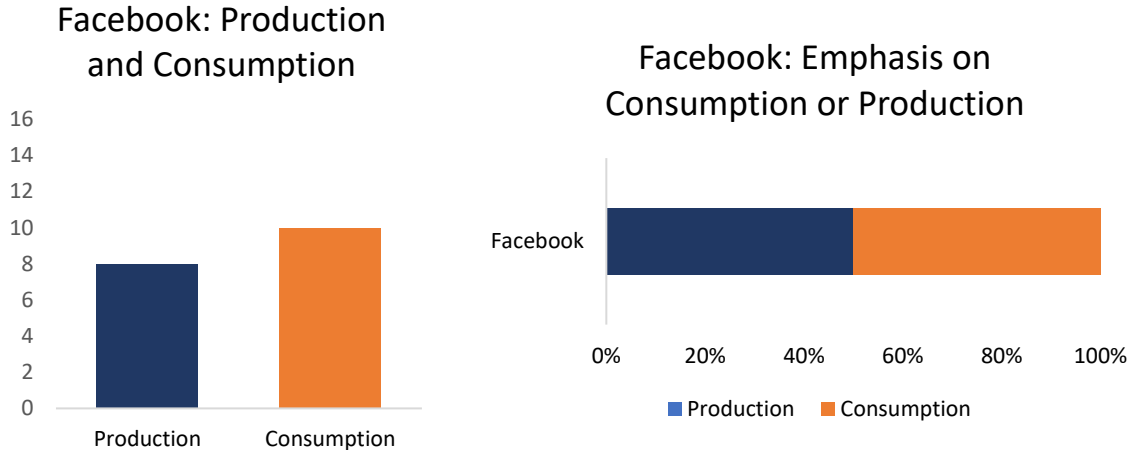
Figure 16: On the left a comparison of passages discussing Facebook and emphasizing production and consumption (not mutually exclusive). On the right, passages discussing Facebook and emphasizing production or consumption (mutually exclusive).

Literacy (Q3)

For the literacy codes (*n*=12), 3 textbooks treat Facebook from a rhetorical perspective and 4 from a functional perspective. The majority, 8 of 12 textbooks, include a critical approach.

Facebook: Literacies
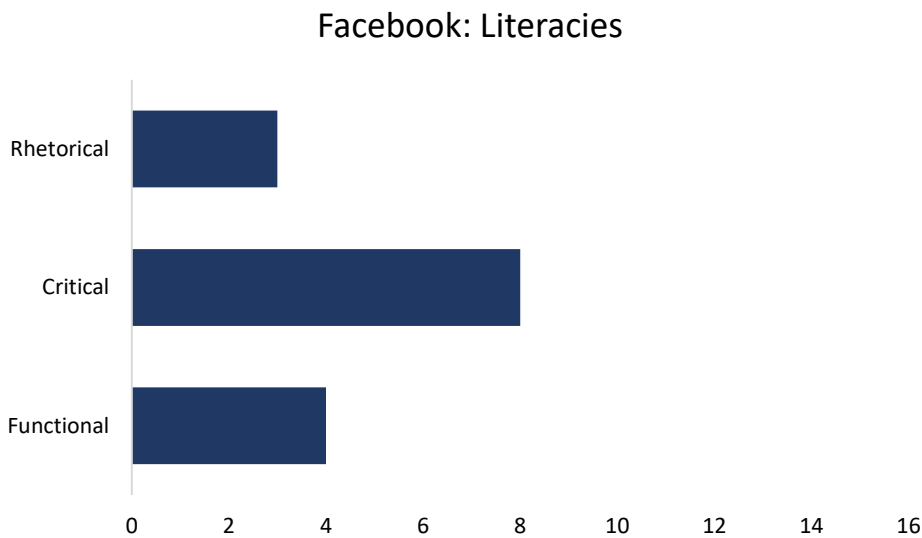
Figure 17: Types of literacy in passages discussing Facebook.

Pedagogical Moves (Q4)

Out of the 12 textbooks examined, 2 provide a definition of Facebook. None of the texts

explicitly connect Facebook to a rhetorical concept, but a majority of the textbooks that index

Facebook provide examples from Facebook or explain a process of using it.

Facebook: Pedagogical Moves
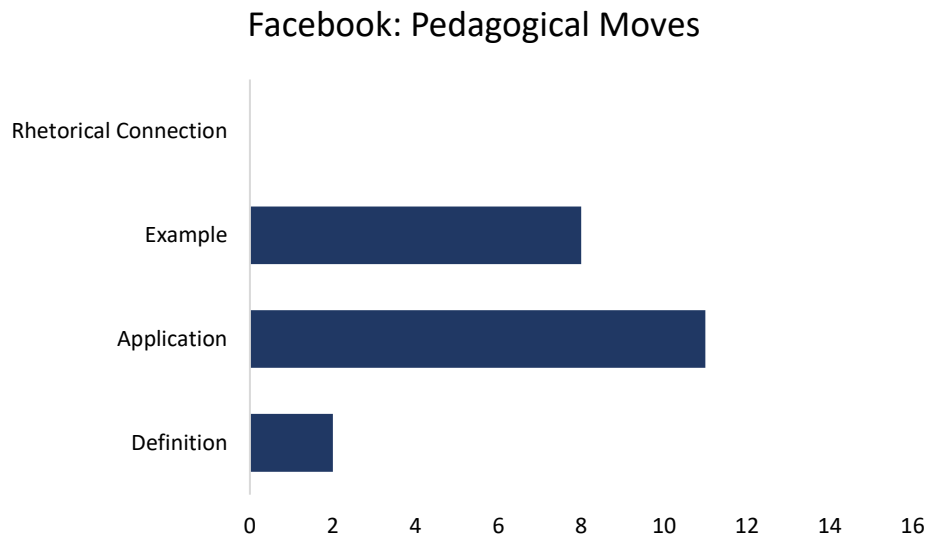
Figure 18: The frequency of pedagogical moves made by textbooks when discussing Facebook.

Twitter

The Sample

The frequency analysis found 15 indexes containing the word *Twitter*. Two textbooks

only included entries for citing Tweets following MLA or APA guidelines, and these entries

were not collected. The passages from the remaining 13 textbooks were collected for the content

analysis.

Reliability

For the analysis of passages containing *fonts*, Cohen's κ was run to determine if there was

agreement between the raters on whether the passages reflected the possible codes. Overall

agreement was substantial, κ = .859. For the codes in the Production/Consumption category and

in the Literacies category, there was perfect agreement, κ = .815. There was also perfect

agreement for the codes in the in the Pedagogical Moves category, κ = .940.

Table 16: Intercoder Reliability for Twitter, by Codebook Category

Category	Simple Agreement	Cohen's Kappa
Production/Consumption	92.31%	.815
Literacies	92.31%	.815
Pedagogical Moves	98.08%	.940

Results

Production or Consumption (Q2)

The content revealed that 4 textbooks (*n* = 13) treated Twitter as a resource for

production and 4 treated Twitter as a resource for consumption. When asked if the text favored

production or consumption (a mutually exclusive decision), 4 texts were coded for production

and 9 for consumption.
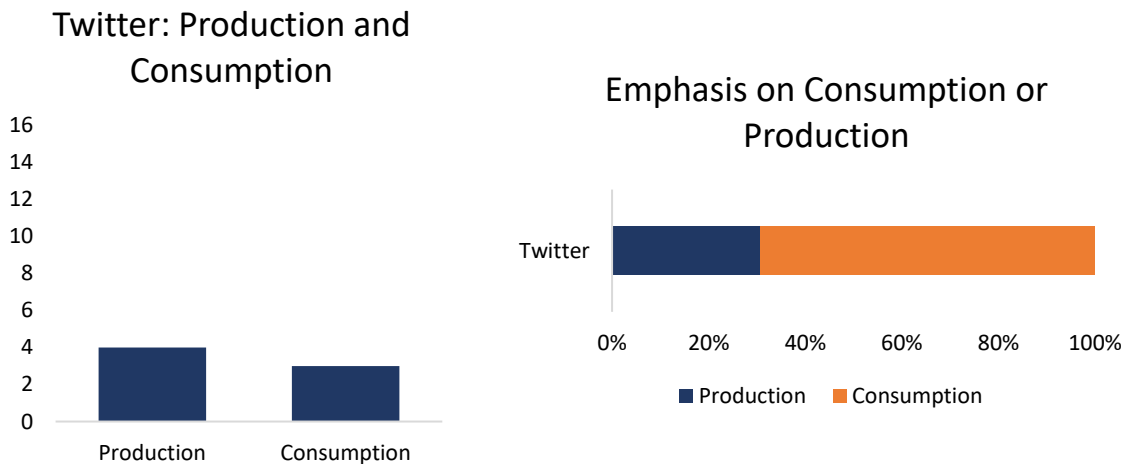
Figure 19: On the left a comparison of passages discussing Twitter and emphasizing production and consumption (not mutually exclusive). On the right, passages discussing Twitter and emphasizing production or consumption (mutually exclusive).

Literacy (Q3)

For the literacy codes (*n*=13), 2 textbooks treat Twitter from a rhetorical perspective, 3 from a critical perspective, and 6 from a functional perspective. While Twitter is most commonly addressed from a critical perspective, critical literacy was identified in fewer than half the textbooks.

Twitter: Literacies
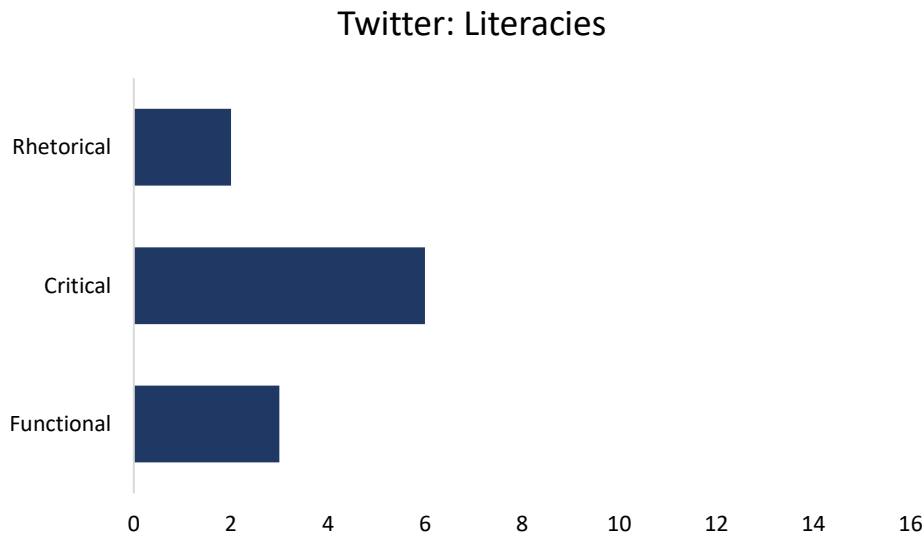
Figure 20: Types of literacy in passages discussing Twitter.

Pedagogical Moves (Q4)

Out of the 13 textbooks examined, 1 made an explicit association between Twitter and a rhetorical concept or provided a definition. 6 textbooks provided examples from Twitter and 2 provided an explanation of its use.

Twitter: Pedagogical Moves
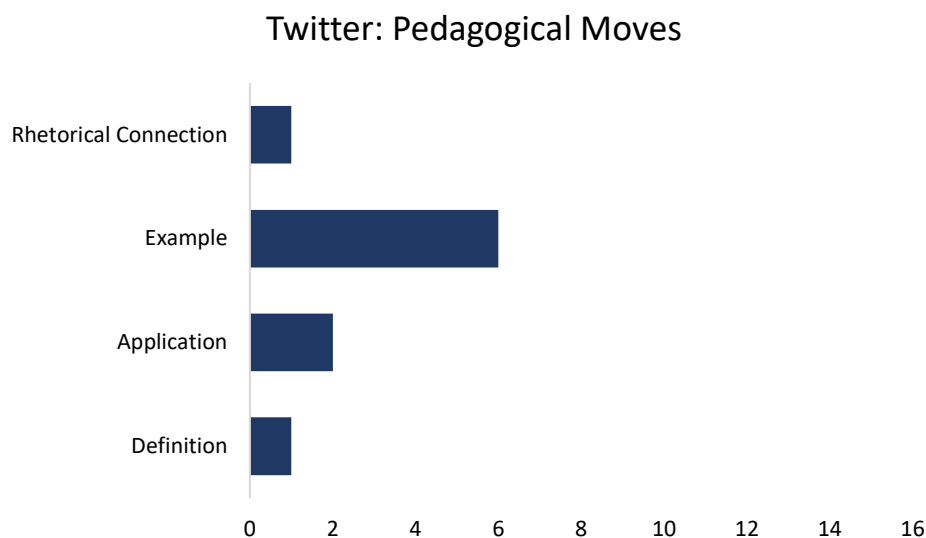
Figure 21: The frequency of pedagogical moves made by textbooks when discussing Twitter.

Phase 3 Summary

The results from the final phase of the study provide insight into how the target terms are integrated into the textbooks. The textbooks address each topic with varying levels of depth, and most textbooks do not address these topics. However, the examination of the textbooks that do include the selected terms can provide additional insight into established instructional patterns.

Regarding RQ2, the data indicates that the texts introduce and explain the selected terms with a focus on both production and consumption. There was a clear emphasis on production when talking about the two design elements (fonts and color), but the focus on consumption is much higher when discussing social media (Twitter and Facebook). *Fonts* stands out, as almost all passages containing the word *fonts* treat the reader as a producer. Both Facebook and Twitter were described in many of the textbooks as popular platforms for civic and social engagement. By framing social media as a resource for finding and consuming information, many of the textbooks appear to privilege traditional essays and academic writing over the types of social engagement attributed to social media.
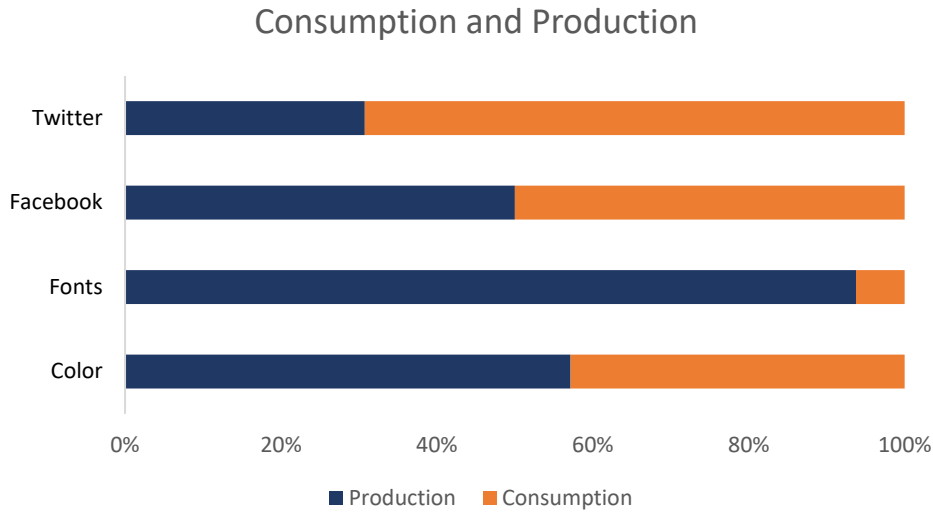
Consumption and Production

Figure 22: A comparison of Production and Consumption (not mutually exclusive) among the selected terms.

A comparison of the data for RQ3 shows the limited rhetorical treatment for each of the target terms. While there is substantial difference in the relative interest on functional or critical perspectives, the rhetorical perspective is the most neglected. In other words, very few of the texts explain how students (or writers in general) should adjust their use of color, fonts, Facebook, or Twitter based on specific purposes. With the two social platforms, some rhetorical thinking was provided, but cultural impacts were emphasized far more often. With the two design elements, the texts emphasized practical, functional advice about choosing colors and fonts and general design principles. Color was tied to emotion quite often, but the texts failed to explain how different colors support or inhibit particular rhetorical goals.

Literacy Categories by Term
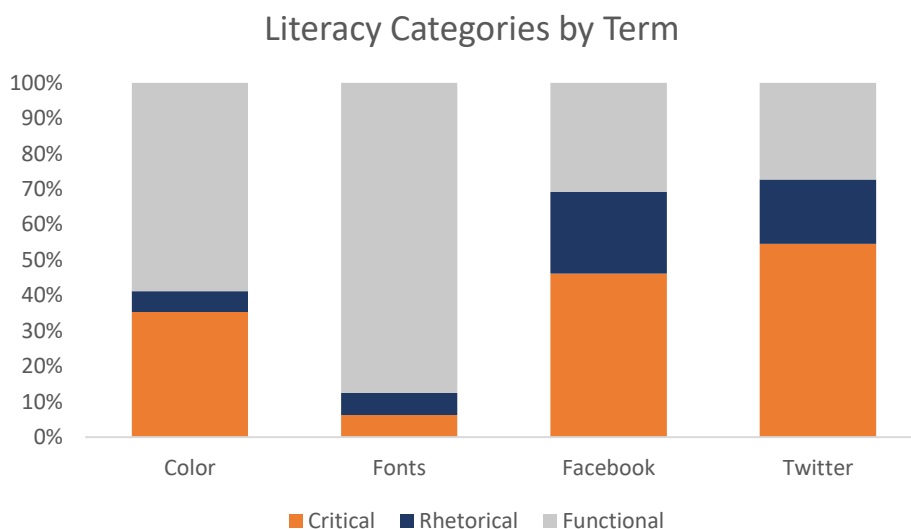
Figure 23: A comparison of the percentage of literacy codes for selected terms.

For RQ4, the data reveals the primary instructional move for each of the terms involves an example or a general description. Among the four pedagogical moves, definitions and rhetorical concepts were the least frequent. Only *color* was regularly connected to a rhetorical principle in the textbooks where it appears. Raters noted that the relationship between color and emotion was made frequently by texts, but the texts did not expand on the relationship beyond connecting certain colors to various emotions. The most common ways these words were explained in the texts were through examples or through explanations of how to use them. While it may seem unnecessary to define *color*, *fonts*, *Facebook*, and *Twitter* to college students, the absence of definitions and rhetorical concepts underscores an assumption by textbook authors that students know enough about these topics or they can figure out what they need.
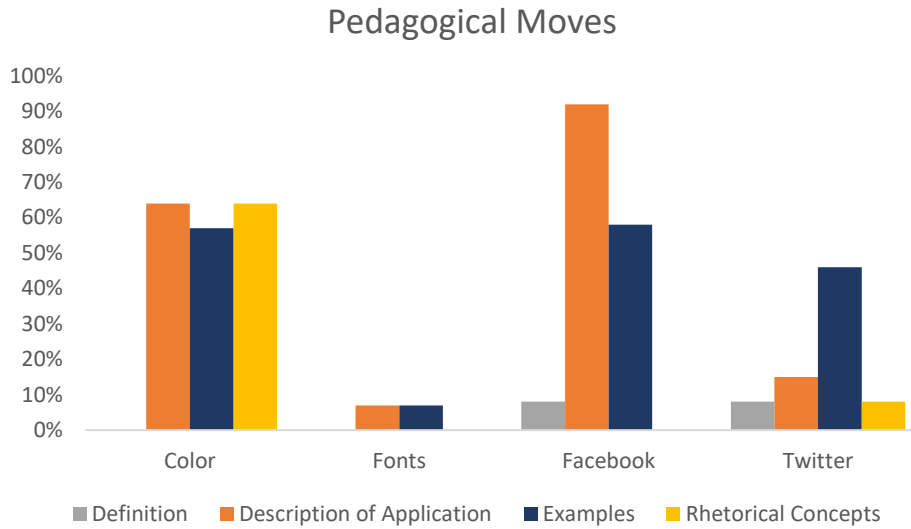
Pedagogical Moves

Figure 24: A comparison of the pedagogical moves used in passages containing the target words.

Conclusion

In this chapter, I presented the results of both the frequency analyses and content analyses. The distant view approach used in this dissertation results in large data sets, but I have attempted to report the results in a way that most directly answers the research questions. It is certainly possible to further analyze and examine the results, both those presented here and those that have not. The data sets collected and developed for this project create a number of opportunities for reflection that go beyond the scope of the initial questions asked, but the goal has been to identify broader patterns. In this final summary of the results, I will briefly address the questions that were asked for this study.

CHAPTER 5.   CONCLUSIONS AND IMPLCATIONS FOR WRITING STUDIES

This dissertation offers an authoritative list of words frequently occurring in FYC textbooks representing digital and multimodal writing instruction, and the four quantitative content analyses provide insight into the ways digital and multimodal concepts are being addressed by recent textbook authors. Through the corpus of textbook indexes, this dissertation also establishes a meta-index for topics taught in composition courses and a process for analyzing and visualizing the language of writing instruction. In this final chapter, I offer a final discussion of the method and the results to situate the findings. I begin by addressing the limitations of this project and the opportunities for additional, related research. Then, I make some tentative recommendations based on the findings by connecting the findings to important issues in writing studies, pedagogy, and writing program administration.

Limitations

The methods used in this dissertation generated concrete and useful data to answer the initial research questions. The methods and findings have also created opportunities for grounding additional research. The methodological choices that enabled this work include limitations for the current stage of the research that need to be noted, which I outline below.

Isolating Textbooks

Instructors and students do not engage textbooks in isolation. Some instructors do not assign a traditional textbook, favoring custom course packs, instructor made materials, or open education resources. Additionally, publishers are increasingly offering supplemental materials via digital platforms that may include content not represented in the textbooks themselves. Moreover, the ways instructors excerpt, extend, and contradict the textbooks they select cannot be captured in an analysis of the texts themselves. Many of the textbooks may include elements

that invite a collaborative relationship with students and teachers through activities and online components. Selecting printed textbooks was necessary for this study because of the genre features and the role that textbooks play in writing instruction. The reliability of the methods used in this study necessitate the use of comparable content. The established uses and expectations surrounding the textbook, as a genre, also make it the most appropriate selection for a study of this type. Future studies should examine the differences in content and pedagogical commitments between writing textbooks and alternative instructional materials.

Text Selection

This study focused on FYC rhetorics textbooks because rhetorics are most representative of the pedagogical mission of writing courses. Still, an investigation of handbooks (which primarily focus on questions of style, correctness, and formatting) and readers (which are collections of essays, articles, and other materials typically used as subjects for writing assignments) would likely provide additional perspective on the questions asked by this research. A comparison of a handbook corpus and a rhetorics corpus could also provide insights into the distinct subjects and goals that represent the two genres.

The method used for identifying texts (reviewing publisher websites) was effective for creating a list of texts; however, this process does not account for the impact of each text. Categorizing the texts by their sales data, adoption rates, or critical reception could provide an additional dimension to the analysis presented in this dissertation. A frequency model based on the number of copies sold or the number of courses that adopted a text could provide additional indicators about the prevalence of topics covered. In early stages of this research, I contacted publishers and universities in an attempt to measure impact, however those attempts were unsuccessful. Publishers are protective of their sales data due to the competitive nature of textbook sales, and universities are inconsistent in the ways they preserve (or don't) the record of

assigned texts. This dissertation treats each text as an equal representation of thinking in the field, and this equal treatment matches the goals of this dissertation because the questions are designed to get a sense of disciplinary values and approaches.

Reliability of Indexes

The method followed here relies on the index to identify the content of a textbook. Each index provides insight into the content of the textbook, but the process of indexing is not uniform, is uneven in coverage, and not all instances for any given term may be indexed. However, the index is a tool that is provided in textbooks specifically for the purpose of allowing instructors and students to efficiently find passages containing target topics. The questions asked here are about the topics covered, and by using the index as an entry point to the text, the method mirrors the process that readers (educators, students, and administrators) go through when looking for information on any given topic. The indexes are established resources that identify the most significant content in a textbook.

Manifest Content and Unit of Analysis

Relying on word forms presents another limitation for this dissertation. Word forms can be efficiently identified through computer-aided means. The reliance on surface-level and manifest content, essential factors in distance reading and the content analyses, necessarily avoids more complex associations. This study treated each word form and all synonyms as independent. However, there are many cases where grouping alternative word forms or synonyms would expand the potential number of passages for analysis. If the goal of this study were to understand specific concepts, then it would be useful to begin with groups of related terms. For example, *font*, *fonts*, *typeface*, *typefaces*, and *typography* could be examined together to get a better understanding of how the related (and sometimes synonymous) ideas are treated. Similarly, an examination of *ethos*, *credibility*, and *authority* or *pathos*, *emotion*, *emotions* would

be revealing. This project did not take these steps because the analysis was dependent on findings from the corpus instead of being driven by a narrower interest in any one topic. Additionally, the approach taken for the content analyses in this project treated each textbook as a unit of analysis. This methodological choice ensured that the frequencies would serve as useful indicators of the treatment of each term by each textbook. Each code is an indication that that readers found (or did not find) a section in which the text treated the target term in particular ways. The codebook does not, however, measure the depth of the treatment of each term. Distance reading methods, through corpus linguistics or content analysis, cannot replace a more detailed analysis; however, the findings here can function to ground future analyses into more narrow topics.

Future Research

In many ways, the limitations mentioned are opportunities to continue the work represented by this dissertation. Additionally, each phase of the method offers opportunities for additional research. The first phase, the corpus, can be expanded longitudinally and to include additional disciplines within writing studies, such as Technical Writing, Business Communication, Science Communication, and Creative Writing. The second phase, the frequency analysis, can be revisited to address content areas outside of multimodality (such as rhetorical concepts, processes, or style) or to identify topics that are addressed infrequently (the words *iPhones*, *gif*, and *voiceover* appeared in only one textbook each and the words *surveymonkey*, *misinformation*, and *Netflix* only appeared in two). The final phase, the content analyses, can be repeated to address additional terms or using alternative codebooks. Additionally, the tools developed for this project can be improved and made available in user-friendly formats such as an application or web interface so that the study can be replicated, and the data can be used to identify additional patterns.

The specialized corpus developed in phase 1 of this dissertation represents a limited period of time; however, the methodology employed here can be followed for an expanded analysis. Distance reading methodologies, as Mueller explained, "can assist in creating devices for sizing up the field *differently* through multiple, selectable layers of aggregable data and metadata" (2017, p. 35). The data here can be reanalyzed and combined with new data sets to map out patterns in new ways. Each year, more textbooks are published that can be analyzed following the methods outlined in this project, and the corpus can be extended to include older textbooks. Expanding the corpus to include both new and older textbooks will provide additional opportunities for understanding trends in writing instruction. Textbooks are generally easy to acquire, and archival work that opens opportunities for substantial comparisons across time could help researchers track the emergence of topics, the increase and decrease of topics over time, and the relationship between scholarly discussions and pedagogical materials.

The wordlists developed in phase 2 can be used to evaluate course curricula and professional development needs. Studying the language of writing instruction is a way of understanding the knowledge and practices of the field. The word lists generated through this research can be used to develop data-informed materials for teachers and students. Wordlists have played this role in scholarship and in pedagogical materials, and in periods of change, our vocabulary plays an important role. In their argument for multiliteracies and multimodality, the New London Group argued clearly for the importance of metalanguage, language about language, as we are responsible for increasingly complex linguistic and technological literacies. They explained, "Teachers and students need a language to describe the forms of meaning that are represented in Available Designs and The Redesigned. In other words, they need a *metalanguage*—a language for talking about language, images, texts, and meaning-making

interactions" (The New London Group, 1996, p. 77). The results of the frequency analysis represents an 'audit' of the language used in writing instruction, and the findings can be used to develop data-driven wordlists representing current instructional needs.

Finally, the content analyses conducted in phase 3 creates additional opportunities for examining the ways we teach digital and multimodal topics. The findings show the extent to which the target words (*color*, *fonts*, *Facebook*, and *Twitter*) are represented, but then new questions emerge about the treatment of these topics over time. Additionally, a closer examination of the most and least multimodal textbooks could further demonstrate the divide in instructional commitments to multimodality. Future research can address additional terms represented in the same texts or in new sets of texts. The same questions could be applied to digitally native instructional materials and other course materials to find more progressive approaches to digital and multimodal content and to shed light on the ecology of course materials.

Collectively, the corpus, the wordlists, and the content analyses represent rich data sets that can be used as the foundation for many additional studies. These findings will also be useful for teachers and administrators who need data to inform discussions about established and emerging themes in our field. The methods here are replicable, which creates an opportunity to expand the research longitudinally. The findings are aggregable, which creates the opportunity for combining the data with the findings of future studies. The specificity and methodological rigor are important for meeting the field's calls for RAD scholarship (Haswell, 2005), and for WPAs attempting to support theory with data (Anson, 2008). This study establishes a foundation to develop expanded analyses of patterns in textbooks and other pedagogical materials that can inform discussions about current and future writing instruction practices.

Implications

> *While data-driven learning and assessment is predicted to impact higher education even more noticeably in the next three to five years, it will only do so if WPAs can incorporate use of the data in ways that benefit the primary stakeholders, students and instructors, as they grapple with the difficult tasks of improving their writing skills—not simply examine the data post-mortem to see what could have gone better."*
> (Lang, 2016, p. 100)

The update from WPA OS 2.0 to 3.0 represented a significant moment of recognition about the necessarily systemic and integral role of digital and multimodal communication to writing pedagogy. The impact of this shift in stance, from treating electronic communication on its own to treating all communication as inherently tied to our tools, uncovers and highlights our established assumptions about how to achieve the outcomes in a writing class. In a new manifesto on multimodal pedagogies, a group of twelve scholars in writing studies disciplines explained, "a multimodal pedagogy is not just additive; rather it is a stance, an orientation, and a privileging of the many ways of making and receiving meaning" (R. Wysocki et al., 2019, p. 21). The ways we embed and integrate visual design, social media, audio recordings, and the related topics into our curricula and professional development should reflect the complex interplay between our writing tools, modes, theories and skills. This dissertation offers a close examination of one factor in the instructional equation, and in so doing it raises questions about both *what* and *how* digital and multimodal content is addressed in writing instruction.

The relationships between teachers and their textbooks in a writing course are undoubtedly varied and complex, yet the impact the textbooks have on students and course design is undoubtedly substantial. When considering the importance of digital and multimodal pedagogy in recent decades, the limited and underdeveloped treatment of digital and multimodal subjects within current writing textbooks presents a challenge. Scholars and teachers must carefully consider the ways their textbooks and other materials prepare students to engage with,

as audience or as author, genres dominated by modes other than printed language. The authority and prevalence of textbooks make them a potential asset or a potential hinderance to disciplinary progress towards integrating and supporting communication practices beyond the academic essay.

Ideally, instructors are capable of building on the textbook, filling in gaps in information through activities and lectures. Ideally, instructors are aware of the limitations of the materials they are using. Ideally, instructors are well-qualified and motivated to teach the most current and useful material. However, as has become a common-place observation among compositionists, many instructors teaching college writing courses were not trained in composition or in writing studies, and questions about the training of writing instructors has a long history. Robert Connors explained that in the early 1800s, there was a large increase in the number of colleges in the United States and the increased demand for teachers created a problem: "The traditional college tutorial methods of Socratic questioning require from teachers considerable knowledge of the field and considerable ability to deploy that knowledge flexibly. These qualities became harder and harder for the many new colleges to find in their teachers" (Connors, 1986, p. 183). According to the history outlined by Connors, the reliance on less skilled teachers led to an increase in "recitation techniques" as a core pedagogy and "question-answer textbooks" as the standard resource (ibid). In courses led by the most highly trained and highly motivated instructors, the textbook proscribed pedagogy may have less control over the course design; however, where training and established practice fall short, textbooks have more impact.

Through this dissertation, I am suggesting that a close analysis of textbooks can be a productive process for educators and administrators precisely because of the significant impact they have. The findings in this dissertation are a reflection of the materials being used by writing

instructors throughout higher education. I acknowledge that any recommendations based on those findings are ideologically informed, and based on the scholarship outlined throughout this dissertation, my recommendations are based on the premise that digital and multimodal communication must be addressed in writing classrooms. With this perspective, two approaches for using the findings in this dissertation are (1) use the findings as a baseline for the knowledge and skills for FYC courses, (2) use the findings as the basis for a critique of practices by identifying gaps or flaws in the treatment of common topics. The two strategies value the findings differently, but both strategies can be useful to administrators and to writing studies scholars. Both goals, improving our courses through curriculum updates and professional development and evaluating disciplinary trends, can be served through a better understanding of common materials. In the recommendations below, I focus on the ways the data can support our efforts to improve our teaching and our scholarly endeavors.

Sustainability for Programs and Professional Development

Given the seemingly limitless new approaches to writing instruction that digital and multimodal scholars have described, it is clear that most educators have gaps in their training that make it difficult to evaluate and implement new content. Additionally, the challenges are ongoing:

> We must negotiate and continuously reorient ourselves across a spectrum of theoretical framing and practical doing. Multimodal composing requires that we interrogate and negotiate different tools, technologies, languages, and interfaces and that we also use them, experiment with them, make with them, and reimagine them. Making meaning requires taking chances, and taking chances requires the risk of failure. Failure itself can be generative and productive and is often a necessary iterative component to making. We see all of these, perhaps most especially failure, as necessary to developing robust, multimodal pedagogies that integrate practices of making. (R. Wysocki et al., 2019, p. 21)

Among the concerns that instructors express about digital and multimodal content is the question of training and professional development. While the WPA OS 3.0 was being drafted,

attendees of a workshop asked a variety of questions including, "How can we prepare faculty and students who aren't ready for this or who don't have access to advanced technologies? (Dryer et al., 2014, p. 132). The concerns are reinforced by observations made by Anson et al. (2006) and Robinson et al. (2019) whose surveys indicate that many instructors are self-taught when it comes to computers and multimodal skills. While self-learning is important and can be powerful, the limits of self-taught technological skills are worth addressing. Robinson et al. argued, "self-reliance may also result in unidentified gaps in knowledge—that is, self-reliant teachers may not know what they do not know" (2019, p. 11). Self-reliance and experimentation may be a necessary first-step for managing change, formalizing professional development opportunities and updating our standards for expected skills and content knowledge are necessary for improving quality.

Education programs responsible for training writing instructors need to address technology and pedagogy, but given the shifting nature of the issue, writing program administrators need to plan for consistent change. One element of such a plan certainly involves ongoing professional development effort. Carrie Leverenz (2008) argued for writing program administrators to set an example by actively engaging in personal professional development; however, individuals can only make so much progress. As explained by R. Wysocki et al., "Multimodal composing cannot exist outside a larger ecology of teaching and curriculum building" (2019, p. 21). Within a program, carving out and encouraging responsible innovation is essential for individuals and programs to meaningfully meet the demands of digital and multimodal pedagogies. To harness the benefits of innovation, and to responsibly monitor the successes and failures that result, administrators need to develop systems for evaluating practices that are considered accepted and those that are still emerging.

The need to update writing curricula is analogous to the challenges that programs face regarding managing technological resources. Differentiating between what is necessary and what is innovative is necessary with both. Administrators and instructors must adapt their teaching to the tools that are available, and planning for updates is essential to sustainable planning. Mapping out the range of approaches in a program is an important step the administrators can take. The model recommended by Gerding and Johnson-Sheehan (2016) for thinking about technology, which categorizes technology use on a spectrum of essential to experimental, can help administrators establish a sustainable approach to digital and multimodal content. Their model envisions four categories of instructional approaches based on when to adopt a technology: Late Majority, Early Majority, Early Adopters, and Innovators. What is useful about this way of thinking about a writing program is the way it emphasizes both balance and adaptability. Communities that have a balance of the categories will be more capable of identifying essential new tools and approaches, while communities that lean too far towards either extreme are likely to experience difficulties.

The methods and findings in this dissertation can help educators reflect on what topics are still innovative and which have been widely adopted. The effect of aggregating and visualizing patterns in pedagogical materials is that we can find patterns that are not readily apparent through other means. A more consistent, accessible view of the ways the topics in the field are evolving will benefit instructors and administrators as they 'grapple' with the pressures of digital tools and emerging genres. To take advantage of the tools and methods that allow for a network sense of our field and our programs, WPAs need to consider the infrastructure and training required. Due to a variety of pressures, the skills and approaches needed for writing program administration are increasingly technical. Michael Day's perspective on the WPA from

over a decade ago was technorhetorician, "that is, as an administrator who understands and has experience in technology, including the rhetoric of technology, and uses that knowledge for the benefit of as many of the program's stakeholders as possible" (2009, p. 3). The skills that Day discussed were primarily associated with the increasingly technological infrastructure and curriculum of many writing programs. Susan Lang (2016) argued for technological skills from data-collection and management perspective, and she explained how big data, text mining, and data visualizations in WPA work can be leveraged to improve a program. Lang, focusing on student writing, explained that the methods used in other organizations to collect and process big data could help WPAs respond more rapidly and intentionally to the needs of students:

> big data and agile methods are heavily intertwined with technology and with quantitative data use—items that until recently were not a typical part of many WPAs' daily consciousness. Integrating both, however, into a program's organizational framework enables WPAs to conduct effective and accelerated instructor evaluation (or assessment) so that managed change can occur within the current semester, in addition to being phased in over subsequent semesters. (2016, p. 83)

Monitoring student and instructor reactions to evaluate curricula and other programmatic components is an important part of writing program administration; however, getting a sense of how a whole program is doing can be a challenge, and observations or anecdotal testimonials can provide only limited insights. Lang (2016) wrote about the ways WPAs can use text and data mining to analyze student writing and instructor feedback at the programmatic level. With attention to the instructional materials, another dimension of analysis could be added to Lang's approach. Comparing instructor feedback to textbook content and other pedagogical materials could help educators more accurately identify, or rule out, elements of a program that students and instructors are responding to. Such an analysis could also help administrators identify places where instructors and students are going beyond the text.

Textbook selection

For educators with an interest in multimodal pedagogies, I am going to make a few suggestions about textbook selection. First, I will point out the need to closely examine our materials, then I will discuss the ways in which we can seek out better materials. Afterwards, I will make a more radical suggestion about the way we should think about textbooks by encouraging an adversarial relationship to the materials. Our pedagogies do not need to be defined by the materials we use, and our students will be better served if we model a critical stance that treats the textbook as limiting and reductive.

When evaluating materials, the presence of digital and multimodal language is not sufficient evidence that the text teaches digital and multimodal concepts. The findings in this dissertation highlight the ways topics addressed in our pedagogical materials may not be fully integrated into our pedagogical frameworks, and the presence of trendy platforms in the introduction to a text or a few chapters may be more of a rhetorical flourish than a substantive instructional moment. When selecting texts or developing materials, identifying the topics covered is an important step, but it is also important to examine the connections and underlying pedagogical treatment of the topics. The treatment of social media in many texts is one example of the ways texts can give the appearance of teaching digital media and web technologies without detailing the unique qualities, affordances, or uses that are associated with various platforms. When talking about Facebook, many textbooks introduce the idea of public audiences, which is worth considering; however, the text does little to explain how to manage multiple audiences or how to navigate the various forums created by Facebook (walls, feeds, groups, advertisements). The question we must ask is why does Facebook and Twitter appear in so many texts other than their popularity? Should we teach our students more about the types of communication that take place through these platforms? Should we help students develop

strategies to evaluate the credibility of information on social media platforms? If so, our textbooks do little to help.

As scholars and educators continue to address the evolving literacy landscape, our materials need to be a part of the conversation. We need to consider the ways we select and use materials, and the relationship between textbook authors, publishers, administrators, and instructors is also worth our attention. In remarks at the annual conference for the Council of Writing Program Administrators, Vivian Garcia, a marketing manager for Bedford, said, "For more than 35 years, Bedford has partnered with leading scholars to develop the best resources available for teaching writing" (2019). The relationships that educators have with publishers is complex, but this view of a partnership between scholars and publishers is one facet. Garcia went on to say, "Textbooks have been the traditional method of circulating new pedagogies, worked out to meet classroom challenges, for each new generation" (ibid). The influence that textbooks have on the experiences of instructors and students should not be overlooked.

Undoubtedly, publishers and scholars collaborate to produce textbooks, but that partnership makes the disconnect between scholarly advocacy more perplexing. The constraints of the genre and the expectations of the target audience are likely confounding factors, but the gap between expectations in writing studies scholarship and the contents of our textbooks is worth addressing. Textbook publishers are important stakeholders in the development and distribution of textbooks. Afterall, the work of editing, printing, and distributing textbooks requires professionals. One way to improve our materials would be through strategic engagement with publishers. John Hudson (2014) argues quite persuasively for the importance of using "our opportunities to influence publishers" to improve LGBTQ representation in textbooks. Textbook

authors and publishers are not against progress, and instructors and administrators can build

relationships with publishers to provide feedback or suggestions.

Building relationships with publishers may prove valuable; however, the changes will

likely be slow. The relationship between educators, textbook authors, and publishers may be

difficult to develop and navigate, but publishers also offer opportunities for materials

customization that may be appealing to some administrators as a way of engaging with

publishers (Barrios, 2010). Alternatively, many instructors and administrators have considered

open education resources (OER) or online texts (Colby, 2013). The collaborative nature of open

education resources and their reduced-price tag make them appealing; however, the turn to OER

does not solve the problem of quality and recency. Free resources often rely on free labor, and

there are few incentives for revising and updating. Many of the available resources quickly

become outdated or simply do not achieve the same quality as their commercial counterparts.

My final recommendation is more radical, however. At another point of rapid change in

writing instruction, Robert Perrin (1988) examined the ways handbooks explained word-

processing programs. Similar to the findings in this dissertation, Perrin observed that most

handbooks offered very limited explanations of word-processing and, "most of them suggest a

surprising reticence about word processing: some handbooks offer rather severe warnings about

the 'dangers' of word processing" (1988, p. 22). Then, as now, slow-changing textbooks embody

an inhibited approach to technologies. For Perrin, the textbooks did not offer enough to students

leading to his suggestions that instructors must provide instruction that goes beyond the text, and

he argued "composition teachers must present word processing more positively than do most

handbooks" (1988, p. 24). Perrin's remarks are about expertise and authority, and are the basis

for my final recommendation: instructors must take ownership and an authoritative position

when teaching digital and multimodal content. At times, we must point to the limitations of existing materials, and we must find new ways to encourage and inspire our students. The materials do not, and are unlikely to, represent the current communication landscape. Achieving the goals of multimodal pedagogies requires educators to experiment with, and encourage their students to experiment with, each new tool, platform, genre, and design element. Achieving the goals that we have laid out in our scholarship and in our outcomes statements requires continued professionalization.

Closing Thoughts

> *One of the things that I love most about composition—one of the reasons I'd rather be with you—is because of ways in which our field has arrived at a disciplinary maturity and yet remains undisciplined, unable to be disciplined.*
> (Banks, 2015, p. 270)

Writing studies is filled with diverse perspectives about the future of writing instruction; however, the high number of high profile calls for innovation and predictions for new approaches to writing suggests a groundswell of support for digital, multimodal, and experimental topics in writing instruction. My analysis of writing textbooks indicates that some new topics are addressed, but primarily in ways that support traditional notions of academic writing. We may be meeting the call to pay attention, but making nods to social media and the power of the web does not address the kinds of calls made by Adam Banks (2015) and Joyce Carter (2016) in their keynote speeches at the Conferences on College Composition and Communication. Adam Banks argues that the familiarity of the academic essay is a problem for progress, taking a moment to suggest it is time to "promote the essay to dominant genre emeritus" (Banks, 2015, pp. 272–273). A year after Bank's attempt to force the academic essay into retirement, Carter argued that members of the CCCC need to proactively "disrupt" and

"reinvent" the work of teaching college level writing and communication (Carter, 2016, p. 387).

Carter's argument was grounded in the need to ensure relevance and sustainability in the face of

changing social, political, and technological landscapes. Both Carter and Banks, like so many

scholars before them, presented a forward-looking vision of disciplinary work that embraces

change and generates new value for students, educators, and the institutions that support them.

Convincing argument and impassioned speeches are admirable moments of advocacy.

Articulating a vision of how disciplinary values and expertise can be leveraged to address the

challenges of the future may even be necessary for change to occur, but curricula, materials,

course design, professional development, and university resources are all essential elements to

realizing those visions. The advocacy work represented by Banks and Carter follows decades of

calls about reimagining literacy instruction. The slow progress of the discipline is, in some ways,

a reflection of the wicked nature of digital and multimodal writing; that is to say the challenge

has no clear definition and changes based on point of view while needing to be continually

readdressed (Marback, 2009; Wickman, 2014). There is no lack of scholarship addressing issues

related to the problem, but the problem remains as complex and urgent as ever.

In the opening chapters of this dissertation, I point to the scholarly discussions about

digital and multimodal writing and the practical challenges associated with professional

development and curricula revision. This dissertation draws attention to actual presence of digital

and multimodal topics in recent composition textbooks to represent the real priorities of the

discipline, at least as represented by our pedagogical materials. What is perhaps the biggest

contribution of this project, though, is the way this project establishes a rigorous, systematic,

empirical set of methods for grounding our theoretical discussions about changes in writing

studies disciplines. The use of distance reading, through corpus linguistic methods and content

analysis, demonstrates a practical way to monitor disciplinary practices and priorities and opens opportunities for additional research. In summary, this study of digital and multimodal topics in textbooks calls attention to the ongoing disciplinary discussion about the changes writing studies faces by situating the problem in our pedagogical materials. With continued attention to disciplinary materials, theory and advocacy can find another avenue towards progress.

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APPENDIX A.   TEXTBOOKS INCLUDED IN THE STUDY

Anson, C. M. (2017). *A guide to college writing*. Pearson.

Axelrod, R. B., & Cooper, C. R. (2018). *The concise St. Martin's guide to writing* (8th ed.).

Ball, C. E., Sheppard, J., & Arola, K. L. (2018). *Writer/designer: A guide to making multimodal projects* (Second).

Ballenger, B. P. (2017). *The curious writer* (Fifth edition). Pearson.

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Bullock, R. H. (2019). *The Norton field guide to writing* (Fifth edition). W. W. Norton & Company.

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Flachmann, K. (2018). *Mosaics: Reading and writing essays* (Seventh edition). Pearson.

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Lunsford, A. A., & Ruskiewicz, J. J. (2019). *Everything's an argument*. Bedford/St. Martin's.

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Morey, S. (2017). *The digital writer*. Fountainhead Press.

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Palmquist, M., & Wallraff, B. (2017). *Joining the conversation: A guide and handbook for writers* (Third edition). Bedford/St. Martin's.

Reinking, J. A., & Von der Osten, R. (2017). *Strategies for successful writing: A rhetoric, reader, and handbook*. Pearson.

Roen, D. H., Glau, G. R., & Maid, B. M. (2018). *The McGraw-Hill guide: Writing for college, writing for life* (Fourth edition). McGraw-Hill Education.

Rosenwasser, D., & Stephen, J. (2019). *Writing analytically* (8th edition). Cengage Learning, Inc.

Rottenberg, A. T., & Winchell, D. H. (2018). *The structure of argument* (9th ed.). Bedford/St Martin's.

Ruszkiewicz, J. J. (2018). *How to write anything: A guide and reference* (Fourth). Bedford/St. Martin's.

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Williams, J. M., & Bizup, J. (2017). *Style: Lessons in clarity and grace* (Twelfth Edition). Pearson.

Wyrick, J. (2017). *Steps to writing well* (13th ed.).

Yagelski, R. (2018). *The essentials of writing: Ten core concepts*.

APPENDIX B.   50 MOST FREQUENT MULTIMODAL TERMS AND WORDS THAT CO-OCCUR IN FIVE OR MORE INDEXES

Textbooks	Target Word	Associated Word Types	5 or more Co-occurrences
31	visual	407	images (12), writing (10), arguments (9), texts (7), elements (7), design (7), analysis (7), mla (6), rhetoric (5), photographs (5), multimodal (5), charts (5)
30	online	444	sources (20), mla (18), style (16), apa (15), research (12), references (11), works (10), on (9), internet (9), electronic (9), cited (9), writing (8), list (8), documentation (8), books (8), video (7), government (7), evaluating (7), articles (7), websites (6), web (6), sites (6), search (6), print (6), journals (6), documents (6), reference (5), media (5), databases (5)
29	databases	134	sources (11), searching (8), research (8), mla (8), library (7), apa (7), style (6), from (6), articles (6), with (5), periodical (5), online (5), general (5), finding (5), academic (5)
29	images	274	visual (12), design (7), visuals (5), style (5)
29	media	398	social (20), writing (10), mla (9), on (8), style (7), sources (7), rhetorical (7), communication (6), online (5), medium (5), design (5)
29	web	321	sites (14), sources (12), mla (10), page (9), internet (9), apa (9), pages (8), style (7), site (6), research (6), online (6), on (6), evaluating (6), writing (5), with (5), based (5)
27	internet	308	sources (14), search (12), web (9), research (9), online (9), on (9), mla (8), engines (7), apa (7), style (6), websites (5), source (5), sites (5), library (5), evaluation (5)
25	design	406	rhetorical (10), writing (8), elements (8), visual (7), images (7), headings (7), essays (7), proximity (6), principles (6), layout (6), fonts (6), document (6), contrast (6), alignment (6), white (5), space (5), repetition (5), page (5), multimedia (5), media (5), color (5)
25	digital	240	object (17), identifier (13), doi (12), mla (7), apa (7), style (6)
24	blogs	173	writing (7), mla (7), sources (6), apa (6)
24	electronic	200	sources (15), online (9), style (8), mla (8), apa (8), documentation (5)
24	google	65	scholar (13), search (5), books (5)

23	television	86	mla (16), style (15), apa (13), programs (11), program (6), citing (5)
22	charts	205	graphs (9), mla (8), style (7), tables (6), visuals (5), visual (5), pie (5)
22	presentations	305	oral (12), writing (9), multimedia (8), visuals (7), software (6), rhetorical (6), presentation (6), organization (5), delivery (5)
22	wikipedia	92	
21	sound	82	mla (9), style (8), recordings (8), apa (7), recording (5)
21	speech	206	parts (8), have (5)
21	video	241	mla (9), style (8), online (7), games (6), writing (5)
20	presentation	182	software (8), oral (7), writing (6), presentations (6), slides (5), prezi (5), powerpoint (5), multimedia (5)
20	searches	112	keyword (14), research (6)
20	sites	219	web (14), sources (8), apa (8), on (7), mla (7), social (6), online (6), search (5), internet (5)
19	art	104	style (7), mla (7), works (5)
19	engines	57	search (19), internet (7)
19	white	74	space (9), e (8), b (8), design (5)
18	clustering	67	mapping (6)
18	photographs	157	mla (7), visual (5), style (5)
18	software	128	presentation (8), apa (8), computer (7), presentations (6), prezi (5), mla (5)
18	visuals	248	presentations (7), writing (6), style (6), apa (6), reading (5), mla (5), images (5), charts (5), arguments (5)
17	facebook	107	mla (5)
17	film	131	style (5), review (5), mla (5)
17	maps	65	mla (7)
17	multimedia	249	presentations (8), writing (7), sources (5), research (5), presentation (5), medium (5), design (5)
17	oral	204	presentations (12), presentation (7), mla (5), audience (5)
17	twitter	73	mla (5)
16	audio	79	mla (9), style (6), recordings (6), apa (5)
16	mapping	94	ideas (6), clustering (6)
16	multimodal	230	texts (6), writing (5), visual (5)
16	music	136	
16	websites	271	style (11), mla (11), apa (9), sources (8), research (6), online (6), works (5), on (5), internet (5)
15	boolean	25	operators (12)

15	cartoons	31	mla (9), style (6)
15	color	73	design (5)
15	database	78	library (5)
15	films	78	mla (10), style (9), apa (9)
15	fonts	45	serif (7), sans (7), design (6)
15	graphs	74	charts (9), bar (7), line (6)
15	powerpoint	25	presentation (5)
15	prezi	35	software (5), presentation (5)
15	radio	53	mla (13), programs (11), style (10)

APPENDIX C.   TERM SEARCH RESULTS

Below are the results used for passage collection during the content analyses for this

dissertation. Some index entries are not included because they refer to a reading in the textbook

or to style guide information. The pages generally indicate the location of the target term, but

additional pages before or after the pages listed here were included when necessary to capture

the sections containing the target word. This context was necessary for raters to evaluate the

ways the target terms were being treated.

Color

Axelrod and Cooper - 2018
    color 394-95, 399
    design
        color in 394-95, 399
    multimodal texts
        color in 394-95, 399
Ball et al. - 2018
    color 46, 46(2.11), 54
    design choices
        color 46, 46(2.11), 54
Ballenger - 2017
    color
        in evaluation of sketches 86
        in reading visual text 50
Braziller and Kleinfeld - 2018
    color
        in advertisements 234
        in news articles 219
Glenn - 2018
    color in website design 55
Klausman - 2019
    color of font 221
Lunsford et al. - 2017
    color 747-49, 748
    design see also medium
        color 747-49
Lunsford and Ruskiewicz - 2019
    color responses to 116, 351-53
    visuals
        color in 351-53

Fonts

Facebook

Twitter