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The Extent of Ethics Instruction in
Technical and Professional Communication Graduate Programs

By

Kristopher O'Neil

A Thesis Submitted in Partial Fulfillment of the Requirements
for the Master of Arts in English: Technical Communication Option

Minnesota State University, Mankato
Mankato, Minnesota

6 July 2013

“The Extent of Ethics Instruction in Technical and Professional Communication Graduate Programs”

Kristopher O’Neil

This thesis has been examined and approved by the following members of the student’s committee.

Dr. Gretchen Perbix: Advisor

Dr. Jennifer Veltsos: Committee Member

Dr. Nancy MacKenzie: Committee Member

Abstract

In this research, I performed a content analysis of the required courses in technical and professional communication (TPC) graduate course syllabi to investigate the prevalence of ethics-related materials included in course instruction. The literature on the topic of ethics instruction in TPC programs identifies ethics as an important area of study for technical communication students. The literature also suggests that effective ethics instruction is layered into assignments and throughout TPC curricula. The content analysis for my research included collecting the syllabi of required courses from a sample of TPC graduate programs, and coding for the occurrence of journal articles and textbook chapters that included the word “ethics” in the title, summary, or keywords. Additionally, my methodology includes an examination of the frequency that ethics materials occur as assigned readings in course syllabi.

The three main findings I show are 1) the number of assigned readings from textbook chapters versus journal articles 2) the disproportionate amount of ethics instruction from research-related courses 3) the low course engagement for assigned ethics readings. My findings show that on average, TPC programs assign ethics content both from journal articles and from textbook chapters. However, I was surprised to find more assigned textbook chapters than journal articles, based on my expectations from the literature on this topic. Additionally, my data showed a disproportionate number of ethics references coming from courses I identify as research-focused. Research textbooks typically contain sections on the ethics of research and this can and should be distinguished from the topic of communication-ethics that I reviewed from the literature.

The literature on this topic suggests the most effective instruction for ethics is to layer ethics content throughout a course. My research found that on average, programs assign ethics material infrequently.

Additionally, I found only three of the seven ethical literacy references I identified from the literature. Furthermore, of the three ethical literacies present, one journal article was the predominant reference that was included as an assigned reading. The seminal literature in the field establishes that layering ethics instruction throughout a course is important for technical communication students. I found that while layering occurs within individual courses, it does not occur throughout the required courses of TPC programs as a whole.

Key Words

communication-ethics, curriculum, ethics, ethos, graduate program, humanistic, layered literacy, multidisciplinary, multi-literate, pedagogy, rhetorical, technical communication, technology

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great joy and pride in knowing that I was so close to completing my Master's degree, and although I cannot celebrate this milestone with her, I hope that my efforts will honor the sacrifices she made for me on behalf of my education.

I. Introduction

My research into this topic began in my second year of graduate school when I first began to perceive a connection between ethics and technical communication. At this time, I had completed all but one of the required courses for the degree and noticed that structured ethics instruction was not the primary pedagogical method for teaching ethics. Furthermore, the majority of ethics instruction and discussion I experienced came from a “Rhetorical Theory” course and a course I identify as a “research” course (“Research and Theory”). From my experience, I began to see that not all ethics instruction is presented as a formal assignment on a syllabus and recognized that there are many methods for layering ethics instruction in courses.

I differentiate two methods of ethics instruction throughout this paper and delineate between what I label “research ethics” and “communication-ethics.” In my paper, I describe research ethics as the ethics of data collection and the ethical reporting of research findings in written reports. I distinguish research ethics from the ethics that the literature discusses. I define communication-ethics as the ethics of understanding the nature, use, and power of language and of the responsibilities technical communicators have as the writers, interpreters, and presenters of that language. Additionally, I see communication-ethics as encompassing aspects of the ethics associated with Kelli Cargile Cook’s seven layered literacies (language and stylistic choices, the writing process, social theory, rhetorical choices, writing about technology, visual literacy issues, and document design).

As an online student who also works full-time as a technical communicator, I witnessed first-hand many of the ethical dilemmas illustrated in the literature on this topic. I formed an early opinion of the prevalence and possible efficacy of ethics instruction in TPC programs based on my preliminary research, which compelled me to expand my research beyond the secondary literature on the topic.

From my perspective as a student and professional, I expected to find courses minimally layering ethics instruction, and did not expect to find TPC programs that regularly focus on ethics. I anticipated that the ethics instruction would be inconsistent (that is, without a clear, unified pedagogical foundation to support specific ethics instruction) when looking at the results of all the TPC graduate programs included in my research.

However, my results show that courses do include ethics-related materials in programs, and layering of ethics instruction is seen even in a study of limited scope such as mine. Nevertheless, as I attempt to highlight in the literature review and emphasize throughout my discussion and conclusion, I believe that to assess ethics instruction in TPC programs, this is a topic that requires regular examination.

Purpose statement

The purpose of my research is to examine to what extent graduate technical and professional communication programs offer instruction in the ethics of technical communication and how this instruction fits with the literature on this topic.

Summary of thesis chapters

This thesis researches the extent of ethics instruction in technical and professional communication (TPC) graduate programs.

Secondary research for two decades has consistently shown that ethics is an important area of study for technical communicators. Changes in communication, due to emerging web-based channels and because of changes in audience, is why ethics pedagogy needs to be continually re-examined. Additionally, the roles of technical communicators have changed, opening numerous, new, possibly unexamined, ethical issues that may not be addressed in current TPC curricula.

To answer these questions, I will review the current literature on this topic and I will conduct original research to corroborate, contrast, and add to the existing knowledge. Specifically, my research attempts to determine whether graduate TPC programs offer instruction in the ethics of technical communication and to what extent.

In chapter II of my research, I present a review of the literature I found influential to my study. I chose a chronological organization to my literature review but identify and address individual thematic sections that I distinguish in the knowledge of my topic. I conclude the literature review by highlighting the major themes and ideas I found throughout the literature.

I discuss my research methodology in chapter III. I use a content analysis method on TPC course syllabi, which follows a prevalent choice of methodology for similar studies on this topic. I explain how I collected the data, coded it, and analyzed it based on specific criteria I identified in similar studies from the literature.

Chapter IV presents my findings followed by my analysis and discussion of the results. In each section, I discuss the results of the content analysis and present descriptions and explanations for their meaning and possible significance.

Finally, chapter V presents my conclusions, limitations, and calls for future research. In my conclusion, I include a summary of the important ideas I want to highlight in my research. I also clarify limitations to my data collection and analysis and offer opportunities to address these shortcomings along with further developing the scope and significance of this study.

II. Literature Review

I chose to organize my literature review in two ways that complement each other. I present a thematic structure along with a chronological review of the literature to present a historical perspective of the major ideas on my topic. I believe that a chronological approach provides a context for my research by showing the historical development of the specific concepts that my research addresses. First, I discuss the classic literature that introduces the fundamental argument that technical communication is rhetorical. In each section of the review, I highlight the prevalent and emerging themes that the authors present. Specifically, each section addresses the following themes: the influence of the humanistic approach in technical communication; the power of rhetorical language; the multidisciplinary role of the technical communicator; why and how TPC programs should layer ethics instruction; and the influence of technology on language.

The prevalent literature on this topic discusses ethics instruction in TPC programs and seeks to explain the best pedagogy to prepare students for the ethical challenges they will face in the workplace. The current and predominant perspective for most TPC programs is ethics instruction based on notions of rhetoric and philosophy from a humanistic and liberal arts foundation. The previous view, which I do not present in this review but will briefly mention for context, reflected the industrial climate in which technical writers worked in the United States post World War II. The perspective gradually changed as the United States transitioned toward an information economy and the rhetorical approach became the established TPC pedagogy.

The Rhetorical Approach to Technical Communication: 1979

Carolyn Miller's landmark essay, "A Humanistic Rationale for Technical Writing," (1979) established TPC programs as belonging to the liberal arts tradition. Her approach to teaching ethics precludes the study of particular theories of ethics or defining (or memorizing) the different philosophies. The benefits of such an approach with a liberal arts foundation is that it endows students with the qualities of responsibility, reflection, questions of conscience, consideration, and awareness that are ideologies steeped in the study of classical rhetoric and philosophy. Miller introduced these qualities as an argument against the preceding windowpane theory of TPC instruction. Miller offered the rhetorical foundation as a new perspective to technical writing curriculum—one based on a humanistic model and that disregards the previous positivist approach. Her influential paper advanced a perspective that continues to subsist today.

The "windowpane theory of language," as explained by Miller, is "the notion that language provides a view out onto the real world, a view which may be clear or obfuscated" (Miller 1979, 611–612). The former TPC perspective believed that technical writing should be clear because clear language provides an unobstructed view of the world. However, Miller advanced the notion that language conveys more than facts, or an objective view of the world—it conveys ideas, knowledge, ethics, ethos, and even learning, if possible.

Current TPC pedagogy is still influenced by Miller's perspective. She wrote that the "teaching of writing should present mechanical rules and skills against a broader understanding of why and how to adjust or violate the rules, of the social implications of the roles a writer

casts for himself or herself and for the reader, and of the ethical repercussions of one's words" (Miller 1979, 617). The literature on this topic constantly revisits the idea of bridging the practical (mechanical rules and skills) and theoretical (broader understanding).

Miller herself revisits the topic of practice and theory a decade later in her article, "What's Practical about Technical Writing?" Here, she restates that rhetorical language should not only serve the things that it describes but also should serve the audience (C.R. Miller 1989, 62). Along with her reaffirmation of the humanistic and rhetorical perspective of technical writing, Miller presents two additional perspectives of the proper approach to TPC pedagogy that you can see through most of the literature today: habit formation and the role of personal conduct. Miller discussed how "Understanding practical rhetoric as a matter of conduct rather than of production" (C.R. Miller 1989, 69) helps the technical communicator form good rhetorical habits used to accomplish ethical ends, once the ends have been determined.

A few years later, Cezar Ornatowski published a paper that supports Miller's theoretical perspective of the rhetorical/humanistic approach to technical writing instruction. Published in 1992, Ornatowski's "Between Efficiency and Politics: Rhetoric and Ethics in Technical Writing" offers an early definition of what I delineate as communication-ethics, which is the "understanding of the nature of language, of the relationship between language and its social contexts, and of the nature and role of technical communication" (Ornatowski 1992, 99). Along with Miller, Ornatowski's paper offers one of the earliest mentions to the connection between rhetoric and ethics and their representation in TPC curricula.

Ornatowski discusses the representation of rhetoric and ethics in TPC curricula by examining traditional textbooks for technical writing courses. Examining the contents of technical writing textbooks is a common method for determining “the standard *paradigm* of current classroom practice,” although Ornatowski acknowledges that “textbooks do not represent the profession and that to cite them as representative of what ‘we’ hold is presumptuous, if not wrong” (Ornatowski 1992, 94). However, looking at the treatment of ethics in textbooks over time, at least as a paradigm, is useful for revealing the ethical perspectives in technical writing curricula.

The degree of ethics instruction was incidental and parenthetical in the textbooks that Ornatowski examined. The textbooks of his day still reflected the windowpane view of communication, which may account for the deficient treatment of ethics. That is, the windowpane perspective views technical writing as “only a matter of dearly marshaling objective facts and designing readable texts,” and within this view, “‘ethical’ problems should not arise” (Ornatowski 1992, 99). However, Ornatowski makes the argument that technical communicators use rhetoric and the humanistic perspective to make decisions that have ethical implications. There are several reasons why the decisions have ethical implications, and one of them is technology.

The seminal work of Steven Katz in “The Ethic of Expediency: Classical Rhetoric, Technology, and the Holocaust,” builds on the previously described perspectives that technical writing is rhetorical and that there is a humanistic perspective to ethics. Katz offers a reason why “the ethical problem in rhetoric” must reject “deliberative rhetoric” or viewing technical

writing as expedient, or instrumental (Katz 1992, 257). He details the “implications and dangers” that deliberative rhetoric embodies. In his words, “Technological expediency actually subsumes political expediency and becomes an end in itself. Progress becomes a virtue at any cost” (Katz 1992, 265). Here, Katz suggests that this technological view of technical communications becomes an ideology of what is expedient or purely practical. The ideology then only serves the ends without an “appreciation for the multiplicity of relations between means and ends” (C.R. Miller 1989, 61). The literature on my topic of ethics in TPC continues to investigate the theme of technology and how it affects technical communicators and the ideology of technical writing curricula.

Katz’s article showed how technology influences how technical communicators view the effects of communication, their responsibility to others, and their responsibility to an organization’s ethical ethos. Katz writes that “it is well known that to perform well in a professional organization, writers must adopt the ethos of that organization (Katz 1992, 257). He questions the motives of teachers, writers, and scholars and whether they knowingly or unknowingly “contribute to this ethos” by not considering ethics in TPC instruction (Katz 1992, 271).

The Power of Rhetorical Language: 1993

In her article “Linking Ethics and Language in the Technical Communication Classroom,” Brenda Sims discusses the practical aspect of ethics instruction that Miller identifies as “practical rhetoric” and Katz as “deliberative rhetoric.” Sims combines her literature review with case studies to examine what communication-ethics principles students are learning and

to demonstrate how technical communication courses should approach ethics instruction. Her literature review suggests that the current pedagogy structures ethics learning around actions, instead of examining the principles that contribute to a student's greater understanding of the choices they make and how communication tools can be used. A model of ethics instruction based on actions suggests that the theories are only as useful as they are practical and that technical communication instruction should focus on the practical.

Sims suggests that instruction should focus on how a writer can manipulate language. She illustrates the idea that technical communicators have a responsibility concerning the manipulation of language by showing that there is a "link between language and ethics" (Sims 1993, 287). She stresses that it is important for students to not only recognize that there is a link, but also to understand how they influence the communication that is produced as a result. Or, in other words, it is important that "they understand that through language and presentation of information they control what information readers see and how they interpret it" (Sims 1993, 287). Her description of ethics related to understanding the use of language, through the power of rhetoric, helps to define communication-ethics.

Sims suggests that classroom instruction should offer a range of ethical theories that focus on teaching awareness of not only what is "ethical" or "unethical" but also how language is used. Sims provides examples of how it is possible to manipulate language, such as:

- Creating false impressions with the intent to confuse
- Using imprecise language to mislead
- Missing or omitting information that can mislead because of lack of context
- Providing false or inaccurate information that can cause harm

- Suppressing important information that deemphasizes problems or warnings
- Avoiding responsibility by obfuscating who “owns” the writing
(Sims 1993, 288–289)

Along with the influence that technology has on communication, the power of rhetorical language, and the understanding of the responsibility it necessitates of the writer, Slack, Miller, and Doak explore the idea of workplace ethos. They see the emerging technical communicator as an author who, through rhetorical uses of language, wields great power while simultaneously having a low level of authority in the workplace. However, the power over meaning contributes to a responsibility to ethics—which is understanding this power and understanding the relationships between the creation of content and its dissemination (Slack, Miller, and Doak 1993).

The literature from the beginning of this review through the mid-nineties continued to promote the ideas of workplace ethos and responsibility for language. Martin and Sanders maintain a similar view of the relevancy of workplace ethos and discuss how academic pedagogy can address it. In their paper, they use a case study and interactive discussion to facilitate an ethical debate and self-reflection among the students. They suggest that the classroom focus for understanding the ethics involved in workplace ethos is to “integrate classroom considerations of the writing process and of audience analysis, of personal and professional ethics, and of relevant workplace controversies” (Martin and Sanders 1994, 147). For Martin and Sanders, ethics is the “representation of ethos, or character, in a text” (Martin and Sanders 1994, 149), which translates to the idea of responsibility—both to the power of

language and to understanding the role of technical communication that Ornatowski also wrote about in 1992.

The literature from 1979 – 1994 established that technical communication is based on the humanistic perspective because of the rhetorical nature of language and its use. Rapid technological progress created additional responsibility; the literature focused on the idea of the multi-literate technical communicator, which is a theme that Paul Dombrowski and Ornatowski both discuss in 1995, and continues in other literature. Dombrowski recognizes that in order to understand communication-ethics, one must “deliberate” ethical choices instead of relying on technology to solve ethical dilemmas (Dombrowski 1995, 146). He suggests that technical information itself does not constitute meaning, and that ethics cannot be “technologized” by increasing technical (that is, objective) information. Instead, he introduces the idea that rules and values cannot be taught and instead there must be a “holistic rhetorical approach” or multidimensional ethics instruction based on the humanistic perspective (Dombrowski 1995, 3). These themes of multidimensional ethics and multi-literate technical communicators appear throughout related literature.

Furthermore, Dombrowski, along with Sullivan (1990), Miller (1989), and Katz (1992) all warn against the narrow pursuit of a single technological value to replace the responsibility of the technical communicator. For Dombrowski, an ethical lapse is not a failure of the technical writing but of the people making the decisions (Dombrowski 1995, 148).

To this point in the literature, the authors proposed embracing the humanistic perspective of technical writing. Along with the rhetorical use of language and the responsibility

of the technical communicator for understanding the power of language, they advocated for the idea of a multi-literate pedagogy in TPC programs. The need for multi-literacy in TPC stems from the emerging multidisciplinary role that TPC professionals experience in the workplace. In his paper "Educating Technical Communicators to Make Better Decisions" (1995), Ornatowski is the first author that links the former ideas of the humanistic perspective to the emerging role of technical communicators. He posits that the amount of responsibility that technical communicators have at a different companies is based on their roles. In the former view, technical communicators do what they are told (Ornatowski 1995, 577). However, there is an emerging multidisciplinary role needed because of the changes in the use of technology and the technical communicator's ability and task to "accommodate" (see Dobrin, 2004) issues of technology to users.

The idea of the multidisciplinary TPC worker, for Ornatowski, is a "burden" that affects technical communicators because they "work at the intersection of the various components and impacts of the system: the technology; the organizations involved in its implementation and management; the various interests vested in the system or arrayed against it; and the various publics which the system impacts" (Ornatowski 1995, 577). More explicitly, the "burden" is that technical communicators, because of the "implications of different communicative choices" and their multidisciplinary role, are responsible for the judgments of value that are ultimately ethical decisions (Ornatowski 1995, 578, 579).

Ornatowski's idea of the emerging technical communicator's responsibilities also serves as a useful developing definition of "communication-ethics." Simply stated, as a working

definition from the literature that helps to define it, communication-ethics means making better decisions about communication. Additional literature illustrates how TPC programs can offer this instruction and why it is important in technical communication.

The Emerging Multidisciplinary Role of TPC: 1995

The emerging multidisciplinary role of technical communicators compels TPC programs to review their existing pedagogy to make sure that it meets the needs for both students and the workplace. The literature from 1979 forward reveals the academic perspective for effective TPC instruction. The focuses seem to concern understanding the power of rhetorical language, understanding the influence that technology has on communication-ethics, and the emerging role of the technical communicator as decision maker.

Scott Blake writes that the focus on the power of language is “due to changes in technology and consciousness” (Scott 1995, 188). Blake discusses how TPC instruction is developing ethical pedagogies, and states that in the existing pedagogy, “we have no guarantees that our students will have the power or opportunity to enter a dialectic about ethics beyond our classrooms” (Scott 1995, 195). Scott points to Ornatowski’s research in “Between Efficiency and Politics,” and points out that the textbooks used in TPC programs “emphasize efficiency, effectiveness, and usefulness at the expense of responsibility” (Scott 1995, 190). Essentially, the developing pedagogy recommendations are to “introduce students to specific communities in the workplace, through orientation videotapes, sample texts, guest speakers, and other sources, and then have the students define the communities’

characteristics and values” (Scott 1995, 196). The research on communication-ethics pedagogy is developed further by Sam Dragga just a few years later.

Dragga addresses academia in his article "Is This Ethical?: A Survey of Opinion on Principles and Practices of Document Design." He questions the ability of educators to adequately prepare students for the same “ethical challenges” that practicing technical communicators face and are unable to reach consensus on. How technical communicators will respond and adapt to the ethical situations they encounter is another area of research that is vital to study; Dragga acknowledges that “rapid advances of computerized technology” is concomitant with the new multidisciplinary responsibilities that technical communicators have (Dragga 1996, 263).

His article ends with a call for further research to address ethics in academia. Similar to Blake’s findings regarding why existing pedagogy does not adequately address communication-ethics, Dragga asks if it is “because teachers ignore the subject of ethics?” (Dragga 1996, 264), or if research on how TPC professionals view the role of communication-ethics will provide the answer.

In the following year, Dragga offered a second, significant research paper titled “A Question of Ethics: Lessons from Technical Communicators on the Job,” that provided research directly from TPC professionals. His research offered a glimpse into how the academic perspective pervades (or does not pervade) the workplace. The claim central to his paper is that technical communicators rely on personal beliefs stemming from the lifelong development of a moral code of ethics or on the opinions of their immediate coworkers and organizations.

Dragga explains that this “perspective emphasizes the ethical power of narrative” (Dragga 1997, 164) and he shows that TPC programs can cultivate this learning using case studies, discussions, and personal examples. Consequently, TPC students can be offered instruction in ethics from the different perspectives mentioned earlier in this paper, but if they ultimately dismiss these in favor of immediate narrative perspective, then academia should reevaluate the efficacy of ethics instruction. Although Dragga’s research concerns technical communicators in the workplace, his findings can be extended to ethics instruction in TPC programs.

Most literature concerning ethics instruction focuses on the analytical perspective rather than on narratives. The analytical perspective is antonymous to the narrative perspective and encompasses “determining right behavior (chiefly through analysis of moral dilemmas)” (Dragga 1997, 162). In “A Question of Ethics,” Dragga offers important, timeless, research questions from the perspective of academia:

- But how desirable or profitable is this new emphasis (the analytical perspective) on ethics?
- Is it (the new emphasis) sufficient?
- Does it adequately prepare students for the ethical issues they might encounter on the job?
- Does it offer students effective guidance for navigating ethical disputes?

Dragga’s data from a sample of technical communicators offers a glimpse into the academic perspective of ethics instruction. At the least, his findings provide reasonable motivation to continue investigating the apparent disconnect between how TPC programs approach ethics instruction and the actual usefulness of that instruction.

Based on Dragga's analysis and interpretations, he suggests using the narrative method for ethics instruction. The narrative approach reinforces the thought process that professional technical communicators value and rely on to make ethical decisions in the workplace. The narrative approach that Dragga suggests follows the previous literature on this topic (Miller 1979, Martin and Sanders 1994, Dombrowski 1995, and Blake 1995).

In the late 1990s, authors continued to support and build on the ideas contributed by the preceding literature. The enduring ideas include the multi-literate technical communicator who understands that technical writing does not follow the windowpane theory and instead understands the rhetorical power of language. Examining technical communication textbooks provides a valuable look at the ethics instruction in TPC programs. However, as Ornatowski pointed out in 1992 (quoted earlier), textbooks should be used only as one part of the research into current classroom practice and do not represent the technical communication profession.

A common secondary theme in the literature is a critical examination of ethics and how they apply to workplace situations. In "What are Students Being Taught About the Ethics of Technical Communication?," Kris Hartung suggests that TPC textbooks prescribe but do not critically examine or justify to TPC graduates the information presented (Hartung 1998). Her ethics pedagogy suggestions are familiar to the ones mentioned previously. For example, she recommends avoiding purely rhetorical approaches or guidelines without concomitant ethical principles, because a cursory coverage of traditional ethical theories does not provide practical value to TPC professionals. Hartung writes, "Certainly a rhetorical approach with no ethical component allows a veil of dishonesty and superficiality to arise between the writer and

audience. Such an approach taken to the extreme is likely to foster an ‘anything goes’ strategy, so long as the audience is convinced” (Hartung 1998, 374).

Hartung’s research and critical evaluation of textbooks does yield practical suggestions for TPC pedagogy. Following the previous literature focused on the multi-literate technical communicator, Hartung recommends a TPC pedagogy that consists of layering ethical theory into class instruction. She writes that “Briefly mentioning traditional ethicists or citing a few of the principles will not be of much use for students, unless they are mentioned with an adequate account of the ethical theories” (Hartung 1998, 378). More directly, Hartung recommends that “if authors decide to make use of the ethical theories of philosophers, then they should either provide more than just a cursory account of those theories or not mention them at all” (Hartung 1998, 378).

In “Complicating Technology” (1998), Robert Johnson provides further research on the preceding ideas of the multi-literate technical communicator and the link between the multidisciplinary technical communicator and the influence of technology in TPC. His article is a critical examination of different fields that work with technology, including technical communication and offers perspective on how these fields view technology. He explains that technology is a significant area of study in modern society, which he describes as “the defining influence of our profession” (Johnson 1998, 76).

Johnson believes that technical communication is a multidisciplinary field and as such, it should view technology from all perspectives. However, borrowing viewpoints from other fields comes with problems—what he calls “the burden of comprehension.” The problem is that with

a viewpoint comes the associated contexts and values from the other fields' viewpoints. This dilemma is very similar to the "burden" that Ornatowski (1995) discusses in that both recognize that a multidisciplinary technical communicator is responsible for the decisions of value with ethical components.

Dombrowski writes that it is a technical communicator's job to evaluate information. This evaluation requires a multidimensional perspective "because ethical conduct usually involves a heavy measure of personal judgment and decision making" (Dombrowski 2000, 4). Dombrowski writes that the decision-making quality of effective technical writing is rhetorical; a humanistic perspective allows for an ethical component that instrumental discourse "characterized by relativist values, a concern for pragmatic usefulness, and the avoidance of theory and history in favor of immediate applicability" cannot (Dombrowski 2000, 5).

In his paper, Dombrowski revisits the link (see Sims 1993, Ornatowski 1995, and Hartung 1998) between technology and language and acknowledges that "Technological advances such as digital techniques open up new possibilities for ethically questionable communications . . ." (Dombrowski 2000, 5). Similar to Sims's (1998) idea of how language can be manipulated, Dombrowski states that, while technical writing may appear factually correct, the result can be highly misleading and therefore unethical. Put another way, this means that if information is deceptive or unsound, it will mislead people either intentionally or unintentionally, which is unethical.

Layered Literacies: 2001

The literature continues to affirm the preceding ideas concerning the rhetorical use of language, the multidisciplinary technical communicator and the influence of technology.

Another important pedagogical idea for communication-ethics instruction, along with a focus on integrating critical thinking to facilitate multi-literate instruction (see Hartung 1998 and Johnson 1998), is that many authors recommend inserting different “literacies” into courses, such as ethics or technology, that are important in TPC. Donna Kienzler states, “Rather than adding an isolated ethics unit to a course, critical thinking allows instructors to incorporate ethics into many different aspects of professional communication” (Kienzler 2001, 319). The incorporation she writes about concerns a technical communicator’s ability to effectively identify and question assumptions, which leads to the “difference between what is and what ought to be, and this difference, as ethicists tell us, is a foundation for ethics” (Kienzler 2001, 320).

The idea of identification and questioning is similar to the critical thinking skills involved in decision-making discussed earlier (see Ornatowski 1992 and 1995, Dombrowski 1995 and 2000, Scott 1995, Dragga 1997, and Johnson 1998). In fact, the importance of decision-making in TPC also relates to the “link between language and ethics” that Sims (1993) discussed and the power of rhetorical writing. Simply stated, the technical communicator makes decisions about language and purpose, acting as an ethical filter of information. Furthermore, Sullivan and Martin (2001) discuss the relationship between being ethical filters and workplace ethos. That is, the “do what you’re told” mentality discussed by Ornatowski (1995) and Katz (1992)

contends that technical communicators must be ethical filters by not resigning ethical responsibility or creating instrumental discourse as dictated by an organization's ethos.

Sullivan and Martin discuss the background of the idea of ethical filtering and workplace ethos. They write, "we need to understand technical communication as a particular subclass of rhetoric. It is rhetoric that is two steps removed from the end because it is rhetoric about technology, and technology, like rhetoric, is a means used to accomplish the ends determined by political processes" (Sullivan and Martin 2001, 252). They assert the importance of the critical examination of corporate politics and decision making, where personal ethics are decided by personal choices and not loyalty to a company.

The ethical dilemmas that technical communicators face stem from their emerging multidisciplinary role and, as the literature reminds us, constantly relate to the influence of technology on the field. For instance, Robert Johnson writes that technical communicators are in a unique position to affect change by asking hard questions about the role of technology in peoples' lives. Johnson explains the "hard questions as follows: If they ask questions that go beyond simply determining the best documentation for the product, if they critically evaluate the need for and the design of the product, they can become more than 'scribes or instrumentalists'" (Johnson 1998, 95).

Kelli Cargile Cook relates the ideas of critical thinking, decision-making, and the multi-literate and multidisciplinary technical communicator to a concept she calls layered literacies. Her concept is an important milestone in communication-ethics research in TPC programs. Her theoretical frame for technical communication pedagogy seems to encompass all of the

predominant ideas, concepts, and theories in the literature on this topic. In Cargile Cook's paper, she wrote that "many introductory technical communication textbooks continue to isolate instruction in certain literacies (such as ethical and technological instruction) into individual chapters rather than integrating these literacies throughout the course of study" (Cook 2002, 6–7).

Her article introduces and defines six literacies that she believes offer a theoretical context with which to structure technical communication pedagogy. The layered literacies approach stems from an acceptance that basic literacy (reading and writing) is inherent for any graduate. Furthermore, Cargile Cook focuses on the knowledge that should be gained from a technical communication curriculum that prepares students to enter the workforce with an "assumption that workplace writers need a repertoire of complex and interrelated skills to be successful" (Cook 2002, 7). The literacies that she suggests are *basic, rhetorical, social, technological, ethical, and critical*, which are the key concepts that appear throughout all of the literature.

While instructors and programs may differ on which literacies are important for students to take to the workplace, the layered literacies approach offers a system of curriculum suggestions to help instructors integrate multiple literacies into individual courses and programs of study, no matter which literacies are chosen. The important aspect of this pedagogical system is that multiple literacies are introduced and discussed in each class as well as systematically throughout a program.

Cargile Cook offers specific curriculum instruction for each literacy and how to assess students' knowledge, understanding, or awareness depending on the literacy. This pedagogy differs from the practical or instrumental approach of teaching raw skills. She concludes that instruction in theoretical literacies will better prepare TPC students for their emerging multidisciplinary roles in the workplace.

As the purpose of my research suggests and as the literature review highlights, I am concerned with the importance and extent of ethics instruction and therefore will examine the "ethical" literacy that Cargile Cook presents in her "Layered Literacies" article. Cargile Cook defines ethical literacy as both "technical communicators' knowledge of professional ethical standards as well as their abilities to consider all stakeholders involved in a writing situation" (Cook 2002, 15). She also identifies seven sites where TPC instruction can incorporate ethics: language and stylistic choices, the writing process, social theory, rhetorical choices, technology, visual literacy issues, and document design.

The crux of Cargile Cook's approach is that courses insert each of the literacies throughout as much of a course as possible. In her review of the corroborative literature on this pedagogical approach, she writes that Billie Wahlstrom advocates "layering multiple literacies into classroom instruction so that technical communication classrooms become learning communities in which literacies are not isolated but integrated and situated through a complex of classroom goals and activities" (Cook 2002, 6).

The ethical literacy encompasses aspects of the others literacies, and adds to them an understanding of the rhetorical power of language and the influence of technology. For this

reason, ethics may be of primary importance to the TPC students. Reporting on the approach that Marshall Kremers (1989) takes, W.J. Williamson describes curriculum design where “Ethics is not set apart from the rest of the course material; rather it is so intertwined with the course content that it cannot be separated from that content” (Williamson 1993, 9). Additionally, Cargile Cook’s review of the literature concerning workplace literacies and curriculum design also reports on the importance of the ethical literacy. She writes that “the need for more focused attention to ethical literacy has been clearly articulated by Wahlstrom, who argues that ethical literacy is a key but often neglected component in technical communication courses” (Cook 2002, 16). Furthermore, she elucidates the advantage of layering literacies, especially for layering ethical literacy:

Increasing our focus on ethical literacy and layering it, as Wahlstrom suggests, with other curricular goals would not only enhance technical communicators’ abilities to make decisions that are grounded in the profession’s ethical principles—legality, honesty, confidentiality, quality, fairness, and professionalism (STC Ethical Principles for Technical Communicators)—but also enhance their decision making by making them more cognizant of ethical implications of their decisions, including their responsibilities as citizens and workers in their society (Cook 2002, 16).

New literacies develop as technology and business develops, and the emerging literacies build on the traditional ones. The literacies that Cargile Cook suggests are still relevant to today’s technical communicator and a valuable pedagogical approach to TPC instruction. However, it is important to continue to the review which literacies are still relevant and which emerging literacies need to be addressed. For instance, in 1978 the predominant literacy was

basic, defined by Cargile Cook as instruction to communicate well and clearly (Cook 2002, 8).

Historical technical writing taught basic literacy that was more akin to business writing, which makes sense because people understood the purpose of business writing whereas technical writing was still an unknown at that time.

Today, technical communicators need more than basic literacy skills, as were needed with early computer use. Cargile Cook writes, "Today, technical communicators need to be multi-literate, possessing a variety of literacies" (Cook 2002, 5). Following this, research by Selfe and Hawisher provides several examples of the literacies that technical communicators and TPC programs employed between 1978 and 2000. Their study, "A Historical Look at Electronic Literacy: Implications for the Education of Technical Communicators," defines the literacies needed during this time.

Selfe and Hawisher offer a historical perspective on how literacies develop, integrate, or fade. Their research identifies "increasingly effective approaches to teaching electronic literacy" in TPC curricula. They recognize the importance and value of teaching "both emerging and fading literacy practices" (Selfe and Hawisher 2002, 265). Their findings suggest that it is important for both the TPC instructors as well as TPC professionals to recognize the multiple forms of literacy including how they change and fade over time. Additionally, for the emerging multidisciplinary technical communicator, Selfe and Hawisher's research suggests "technical communicators need to be able to deal flexibly with both emerging and fading forms of literacy as communication systems continue to undergo rapid change in the cultural ecology of twenty-first-century America" (Selfe and Hawisher 2002, 262).

Cargile Cook and Selfe and Hawisher offer an argument for the multi-literate technical communicator and note the special importance for the ethical and technological literacies. The most recent literature from the past decade examines the current representation of ethics instruction in TPC programs.

Technology and Language: 2003 - present

The applied research of Wilson and Ford (2003) examines how TPC Master's degree programs prepare students for the workplace. They found that while TPC professionals admit that TPC curricula cannot teach all necessary skills, ethics is not cited as an important topic for students or professionals.

The background of Wilson and Ford's research concerns TPC curricula and how some practical skills just cannot be taught in a program—for example, "politicking." Additionally, the responders indicated that the curriculum of the core courses in TPC programs were very project driven and when combined with the mandatory internship, offered a lot of industry experience in the classroom.

The other important discussion and analysis from their study included the expectations that TPC students have when entering the workplace. Two relevant points are stated that reflect the prominent theories related to the importance of instruction in theoretical principles, the recognition of the importance of technology, and an understanding of how technical communicators deal with workplace ethos.

1. That undergraduate degrees in TPC should focus on the skills so that the MA/MS TPC programs cannot only build on the skills but also add a deeper theoretical perspective.

Doing this will allow TPC workers to challenge current modes of thinking and make them better by either building them up or breaking them down.

2. The expectations of how they will fit into workplace dynamics, while recognizing variables such as a “changing technical economy where often information is the key component of the technology” (Wilson and Ford 2003, 153), how TPC workers see themselves within this framework, and (perhaps more importantly) how others see them.

As Wilson and Ford’s research seems to affirm, the focus of TPC instruction that appears to be consistent over the decades and for academia and the workplace, is the focus on the influence of technology on communication-ethics. Many authors in this literature review discuss the relationship between the influence of technology, the rhetorical use of language, and the ethical technical communicator (see Miller 1979 and 1989, Ornatowski 1992, Katz 1992, Dombrowski 1995 and 2000, and Scott 1995).

Continuing with the idea of the relationship between technology and ethics, Allen and Benninghoff’s article “TPC Program Snapshots: Developing Curricula and Addressing Challenges,” examines the core program curricula for TPC programs—the authors examined the courses using a quantitative scale to rank the frequency and breadth of the courses within a program. A limitation of this article related to my topic of research is that it surveys undergraduate programs, whereas the focus of my research is on graduate programs. However, I believe that the findings help inform whether students who enter graduate TPC programs are entering with a strong foundation in ethical theory.

The findings by Allen and Benninghoff show that ethical theory ranked 14 out of 21 for the top program core topics; while ethics topics are covered in many non-topic-specific courses, they are not featured in courses or a course focus in most TPC programs. The authors were surprised by this result and noted that “the low score for ethics (14%) as a core topic surprised us because it had been rated as receiving classroom attention at the first or second levels by 88% of programs” (Allen and Benninghoff 2004, 171).

An important corollary from their research is how the programs’ cores prepare students to be technologically literate. There is a strong connection among the ideas of technology, multi-literacy, and rhetoric; Allen and Benninghoff’s article raises valuable questions about perceived digital literacy versus how many courses should focus on tangible “technology” skills to prepare students for meaningful contributions in the workplace. The authors framed the topic as what “procedures TPC programs are using to address the challenge of balancing technological skills with literacy and humanistic issues” (Allen and Benninghoff 2004, 160).

Last, Allen and Benninghoff discuss the importance of a critical analysis of technology to “be able to engage in...discussions surrounding the development and uses of technology” (Allen and Benninghoff 2004, 179). Based on the literature in this review, critical analysis is an essential component of what an ethics foundation offers students, not only on the “uses and effects of technologies” but also on the benefits to students as they navigate technology and the workplace. This critique of the use of technology and how it relates to TPC pedagogy, is explained succinctly by Allen and Benninghoff:

One of his primary concerns was how instructors would prepare their students to use technology effectively in their future professions without losing sight of literacy and humanistic goals, especially as these goals are implicated in the very use of computers as instruments of writing (Allen and Benninghoff 2004, 157).

Furthermore, Allen and Benninghoff's research contributes to the idea of emerging multidisciplinary technical communicators and how they assimilate to workplace ethos. They acknowledge that graduates "from these programs now go into areas such as editing and publishing, marketing, or public relations work for industry, as well as the more traditional documentation positions" (Allen and Benninghoff 2004, 158). The question of how TPC programs are preparing technical communicators for the workplace is not answered in Allen and Benninghoff's article. Dragga's "A Question of Ethics" provides some insights toward answering this question but there is still a crucial unanswered question concerning whether it is the responsibility of TPC programs to provide all the ethics instruction a future technical communicator will need.

Balancing academia and workplace needs is a dilemma that TPC programs face as they question whether they also provide an adequate ethics foundation to help students navigate both the workplace ethos and technology. Allen and Benninghoff frame the topic of workplace ethos and technology with the following question:

Are our programs seeking to claim expertise in the newly developing digital areas while retaining the humanities perspective that allows our graduates to add breadth and depth to their workplace contributions (Allen and Benninghoff 2004, 174)?

Along with Allen and Benninghoff and the preceding authors who have written on workplace ethos and technology (see Miller 1979, Katz 1992, and Sullivan and Martin 2001), Alicia McBride discusses these two ideas and how they relate to communication-ethics. The two primary audiences for which a technical communicator writes are the organization and those who read what is written. Sometimes these two groups have conflicting needs. "The ethical standards that an organization espouses may be correct from the point of view of the organization, but at times the communicator may doubt whether they are ethical for a broader audience" (McBride 2005, 4).

The rapid technological changes and the effects they have on how we communicate and receive communication have changed the ethical implications for technical communicators. Additionally, technical communicators are in a position to help guide workplace ethos because they interact with the organization's audience and work to rectify the ethical conflicts that arise in communication. "Although technical communicators often speak for an organization, their audience is frequently comprised of people outside of the organization" (McBride 2005, 4). The relationship that technical communicators have with the readers of their communication gives them great influence over workplace ethos and great power over language.

Spigelman and Grobman (2006) research corroborates the previous research that the focus of TPC instruction should be on how the rhetorical approach can manipulate language. They discuss how critical insight and reflection are important characteristics that communicators must possess; however, these qualities cannot be taught but instead must be learned. For example, a program can teach transferrable skills such as writing, grammar, and

other “practical strategies” (Spigelman and Grobman 2006, 48), but these alone will not prepare students to face ethical dilemmas in the workplace. Furthermore, they connect the classical rhetoric and philosophy idea introduced by Miller to the “concerns of rhetoric,” which they define as “ethical, intellectual, and pragmatic” (Spigelman and Grobman 2006, 49). They claim that these concerns constitute crucial instruction for students to learn. It is important to examine hegemonies and connect them to potential workplace ethos, otherwise students will not understand the power of discourse and their ethical responsibilities as purveyors of language (Spigelman and Grobman 2006, 57).

The correlation above regarding workplace ethos and communication-ethics is further illustrated in research by Barnes and Keleher (2006). Along with the previous research (see Ornatowski 1992, Scott 1995, Hartung 1998, and Cargile Cook 2002), Barnes and Keleher’s data contends that TPC textbooks do not offer substantial treatments of ethics. A substantial treatment would include a “critical pedagogy” of ethics instruction that consists of multiple theories or perspectives that focus on language. Barnes and Keleher found that the textbooks presented one or more opposing ethical views or provided such a cursory examination that students would not be able to apply those ethical principles critically in their business communications.

Barnes and Keleher described two differing views found in textbooks: foundational and nonfoundational. The foundational view focuses on content rather than processes where the individual is “the final arbiter of ethics” (Barnes and Keleher 2006, 147). The nonfoundational view constitutes an ethos that “places the group ahead of the individual” (Barnes and Keleher

2006, 151). Social constructivist theory is similar to the nonfoundational view, which purports that culture and society not only influence our ethical decisions, but also determine them. This idea is reflected by the principle that “your personal ethic is based on your belief and acceptance of what the communities or groups with which you most closely identify consider moral and ethical” (Barnes and Keleher 2006, 151–152). This perspective is in contrast to the view that multi-literate technical communicators should be the ethical filter for not only their readers but also for their organizations.

Ultimately, Barnes and Keleher contend that the opposing foundational and nonfoundational ethical views will either confuse students or offer such a cursory examination of communication-ethics that students will not be able to effectively navigate ethically-questionable situations in the workplace (see Kris Hartung 1998). Instead, the authors propose a critical pedagogy of ethics that would allow students to determine for themselves how to apply ethical principles to their communications and how to contribute to the workplace ethos.

Literature Review Conclusion

The current work environment has shifted from the isolated technical writer with no control of the content to the multidisciplinary technical communicator who creates the content, layout, graphics, and decides when, where, and how to disseminate that information. The multidisciplinary technical communicator’s increased responsibility due to this shift, coupled with rapid advances in technology through the decades, change not only how we should approach ethics but also how we should teach it to future technical communicators who will inevitably deal with more complex ethical situations in the workplace (Dragga 1996, 256).

Technical communicators who study communication within the predominant pedagogical approach in the interdisciplinary field of the humanities will reflect the fundamental correlation between effective communication and human association. As technological devices continue to become more complex and have the ability to do so much—sometimes for great harm—competent technical communicators will need to be a buffer between technology and the people who use it. Additionally, a humanistic and rhetorical approach to technical communication would not be complete without first understanding the power of rhetorical language, and then recognizing that it is the technical communicator who has ultimate responsibility for content that is disseminated. For these reasons, an effective technical communicator's education would not be complete without studying ethics.

Someone has to decide whether technical discourse is effective. Whether the decision is deliberate or not, a decision is made when content is published. Technical communicators make ethical choices when they choose to provide “complete and accurate information upon which others can base their decisions” (Herschel and Andrews 1997, 162). Conversely, technical writers have the power to hinder, confuse, and distort. Continuing this paper's discussion of the power of rhetorical communication, technical communicators must question, understand, and comprehend the rhetoric they use in technical discourse and what its effects will be on the people who read it. There are ethical dilemmas present in the creation of technical content such as “in emphasis, selection, framing, grouping, or choice of type of visual element” (Kallendorf and Kallendorf 1985, 6). Furthermore, “the modern technical writer needs to sort

out and weigh possible biases and conflicting claims about such matters as safety, severity, and need” (Dombrowski 2000, 10).

To summarize, the literature states that technical discourse is rhetorical, that a rhetorical discourse follows a humanistic approach; that the proper pedagogy for establishing effective communicators lies within the humanistic method; and that the study of ethics is crucial for evaluating the appropriateness of information, among many other concerns. It is admittedly a difficult endeavor to balance the complete education of an effective communicator with the practical requirements of the workplace. However, a rhetorical foundation and multi-literacy pedagogy emboldens students with the qualities of *responsibility, reflection, questions of conscience, consideration, decision-making, and awareness*. This approach coupled with a balance of pragmatic courses will prepare students to navigate new ideological and ethical predicaments that professional communicators will inevitably face.

III. Methodology

In the previous chapter, I discussed the literature on ethics instruction in TPC programs and how it consistently indicates the importance of this area of study for TPC students and graduates. The consideration of the existing literature on ethics in TPC programs and for technical communication professionals guides my research question and directs the research needed to help answer it.

My study looks at the required courses from a selection of TPC graduate programs and evaluates the courses to consider the extent of ethics instruction in TPC graduate programs. In this chapter, I explain the research method I chose to examine this topic, the collection method, and my data analysis for how I coded the material.

Research Method

My research is a content analysis of the syllabi from the required courses of TPC graduate programs. Content analysis of syllabi is a common method by which to measure, compare, or evaluate ethics content in TPC courses and programs. I developed my method from similar studies in the field such as Dragga 1996; Hartung 1998; Allen and Benninghoff 2004; Rainey, Turner, and Dayton 2005; Pearson et al. 2006; Barnes and Keleher 2006; Lanier 2009; and Whiteside 2003.

Data Collection

To help answer my research question and establish a reliable data set, I chose to select programs from the Society of Technical Communication (STC) Academic Database

(<http://www.stc.org/education/academic-database>). I chose this database because it is a publically accessible list of technical communication graduate programs. The STC is a large organization in North America and supports a wide array of interests to the technical communication field, both academic and professional.

Another aspect of using the STC Academic Database is that using it will provide a perspective on the programs that choose to be listed in the STC database. That is, the programs believe they are relevant to STC members (and presumably non-members because the database is public-facing)¹ and that is why they choose to advertise their programs on the database. Per the STC's Deputy Executive Director of education, programs request to be listed and provide the copy that the STC uploads to the database.

I initially selected the "Master of Science" (MS) and "Master of Arts" (MA) programs from the database. I began the data collection 2 March 2013, and identified 16 MS programs and 12 MA programs. However, after examining each program, I excluded one MA program because I could not locate information from the institution's website indicating that it offered a TPC program. Additionally, one program listed as an MA on STC's website was listed as an MS on its own website. Therefore, I included 27 programs in my data solicitation (see Appendix 1 for the complete list of programs):

Master of Science: 17

Master of Arts: 10

¹ For example, the University of Washington program (Master of Science in Human Centered Design & Engineering (HCDE) does not fit the traditional technical communication discipline with its engineering emphasis and lack of composition courses, but it chooses to advertise its program on the STC database. The program's inclusion may be an example of how programs are evolving within technical communication.

Required courses only

After I identified the TPC programs to include in my research, I identified the required courses in the program from each program's department web page. I included only the required courses for each program to maintain consistency and reliability for this research and for future studies. By analyzing only required courses, the data reflects the courses that every graduate took and eliminates the need to make assumptions about incomplete programs. For curricula that included an optional required course (such as, Course A or Course B), I included both courses in this research. I excluded all individualized study such as Internships, Thesis or Alternate Papers.

For programs that offer different "classes" or "sections" for required courses, I used the syllabus of only the most recently-offered course (by semester and year).²

Email solicitations for the course syllabi

I obtained the required course syllabi by 1) searching the internet for publically available repositories, such as the university or program web pages, faculty websites, or other document repositories 2) emailing the primary contact listed on each program web page on the STC database 3) emailing other contacts, if different than the primary contact, that were listed on the program websites 4) emailing individual faculty for specific courses when provided that information (for example, by a reply from 1, 2, or 3).

² If the scenario were to occur of multiple sections being offered during the same semester (in this study, this scenario did not occur), the first received would be used. However, selecting the first received syllabus could affect the data in a measurable way, such as if an instructor who would offer a syllabi quicker might be more confident that it meets my requirements for the study, which is communicated to the instructor in the solicitation for the syllabi. Therefore, the syllabus might not be the most representative of a typical class or section for that course.

I used a standardized email template that I created to contact instructors for the course syllabi (see Appendix 2 for the email template). It contained a salutation, a brief explanation of who I am and what my research aim is, and then a solicitation for a syllabus for the required courses of the program.

I closed the data collection on 5 April 2013. I found or received the syllabi for all the required courses for 10 programs. Figure 1 below displays the list of programs included in my study:

Figure 1: Programs included in this thesis research

School Name	Number of Required Courses
Auburn University	4
James Madison University MA	3
James Madison University MS	4
Mercer University	8
Minnesota State University, Mankato	5
Montana Tech of the University of Montana	8
New Jersey Institute of Technology	5
North Dakota State University	3
University of Wisconsin-Stout	4
West Virginia University	3

After reviewing and coding the syllabi, I recognized that all of the syllabi for two programs did not include any assigned journal articles. For this reason, I emailed the program contacts to confirm whether the data was available for review.

- Mercer University: The courses use an online student portal for assigned readings from journal articles. I received information for each course that did not affect my original data coding.

- New Jersey Institute of Technology (NJIT): NJIT courses use Moodle for assigned journal articles. I was unable to confirm or refute my original coding and therefore, I did not include NJIT's individual course data for ethics readings in my analysis.

Data instruments

The breadth of content varied within the syllabi, but each contained some or all of the following sections:

- Title of "Syllabus" in the document; course name and number
- course description
- course objectives
- grading rubric
- required texts
- assigned readings
- project descriptions
- exam topics
- course schedule with weekly topic descriptions
- assignment descriptions

For this research, the quality, content, or breadth of each syllabus was not question—if the document was the official syllabus for the course, it was used in this study regardless of the extent of its breadth.

The use of syllabi for content analysis to examine trends or other phenomena within courses is common in research such as this one. Past studies (Campbell 2000; Whiteside 2003; Allen and Benninghoff 2004; Harner and Rich 2005) have relied on syllabi to help answer similar

research questions and syllabi are one of the most comprehensive ways to discern the course content or expectations, pedagogy, and intended learning.

Data Analysis

I used an Excel worksheet to store and code the data. I assigned one row per required course for each of the 10 programs. There were 47 required courses. For each program and required course, I assigned the following columns for data collection:

- A. School Name
- B. MA or MS
- C. Course Number
- D. Course Title
- E. "Ethics" in Title
- F. Course Engagement
- G. Ethics Textbook Chapters assigned
- H. Ethics journal articles assigned
- I. Layered Literacy 1: discussions of language and stylistic choices
- J. Layered Literacy 2: the writing process
- K. Layered Literacy 3: social theory
- L. Layered Literacy 4: rhetorical choices
- M. Layered Literacy 5: technology
- N. Layered Literacy 6: visual literacy issues, specifically in graphic and illustration choices
- O. Layered Literacy 7: document design

How each data source was coded

Columns A – E are self-identified data used for labeling and identification of each program, degree, and course. Below is an explanation of how I coded each remaining data point.

“Ethics” in title

An indicator that a course focuses on “ethics in technical communication” is whether “ethics” is in the course title. I coded for this occurrence to help me consider whether ethics instruction is presented as a stand-alone course or whether it is layered into other required courses.

Course engagement

Course engagement is based on the course assignments and activities and is a way to infer the course’s focus on ethics; for example, the pedagogical methods used (assignments, readings, projects, etc.) and if it is a focus for a majority of course assignments.

I coded for course engagement using an arbitrary numerical value between 0 and 3, with each value represented by the following description:

Figure 2: Course engagement codes

3	Focus of course (highest): Every course meeting had an assignment that was ethics related (e.g., weekly readings and assignments)
2	Featured as a regular topic of discussion: Over 51% of the course tasks were ethics related
1	Focus of a project or assignment: The primary focus for 1 task (for example, project, report, or assignment)
0	Not covered (lowest): No textual evidence in the syllabus; however, ethics may be covered incidentally or in other activities not listed in the syllabus

Using this approach, I assigned an average course engagement number for each course, and the amount of discernible ethics instruction will equate to a comparable average course engagement for each program. For example, those programs that contain courses with no discernible ethics instruction will reflect a low (0) average course engagement even though individual courses may receive a high focus coding.

Ethics textbook chapters assigned

I reviewed every textbook included in the syllabus as assigned reading, and specifically searched for chapters that included the term “ethics” in the title or description. To determine if the chapter was assigned and if it contained the term “ethics,” I reviewed the chapter titles in the syllabus and the table of contents of the textbooks.

Additionally, I added a special indication for one of the assigned textbooks or textbook chapters mentioned in the article “Ethics in Conflict Making the Case for a Critical Pedagogy” (Barnes and Keleher 2006). The textbooks from the article are below and the full citations of these texts are included in Appendix 3:

- In Business Ethics: Violations of the Public Trust (Hartley, 1993)
- Technical Communication (Markel, 2004)
- Maslow’s Business Communication Today (Bovée and Thill, 1992)
- Technical Communication: A Reader-Centered Approach (Anderson, 2003)
- Business Communication (Lehman and DuFrene, 2005)
- The basics of interpersonal communication. Boston: Pearson Education (McLean, S., 2005)
- Inter-Act: Interpersonal Communication Concepts, Skills, and Contexts (Verderber and Verderber, 2001)
- Interpersonal Communication: Relating to Others (Beebe, Beebe, and Redmond, 2005)
- Interpersonal Communication: A Goals-Based Approach (Cody, Canary, and Cody, 2003)
- Interplay: The Process of Interpersonal Communication (Adler, Rosenfeld, and Proctor, 2004)
- The Tradition of Philosophy (Hall and Bowie, 1986)

- Bridges Not Walls (Stewart, 2002)

Ethics journal articles

I counted any assigned journal article in the syllabus that contained the word “ethic” (or “ethics,” “ethical”) in its title, abstract, or keywords. I did not count the cases where ethics journal articles were not assigned such as in “further reading” or “additional” resources sections of the syllabi.

Layered Literacies

There are seven ethical literacies Kelli Cargile Cook identified in her paper, “Layered Literacies: A Theoretical Frame for Technical Communication Pedagogy.” Cargile Cook offers corresponding journal articles as examples of each of the ethical literacies. However, these articles serve only as markers for the ethical literacies that Cargile Cook describes and do not necessarily represent the entire breadth of each ethical approach. Additionally, these journal articles are also counted in my previous “Ethics journal articles” section because each one contains “ethics” in the title, but each of these particular articles is recorded separately for relevance to the aforementioned article and will be considered in the Findings and Discussion chapter of this paper.

As I mentioned previously in the literature review chapter, Cargile Cook’s article introduces a method of instruction for technical communication programs and specifically discusses “new methods for incorporating ethical instruction into classroom practice” (Cook 2002, 15) and offers an example of this incorporation with the seven ethical literacies. Each

ethical literacy and its corresponding journal article (or articles) is listed below. I coded for each of the seven ethical literacies and further coded for the occurrence of which corresponding article is represented. If a journal article for a specific layered literacy is present, I recorded this instance for the corresponding literacy.

Layered Literacy 1: discussions of language and stylistic choices

- Ornatowski, Cezar. "Between Efficiency and Politics: Rhetoric and Ethics in Technical Writing." *Technical Communication Quarterly* 1.1 (1992): 91-103.
- Sims, Brenda R. "Linking Ethics and Language in the Technical Communication Classroom." *Technical Communication Quarterly* 2 (1993): 285-99.

Layered Literacy 2: the writing process

- Martin, Wanda, and Scott P. Sanders. "Ethics, Audience, and the Writing Process: Bringing Public Policy Issues into the Classroom." *Technical Communication Quarterly* 3 (1994): 147-63.

Layered Literacy 3: social theory

- Affeldt, Robert J. "Deepening the Responsibility: A Social Epistemic Approach to the Ethics of Professional and Technical Writing." *Technical Communication Quarterly* 5 (1996): 207-20.

Layered Literacy 4: rhetorical choices

- Bryan, John. "Down the Slippery Slope: Ethics and the Technical Writer as Marketer." *TCQ* 1.1 (1992): 73-88.
- Scott, J. Blake. "Sophistic ethics in the technical writing classroom: Teaching nomos, deliberation, and action." *Technical Communication Quarterly* 4, no. 2 (1995): 187.

Layered Literacy 5: technology

- Katz, Steven B. "The Ethic of Expediency: Classical Rhetoric, Technology, and the Holocaust." *College English* 54 (1992): 255-75.
- Schroll, Christopher J. "Technology and Communication Ethics: An Evaluative Framework." *Technical Communication Quarterly* 4 (1995): 147-64.
- Porter, James E. "Legal Realities and Ethical Hyperrealities: A Critical Approach toward Cyberwriting." *Computers and Technical Communication: Pedagogical and Programmatic Perspectives*. Ed. Stuart A. Selber. Greenwich, CT: Ablex, (1997): 45-73.

Layered Literacy 6: visual literacy issues, specifically in graphic and illustration choices

- Allen, Nancy. "Ethics and Visual Rhetorics: Seeing's Not Believing Anymore." *Technical Communication Quarterly* 5 (1996): 87-105.

Layered Literacy 7: document design

- Dragga, Sam. "Is This Ethical? A Survey of Opinion on Principles and Practices of Document Design." *Technical Communication* 43 (1996): 255-65.

Determining Ethics Extent

By combining the total of the assigned readings on ethics, course engagement measure, and layered literacies, I was able to analyze the programs by curriculum and by degree in a measure that I call the "ethics extent." This assigned extent does not represent the quality of ethics instruction at any institution, nor does it tell us whether or not the ethics instruction is sufficient or "good" or "bad." It does, however, combine my various measures of ethics instruction into a single value to enable comparison.

In order to determine extent, the layered literacies readings are multiplied by the course engagement results. The course engagement does not represent content, but rather a measure of focus in the course. It makes sense to multiply it with the content in some way. Because the

layered literacies represent the recommended ethics content from my review of the literature on this topic, multiplying them by the course engagement (the arbitrary number between 0.0 and 3) allows one layered literacy journal article to be weighted more than another ethics reference (up to a 3:1 ratio).

The value for layered literacies in a program is assigned a value between 0 – 7 based on how many of the literacies are present—a 7 indicates that all of the literacies were covered at some point. The average course engagement has a value from 0.0 – 3, where a 3 indicates that ethics instruction was covered in every course meeting, and a 0 indicates that no textual evidence was found that ethics was covered.

This value (0-21) is then added to the total ethics readings (assigned ethics textbook chapters and journal articles). To account for duplication between the layered literacies and the total ethics readings, the layered literacy count is subtracted from this final value, as it is already included in the calculation.

The intent is to illustrate the differences and not to systematically evaluate the schools against one another. This method creates numbers that are closer together and therefore easier to compare and multiplying all the content would likely not change the order the schools appear in—it would just increase the gaps between them. The purpose of the resulting program placements is not to assign value, yet to gain an understanding of where these programs fall in relation to each other.

Ethical Considerations of Data Instruments

The syllabi are the most important artifacts for this research because of their value as the primary data used for the content analysis. However, the syllabi also hold intrinsic value as the intellectual property of the instructors. From this perspective, the syllabi are more than just a means to an end, and protecting their integrity became more than an ancillary motive in my research to ensure an ethical treatment of instruments. For these reasons, I made an effort to keep the syllabi confidential by not identifying course instructors by name. To represent their value appropriately, I made a secondary pass to code for my research and I will acknowledge and elucidate limitations of my research that result from my method and are not representative of the quality or content of the syllabi.

IV. Findings and Discussion

This chapter presents my findings from the content analysis of the syllabi of the required courses for 10 graduate TPC (Technical and Professional Communication) programs. Along with my findings, I present the discussion of my analysis concurrently in this chapter. Below, I discuss how my findings, combined with relevant secondary research, applies to current TPC students, educators, and professionals. Additionally, I will discuss implications related to how technology and the TPC field's emerging multidisciplinary role influence the ethics of technical communication pedagogy.

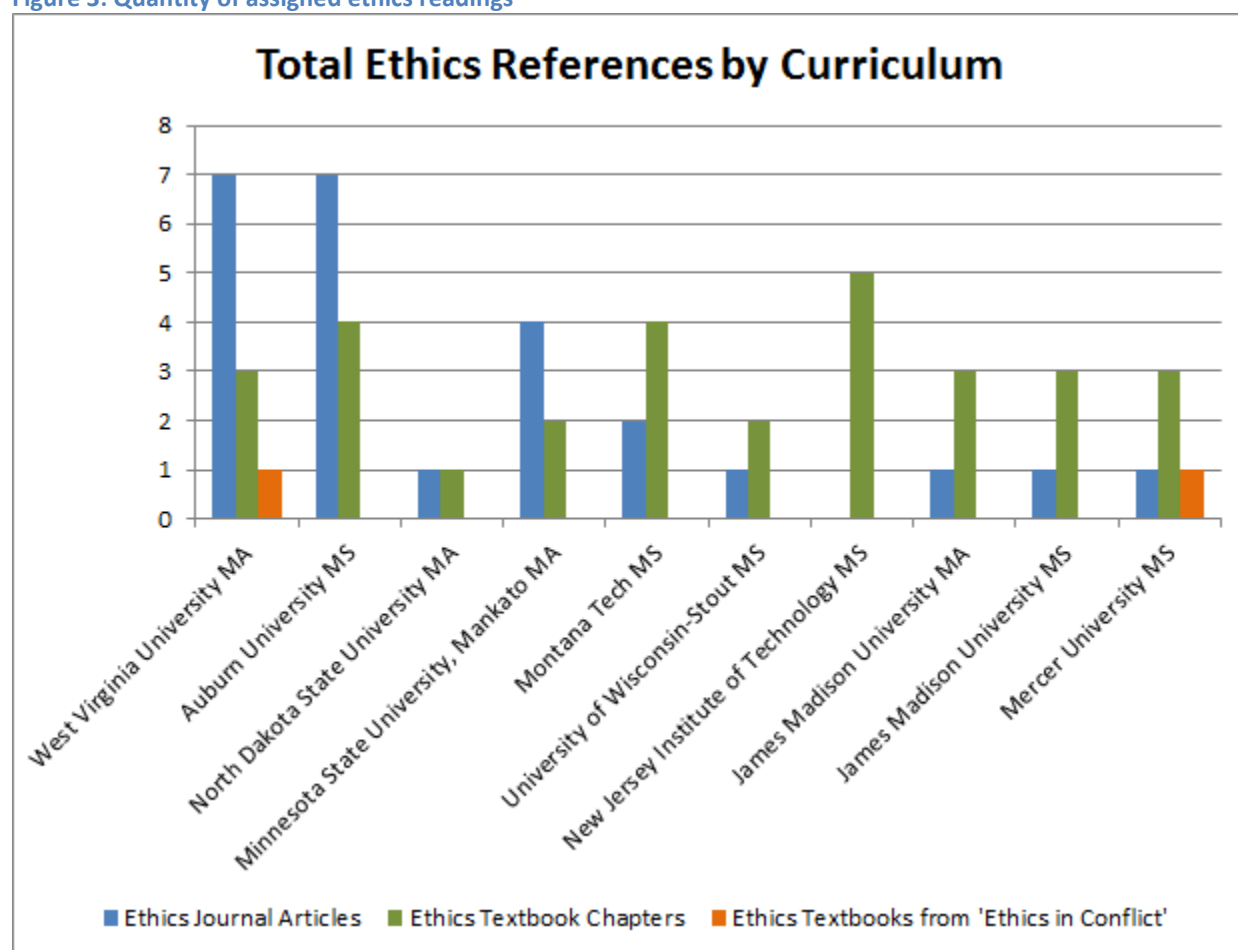
Surprisingly, I found that programs used textbooks more than journal articles to present ethics. However, I present an interesting finding that my methodology did not account for. Many programs included required courses in research, and these courses typically contain sections on ethics such as the ethics of data collection and analysis. My literature review focuses on communication-ethics, or the ethics of language and its use. Unexpectedly, my findings show a disproportionate amount of the ethics instruction coming from research courses, which has implications that may concern TPC program curricula and where ethics instruction is focused.

Assigned Ethics Readings by Program

I coded for the presence of "ethics" readings that I identified as assigned readings in the syllabi. Furthermore, I performed an additional coding for the textbooks from "Ethics in Conflict: Making a Case for a Critical Pedagogy" (Barnes and Keleher 2006), to account for the

ethics textbooks I identified in the literature review. The identified textbooks are important to distinguish from the other textbooks because these are recognized as providing “substantial” (Barnes and Keleher 2006, 145) technical communication ethics instruction, whereas further research is needed to qualify the other textbooks not included in my list. For instance, many of the other textbooks are research textbooks, which I will discuss later in this chapter. The table below displays the total number of all assigned readings that I found from journal articles that focus on ethics and chapters from ethics textbooks.

Figure 3: Quantity of assigned ethics readings



Each colored bar represents the quantity of assigned readings where the assigned text includes “ethics” in its title. The two selections are based on their corresponding sections from my Methods chapter: “Ethics textbook chapters assigned” and “Ethics journal articles.”

These are the total instances where ethics are included in courses. The chart illustrates that for the two programs (West Virginia University and Auburn University) with the highest number of ethics readings, each have assigned 7 ethics journal articles, which make up the majority of the coded material for those two programs. However, the remaining programs have a higher quantity of ethics readings from textbook chapters than from journal articles. Last, each program included assigned ethics textbook chapters in their curricula but only two programs used textbooks from “Ethics in Conflict,” which I discuss below.

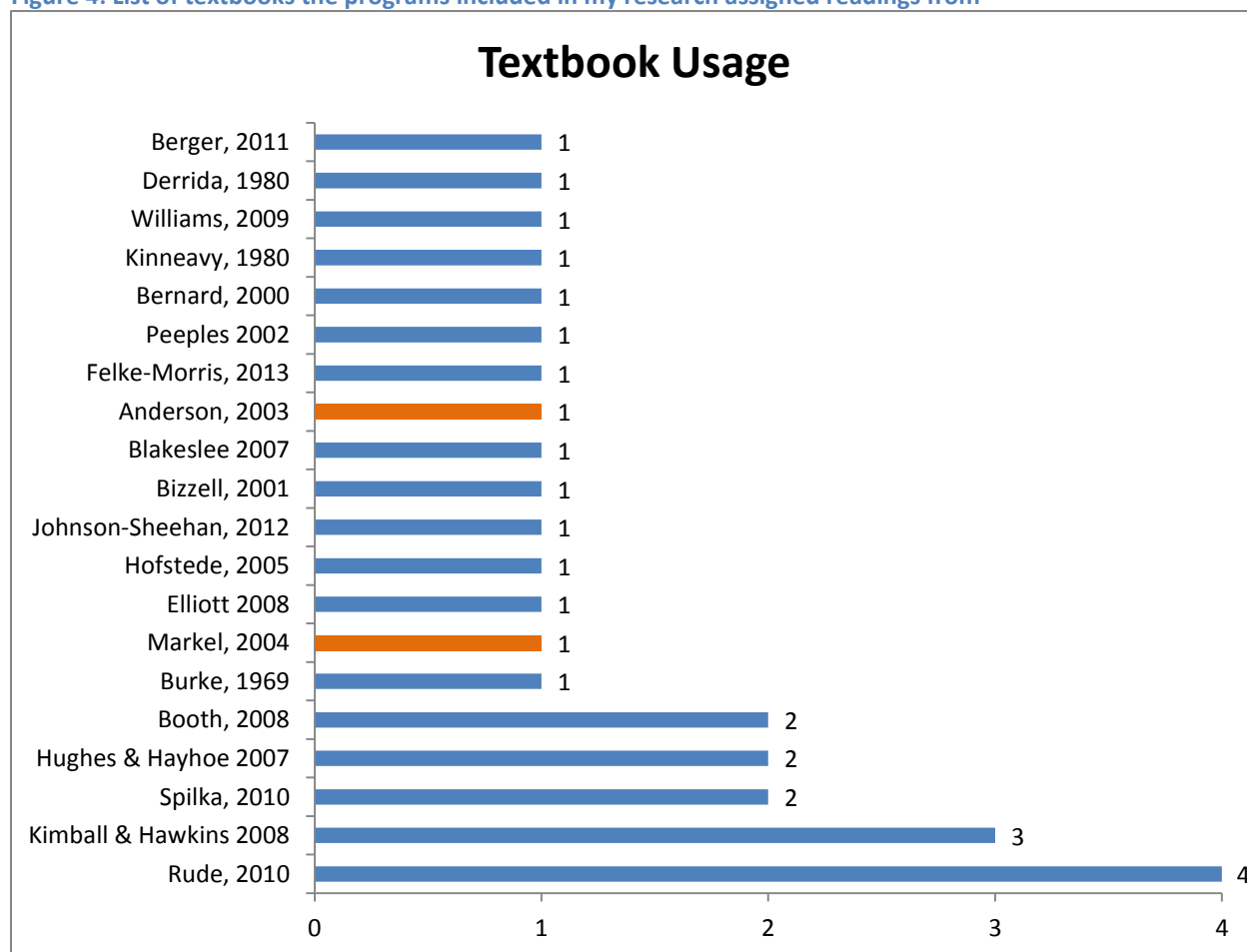
Most of the programs appear to use the same number of textbooks relative to the wider distribution of journal articles in programs. That is, assigned textbook usage as a total across programs tends to be consistent, whereas the average for assigned ethics journal articles is low.

Distribution of assigned ethics readings

I recorded a selection of textbooks named in “Ethics in Conflict Making the Case for a Critical Pedagogy” (Barnes and Keleher 2006) and I note these for their relevance to the literature on this topic. Only two of these textbooks were assigned chapters in any of the courses (see Figure 4). However, this finding is not surprising because Barnes and Keleher’s article was focused on undergraduate TPC courses. In some instances, courses assigned a chapter from a more recent version of a textbook Barnes and Keleher included in their study. Additionally, I did not intend for the “Ethics in Conflict” list to be a definitive collection of the

only ethics textbooks but I did need a reference point from which to start. Figure 4 shows a list of all the textbooks included in the “Ethics Texts assigned” section of my methodology. Full citations of these texts are included in Appendix 3. The two orange bars are the textbooks from the “Ethics in Conflict” list.

Figure 4: List of textbooks the programs included in my research assigned readings from



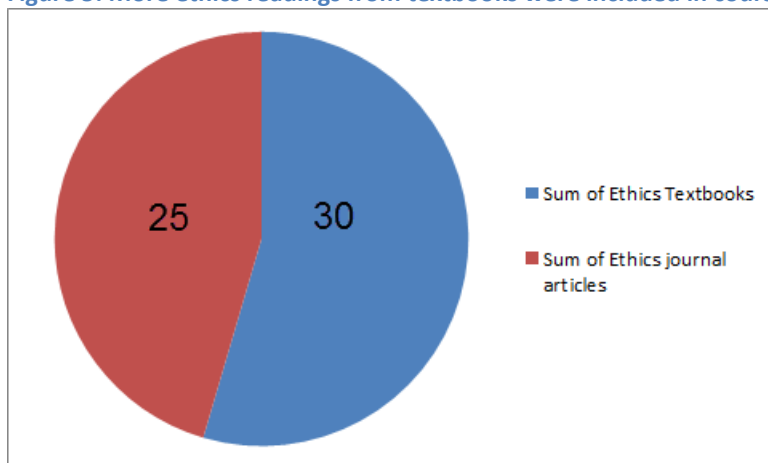
As the chart illustrates, graduate TPC programs draw from a variety of textbook sources.

Additionally, more recently published textbooks were favored over older textbooks and five textbooks (Booth, Hughes and Hayhoe, Spilka, Kimball and Hawkins, and Rude) were assigned more than once (2, 2, 2, 3, and 4 times respectively).

I will discuss later in this paper the question of why chapters from some textbooks are not assigned as often as the others; for example, why they are not included in my review of the literature, or why multiple graduate TPC instructors seem to value some textbooks for use in ethics instruction over others.

I was surprised that more programs assigned readings from textbooks than from peer-reviewed journals.

Figure 5: More ethics readings from textbooks were included in course syllabi than journal articles



My research included coding for instances of textbooks I identified as containing the word “ethics” in their titles as well as specific textbooks that Barnes and Keleher (“Ethics in Conflict,” 2006) identified as substantially presenting ethics in TPC undergraduate. I was unable to locate a current, extensive list of textbooks from graduate programs, which is a research limitation that if remedied, would contribute to a better understanding of the ethics content that TPC graduate programs are using.

The lack of an extensive list of textbooks is more important than I originally anticipated because I did not expect to find a higher prevalence of textbooks assigned throughout

programs in my research. Although, what appears as a high frequency of ethics readings stemming from assigned readings from textbooks may be an inaccurate interpretation. My data showed a disproportionate number of ethics readings coming from research courses. Research textbooks typically contain sections on the ethics of research and this can and should be distinguished from the topic of communication-ethics that I reviewed from the literature. However, my focus on communication-ethics instead of research ethics does not imply that research ethics are unimportant. For example, research ethics are important because technical communicators often perform research in professional settings as part of their multidisciplinary role; that is, they conduct usability studies with live participants, present quantitative data after collecting and analyzing it, and so on. However, my research seeks to examine the extent of communication-ethics, which I define from the secondary literature as understanding the power and use of rhetorical language.

The number of ethics readings between the research and non-research courses demonstrates the emphasis away from journal articles that focus on ethics that a program with many research courses has. For example, since my research indicates that research ethics is presented more in textbooks than in journal articles, it is not surprising that research courses would show a disproportionately higher number of textbook readings.

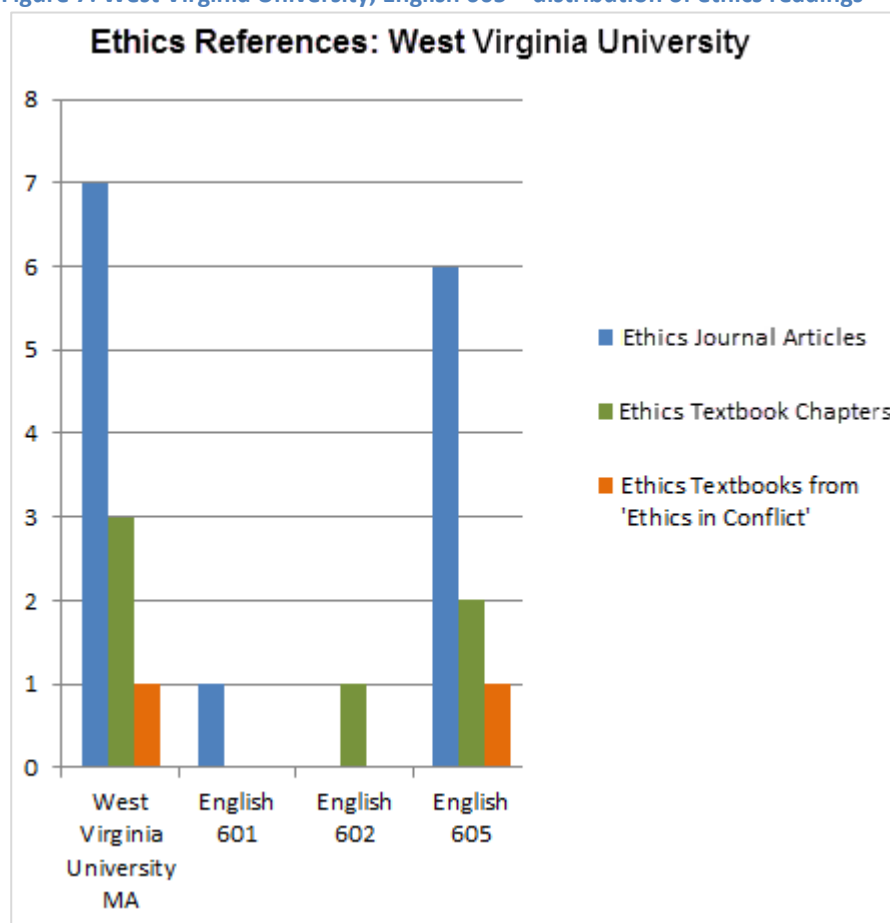
Figure 6: The difference of ethics readings between the total with research courses included or excluded

Non-Research Courses	
Sum of Ethics Textbooks	Sum of Ethics journal articles
16	18
Research Courses	
Sum of Ethics Textbooks	Sum of Ethics journal articles
14	7

As Figure 6 above shows, the total readings from ethics journal articles for all the non-research courses is much higher than the readings in research courses. This supports my assumption that research courses account for a disproportionate number of ethics readings in programs.

Another aspect concerning the assigned readings is the apparent lack of distribution across the programs. The poor distribution is not necessarily apparent from my raw findings because I am primarily looking at the totals or averages by program and by curriculum (all of the programs combined). However, by looking at the totals per course, we see that courses do not distribute ethics content from journal articles or textbook chapters equally throughout a program. This is an important distinction to make because as I reviewed in the literature, the best pedagogical method for teaching ethics in TPC programs is to layer it in throughout courses and programs, which my research would reflect as higher engagement (see Hartung 1998, Kienzler 2001, Cargile Cook 2002).

Figure 7: West Virginia University, English 605 – distribution of ethics readings



One course, titled “Professional Writing Theory and Research” (English 605), received a course engagement measure of “2” and contained one the highest number of recorded ethics material in my research. Furthermore, it contained a research component that I have mentioned above that also contributed to its ethics extent based on my methodology. As the graph above shows, there is little distribution of ethics readings across the program. English 605 accounts for 6 out of 7 of the assigned journal articles, with English 601 having the 1 other and English 602 assigning 0 journal articles. This is an example of how even though my method and

findings present this program as offering a higher extent of ethics instruction, the per course extent for layering in ethics instruction is not prevalent.

I acknowledge that some programs have an intent that is not aligned with the pervasive pedagogical theories I subscribe to and have presented in my research. That is, perhaps the state of TPC graduate programs has changed so much that the literature on the topic does not reflect the intent of ethics instruction. The MS programs tend to have more ethics readings that derive from courses I identify as research courses in my findings.

The assigned textbook chapter totals from New Jersey Institute of Technology (NJIT) is an example of how the research-ethics textbooks may contribute to a higher engagement measure. NJIT has the highest number of ethics textbooks per program for all the programs included in my study.

Figure 8: Total ethics textbook chapter readings for New Jersey Institute of Technology

	Course Title	Sum of Ethics Textbook Chapters
New Jersey Institute of Technology MS		
PTC 601	Advanced Professional and Technical Communication	1
PTC 603	Cultural and Technological Change	0
PTC 604	Communication Theory and Research	4
PTC 605	Elements of Visual Design	0
PTC 606	Advanced Online Design	0

However, when I exclude research courses from my analysis, NJIT moves from the exact middle of my “ethics extent” grouping to the last position of the lowest tier. The implication of the change in position attributed to research-ethics is an excellent example of my analysis. Additionally, it offers a reason for why further research is needed to examine the relationship between the perceived extent of ethics instruction and the actual. I discuss the significance of

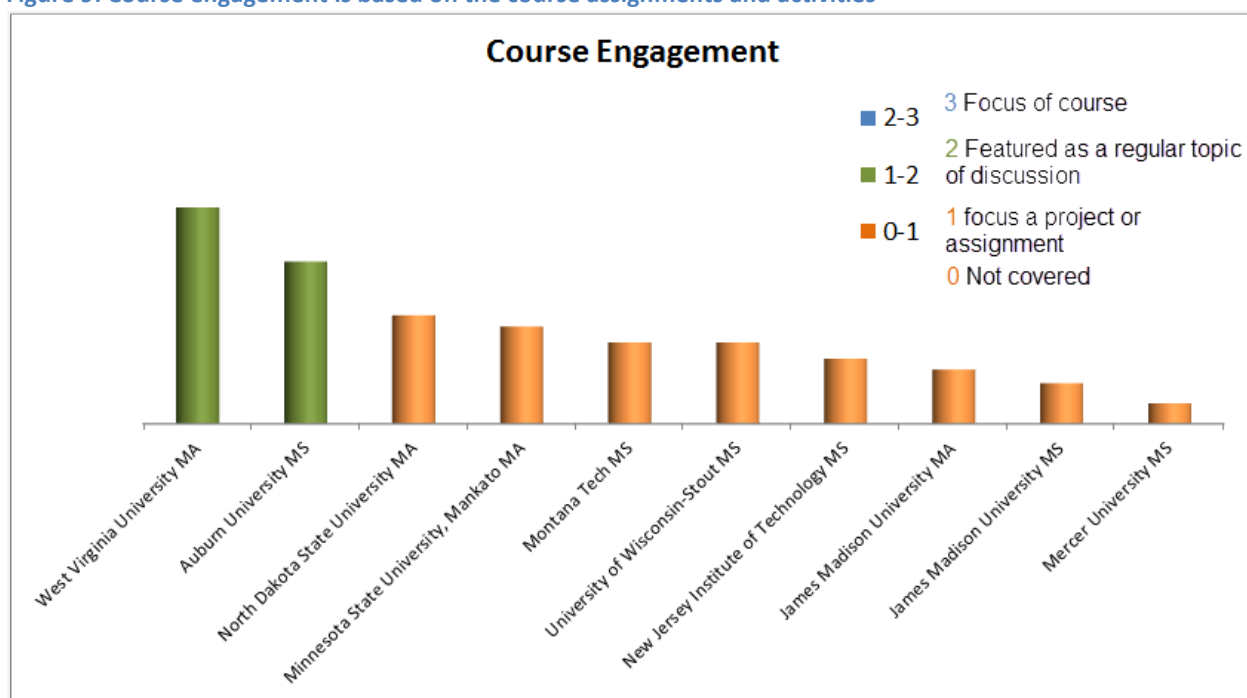
my research-ethics finding below in the “Ethics Extent by Curriculum: Research Courses Excluded” section.

Ultimately, the number of ethics readings offered was more consistent than I expected but based on my analysis, does not demonstrate adequate layering (or engagement per my methodology) based on my assessment of the literature on this topic. For example, layering in the ethical literacy as Cargile Cook describes is important because this pedagogical model provides a structure that others such as Dragga (1996) and Spigelman and Grobman (2006) advocate rather than a model that does not layer ethics instruction. To see adequate layering, we would find a higher engagement number combined with more ethics readings distributed across programs.

Course Engagement

I coded for the course engagement data using an arbitrary numerical value (held constant across courses) and assigned each course a decimal value from 0.0 (little or no course engagement) to 3.0 (very high, or complete course engagement). Because my research is looking at the extent of ethics instruction by program and not by course, Figure 9 below shows the results of the total program average of my course engagement coding.

Figure 9: Course engagement is based on the course assignments and activities



There are three tiers coded for and displayed in the table above. I chose to display the results grouped by tiers to represent the three levels of course engagement for which I coded. The reason for the tiers is to show where each program falls in the course engagement spectrum; when looking at the average per program, it is not important to display the individual course engagement numbers. However, when I discuss next the significance of the results, I provide individual engagement values per course.

The orange tier is the group of programs with an average course engagement between 0 and 1; the green tier is the average course engagement between 1 and 2; and the blue tier is the average course engagement between 2 and 3. The chart shows that none of the programs exhibits an average course engagement between 2 and 3. Two programs received the 1-2

average and the remaining programs received moderate averages between 0 and 1. Overall, my analysis demonstrates low course engagement per program in ethics instruction.

However, I do not mean to indicate that individual courses within the programs did not receive a 2 or 3 coding. For instance, individual courses at West Virginia University (see Figure 10 below) and Montana Tech (see Figure 11 below) were coded as 2 and 3 respectively, which contributed to their total average course engagement number in this data.

Figure 10: West Virginia University individual course breakdown for course engagement

	Course Title	Average Course Engagement
West Virginia University MA		
English 601	Introduction to Composition Studies	1
English 602	Theory and Practice of Editing	1
English 605	Professional Writing Theory and Research	2

Figure 11: Montana Tech of the University of Montana individual course breakdown for course engagement

	Course Title	Average Course Engagement
Montana Tech of the University of Montana MS		
T.C. 5016	Professional Presentations	0
T.C. 5056	Technical Writing & Editing	1
T.C. 5376	Ethics Proseminar	3
T.C. 5416W	Rhetorical Theories & Professional Commur	0
T.C. 5476	Print Production/Multimedia Productions	0
T.C. 5486	Print Production/Multimedia Productions	0
T.C. 5506	Intercultural Communication	0
T.C. 5616	Research Methods	0

My research shows that most programs include ethics content in instruction but that the instruction is not layered (or spread out) throughout individual courses in the programs. I label this layering as “engagement” in my research. While my research does not account for all the methods for introducing or examining ethics topics that courses may employ, it does show

some of the primary ones based on the literature of the topic and my methodology. That is, the prevalence of ethics content as conveyed on a syllabus does not equate to the efficacy of ethics instruction, although my research did not address the efficacy, or quality, of the included instruction. However, I do think that the results of my course engagement data can be useful if we want to begin evaluating the effectiveness of current ethics instruction in TPC graduate programs. For instance, even though my data recorded some engagement for every program, my analysis shows that the majority of the engagement number for all programs came from only a few courses. For example, on the high end of the scale, West Virginia University and Auburn University scored the highest average based on my methodology, yet all but one course in both programs scored a 1.

Figure 12: All the courses for the top two programs scored a 1, except one course from West Virginia University

	Course Title	Average Course Engagement
West Virginia University MA		
English 601	Introduction to Composition Studies	1
English 602	Theory and Practice of Editing	1
English 605	Professional Writing Theory and Research	2
Auburn University MS		
ENGL 6000	Technical and Professional Editing	1
ENGL 6010	Document Design in Technical and Professional Communication	1
ENGL 7010	Technical and Professional Communication: Issues and Approaches	1
ENGL 7060	Web Development	1

Conversely, the two programs with the lowest average engagement numbers, James Madison University (MS) and Mercer University, both scored all 0's but one for every course. From my methodology, a 1 is the value represented by a course that has ethics as a primary focus for one task or assignment and whereas a 3 represents that ethics is the focus of a course.

Figure 13: Except for one course in each program, all the courses for two programs scored a 0

	Course Title	Average Course Engagement
James Madison University MS		
WRTC 510	Seminar in Technical and Scientific Communication	1
WRTC 511	Seminar in Writing and Rhetoric Studies	0
WRTC 530	Research Methods in Writing, Rhetoric and Technical Communication	0
WRTC 540	Professional Editing	0
Mercer University MS		
TCO 605	Usability	0
TCO 620	Managing Multimedia	0
TCO 630	Managing People and Projects	0
TCO 641	Advanced Technical Communication	0
TCO 650	History and Theory of Technical Communication	0
TCO 651	International Technical Communication	0
TCO 665	Instructional Design	0
TCO 676	Visual Communication	1

As I stated above, there was not a significant difference between the average engagement numbers from the highest program to the lowest because the scores averaged on the lower end of the scale. The results indicate that the TPC programs in my study do not incorporate ethics instruction throughout most required courses per program, or is not reflected in the syllabi.

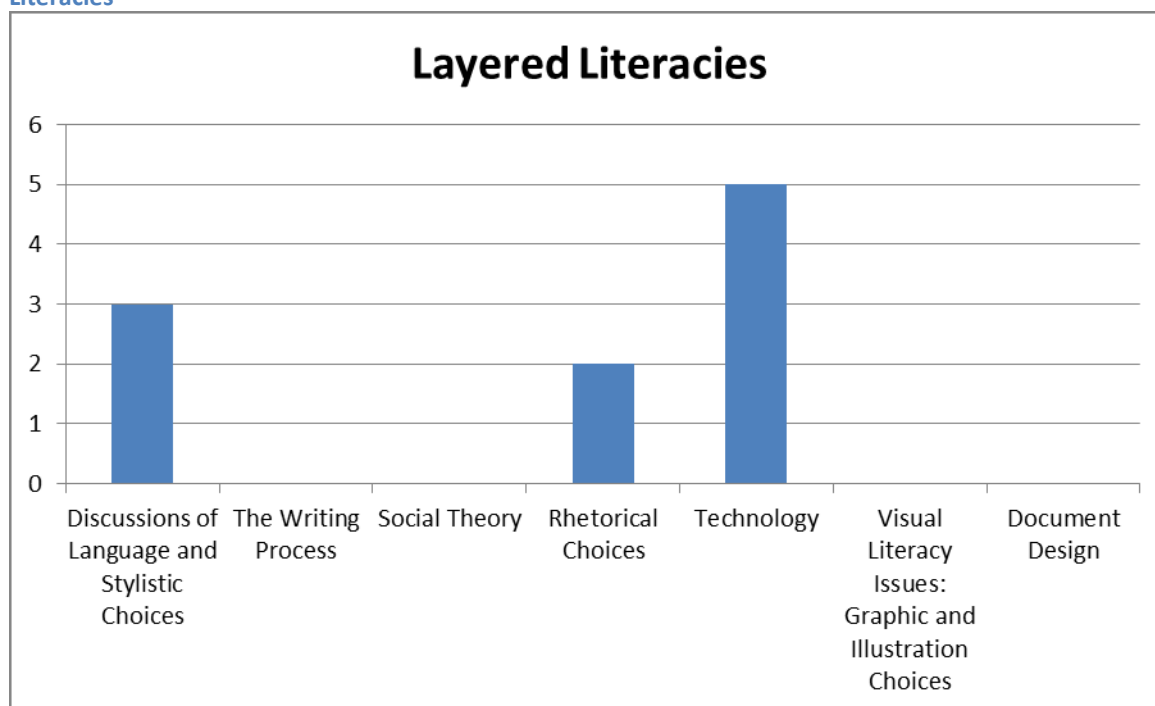
The implications of this finding sustain the research from Spigelman and Grossman (2006), Sims (1993), and Cargile Cook (2002) that systematic instruction in ethics is needed within individual courses as well as throughout a program. However, my findings show only that systematic instruction in ethics may be occurring for some courses. The characteristics of that instruction are a topic for future research, as my study only looked at the prevalence.

Layered Literacies

Texts from three of the seven layered literacies were present in my data set, and Figure 14 below displays these by total number of readings from all the programs. The number

represents the number of times the literacy was represented in the institutions observed. One can view the results as a total by the TPC graduate institution (both MS and MA) and those included are possibly a reflection of the current focus of TPC academia as a whole. For this reason, I coded for the presence of the literacies separately even though they did contribute to total ethics extent. My primary purpose for coding this data is to have a snapshot of current layered literacy use in TPC programs.

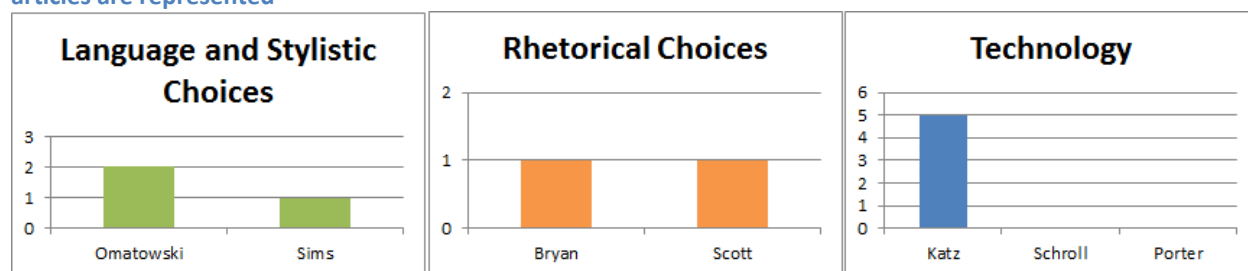
Figure 14: Occurrence for all programs of each layered literacy article from Cargile Cook's article "Layered Literacies"



I coded for the occurrence of the specific journal articles from Cargile Cook's article that she provided as examples for each of the seven literacies. I provide a list of the articles in my Methods chapter. Because I coded for each layered literacy article in the total ethics readings section, I do not show a breakdown by program and instead display the total as a total for all graduate TPC programs. Additionally, I include below the total number of uses for each article

within a layered literacy because between one and three articles represent each layered literacy. Figure 15 below shows a chart of the prevalence of the articles that represent their respective layered literacy.

Figure 15: A breakdown of each of the three layered literacies found throughout all the programs and which articles are represented



My findings show that Katz’s article, “The Ethic of Expediency” (1992), occurs most frequently as an assigned reading and also constitutes the entire representation of the “Technology” layered literacy. Furthermore, my data does show that “Technology,” and Katz’s article in particular, is still the dominant aspect of ethics instruction in graduate TPC programs. The other layered literacies, “Language and Stylistic Choices” and “Rhetorical Choices,” had an equal distribution of the example articles from Cargile Cook’s article. Furthermore, only five of the ten programs I analyzed used texts mentioned in Cargile Cook’s article. The lack of prevalence could mean that either half the programs did not assign these specific readings on a syllabus; other articles are used in the place of the layered literacy articles; the limitations of my methodology do not account for their use; or a combination of these reasons.

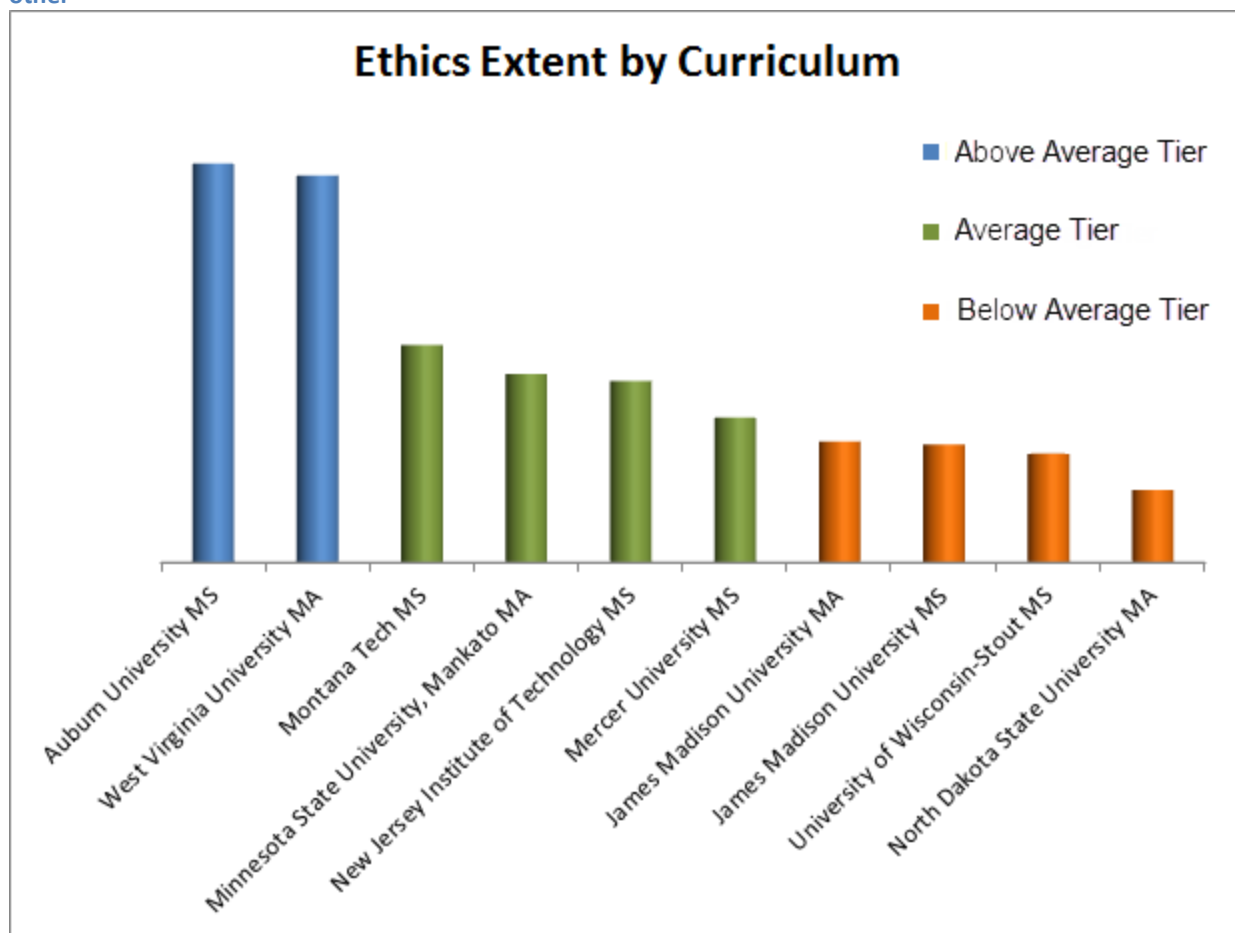
The data from my research has limitations because the example articles list is both short and contains articles referenced from only the 1990’s as a continuation of the time period when “authors held a special interest in building a theoretical framework for teaching ethics”

(Cook 2002, 15). Additionally, I do not believe that Cargile Cook intended this “list” as a definitive list or perhaps as a list at all. Consequently, in my Conclusions, Limitations, and Future research chapter, I will discuss the need for further research on the journal articles that could be included within the layered literacies that Cargile Cook provides as examples and what I see as a beginning.

Ethics Extent by Curriculum

The assigned ethics extent represents how I grouped the programs by combining the total ethics readings (the assigned ethics textbook chapters and ethics journal articles), course engagement (assigned from the arbitrary scale between 0 and 3), and the occurrence of layered literacy articles. My ethics extent does not account for the quality of ethics instruction, only its prevalence. This prevalence helps to answer my research question for determining to what extent TPC graduate programs offer instruction in ethics. Figure 16 shows the ethics extent by curriculum from the programs included in this study.

Figure 16: The ethics extent is divided into three groups to show where these programs fall in relation to each other



There are two programs with an ethics extent that is above the average I established in my methodology. The programs in the above average tier are a result of higher engagement, a larger selection of ethics content (both ethics journal articles and textbook chapters), and representation of the layered literacies. The remaining programs in this study placed into two distinct tiers, representing the average and below average ethics extent by curriculum.

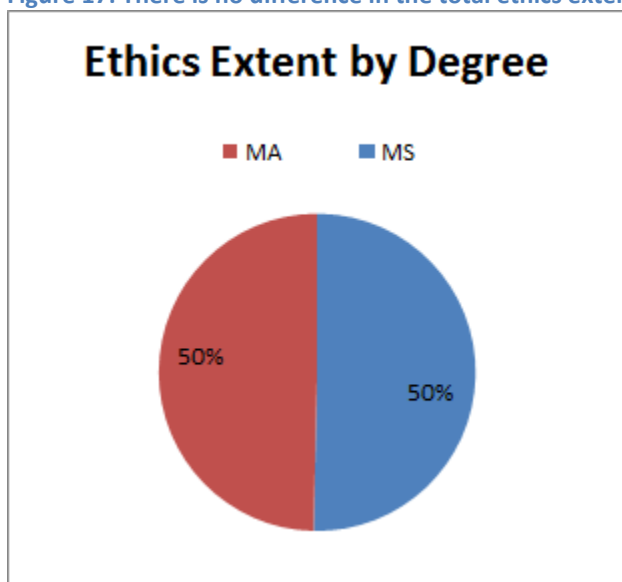
With the exception of the above average tier, the ethics extent shows that the programs included in this study have similar ethics instruction to one another. Although there is a significant difference between the above average tier and the two average and below average

tiers, there was not a significant difference between the top of the average tier and the bottom of the below average tier.

Ethics extent by degree

By looking at the total ethics extent by program and comparing by degree type, we see no difference in ethics extent between MS and MA curricula. Figure 17 shows a chart of the average ethics extent by degree type.

Figure 17: There is no difference in the total ethics extent by degree type



Ethics Extent by Curriculum: Research Courses Excluded

The data shows that a large amount of the assigned ethics readings came from courses with assigned textbooks whose contents focus on research as well as courses with "research" in the course title. The effect that the research ethics textbooks have on my "ethics extent" is significant enough to warrant a deeper look. The reason this is significant is because research courses were not included in my literature review of the recommended ethics instruction and yet these courses seemed to provide a substantial amount of the ethics instruction compared

to non-research courses. That is, research-based ethics readings focus on the ethics of gathering information and not on the communication-ethics perspective that I presented in my literature review. For example, courses with research in the title comprised 19% (9 of 47) of the total courses in this study. That 19% accounted for 32% of the overall ethics extent, and by extension a larger portion of course engagement, layered literacies, and ethics readings as well. Due to the disproportionate nature of these figures, I have calculated the ethics extent excluding the research courses to see how this affects my findings.

As illustrated in the “Ethics Extent by Curriculum (Research Courses Excluded)” chart (see Figure 18 below), by removing research courses from the ethics extent, we are left with one program from the highest tier and three in the middle tier. Furthermore, six programs place in the lowest tier of ethics extent including one that was previously in the highest tier.

Figure 18: A large amount of assigned ethics readings come from research-ethics textbooks

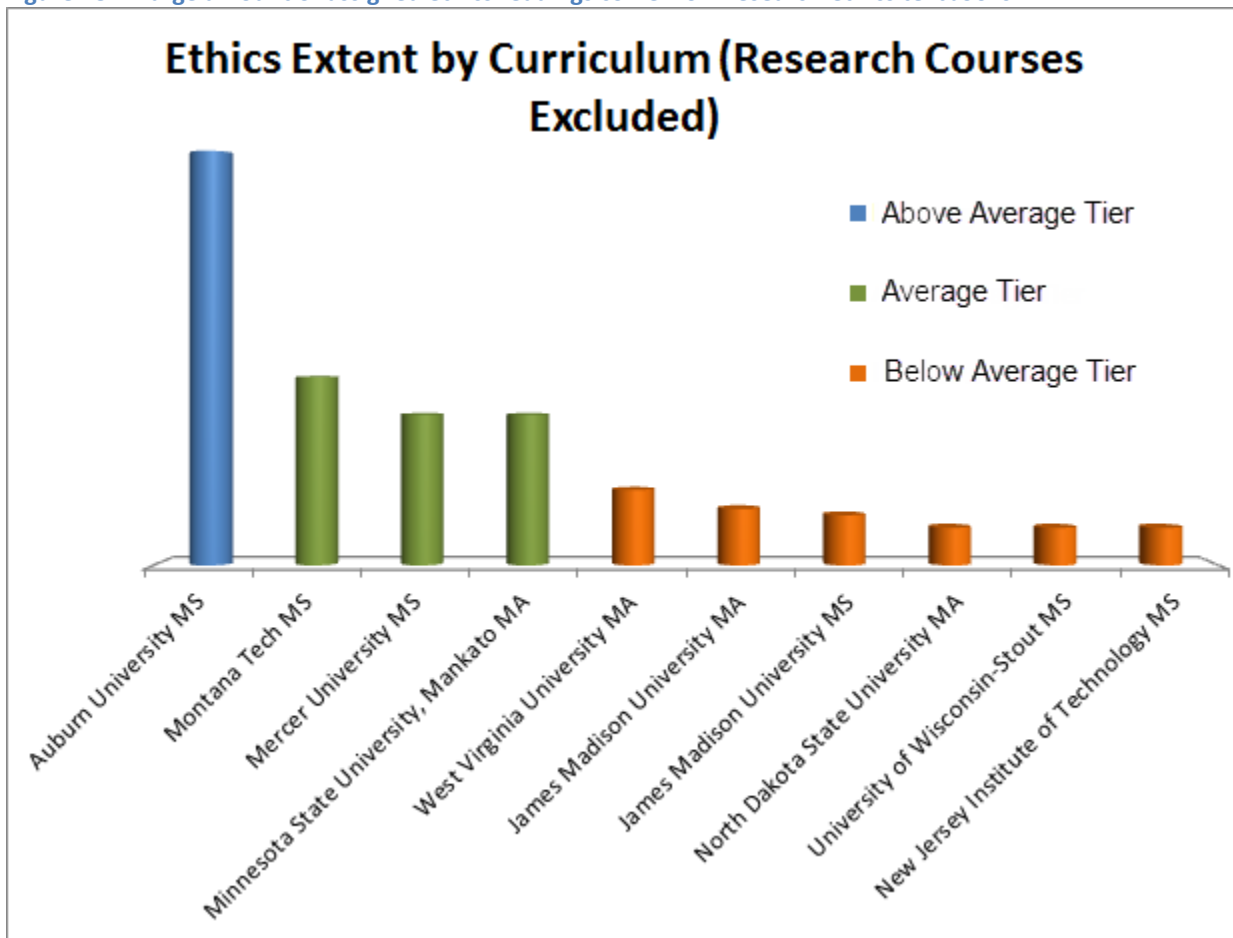
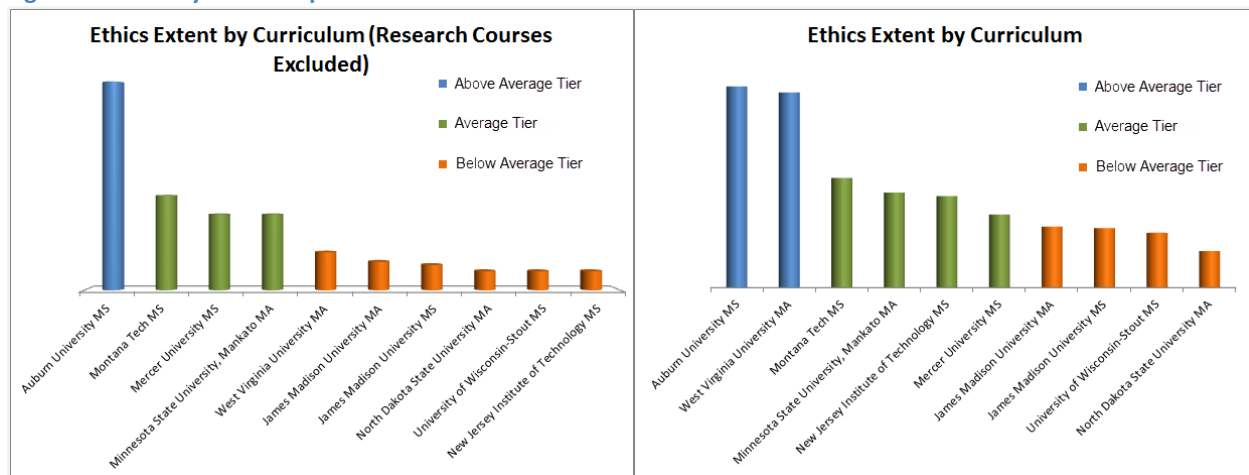


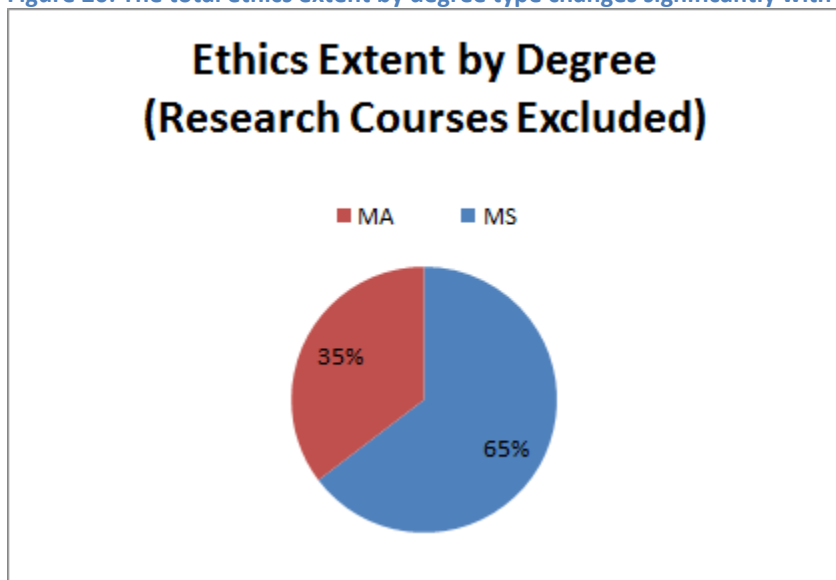
Figure 19: Side-by-side comparison of ethics extent with and without research courses



Interestingly, although there was no significant difference in the number of research courses

(between MS and MA programs) the overall ethics extent by degree type changed substantially. As illustrated in Figure 20, we see that MS degree programs in my study had a larger extent of ethics instruction than the MA programs if we exclude research courses from the analysis.

Figure 20: The total ethics extent by degree type changes significantly with research courses excluded



The representation of ethics-related instruction based on research-ethics is significant for two reasons relating to my research:

- 1) I did not account for this distinction in my methodology I because I did not foresee it as meaningfully affecting my data
- 2) Programs may be relying on research textbooks and the ethics of research in place of communication-ethics, or communication-ethics may not be adequately represented.

V. Conclusion, Limitations, and Future Research

In this chapter, I offer my expectations prior to conducting my research and suggest possible practical applications based on the implications of my findings. I discuss the relevance between the literature on this topic and especially how the influence of technology and an understanding of the power of language is important for TPC pedagogy. Last, I acknowledge the limitations to my research and propose additional methods to improve my research and to add to the knowledge of the topic of ethics instruction in TPC graduate programs.

I expected to find that most required courses would assign more journal articles than textbook chapters and I based this expectation on my personal experience in my TPC graduate program and from what I read in the literature on this topic. For instance, most of the literature uses examples from peer-reviewed journal articles for effective and recommended ethics instruction and conversely, the literature seems to have an overall negative viewpoint toward the effectiveness of current textbooks as a pedagogical source. For example, Ornatowski (1992) found that ethics instruction in textbooks was incidental and parenthetical; Blake (1995) points out that the textbooks from his research emphasize “efficiency” at the expense of responsibility; and Hartung (1998) suggests that textbooks prescribe ethical perspectives and do not critically examine them. For these reasons, I expected to see more “ethics” journal articles assigned in the syllabi used in my research.

My research did not look at the efficacy of instruction in or beyond the classroom, but the secondary literature does suggest that certain types of ethics instruction and pedagogical frameworks are more effective for TPC graduates in the workplace. Although my research did

not go so far as to collect data on the efficacy of ethics instruction, linking the prevalence of ethics instruction to the efficacy of that instruction is the practical application of any research such as mine. For this reason, I did keep this question in mind and even though I need to collect more data, my research does move toward this question and my data does build a framework from which I can discuss this topic. Therefore, I can look at the instruction that is suggested from my data and make suppositions concerning the efficacy as it conforms (or does not) to the literature on this topic.

I did expect to find similar ethics instruction in current TPC graduate programs that the secondary literature describes. For example, what the intent of ethics instructions seems to be, such as pedagogies stemming from classical rhetoric or philosophy, critical insight, self-reflection, or case studies (Miller 1979; Hartung 1998; Spigelman and Grobman 2006; Barnes and Keleher 2006). If my suppositions concerning the low ethics extent in programs affecting the efficacy of ethics instruction are true, it would suggest that the extent of ethics instruction that TPC graduate programs believe they are delivering is significantly misrepresented. This possible misrepresentation, of course, can be mitigated by a contemporary review and analysis of the textbook chapters that the programs use for instruction to determine their value to adequately introduce or prepare students to communicate ethically.

What ethics extent did I see?

Overall, I would characterize the results of my research as partially meeting my expectations and partially challenging them. I understood that most current TPC programs do not dedicate individual required courses or significant course time (engagement) to “ethics”

instruction, and I believe that this expectation was largely met. However, I also believe that the programs included in my research did contain more ethics instruction (extent) than I anticipated prior to my research. The literature I rely on for my study ranges between 1978 to 2006, but I think that it held up well within the analysis of current TPC programs. The pervasiveness of the methodology for my study shows the popularity of each author's ideas and lends some credibility to the value of their pedagogical suggestions and my analysis of their prevalence in current TPC programs.

Are TPC programs layering ethics instruction?

In Cargile Cook's article "Layered Literacies," she identifies six literacies that technical communicators should possess. As she states in her paper, "no single frame fully incorporates all of the literacies currently held to be important for technical communicators' workplace success" (Cook 2002, 6). My research and analysis focuses on the ethical literacy, which has been more widely researched because of its apparent importance to technical communicators. Cargile Cook, Dragga (1996), Allen and Benninghoff (2004), and others advocate for increased consideration of ethics in TPC programs because "the need for more focused attention to ethical literacy... is a key but often neglected component in technical communication courses" (Cook 2002, 16).

My findings suggest that programs are not adequately layering ethics instruction. My analysis combines the prevalence of ethics materials, how often those materials are assigned throughout the course, and whether the identified ethical literacy materials were used. Combined, this analysis determines my ethics extent by curriculum finding. My results show a

low ethics extent and as I reported earlier in this paper, only half the courses included in my study assigned materials from the Cargile Cook's layered literacies examples. Furthermore, for the courses that did assign a "Layered Literacies" article, half of the total readings are from a single source. The narrow selection of ethics sources disbursed by the programs combined with the low ethics extent suggests that programs are not layering ethics instruction. However, it is possible that layering may not be represented in course syllabi and future research including interviews and surveys would address this limitation.

What is the influence of technology and language on the ethics of technical communication

Technical communication is a multidisciplinary field and technical communicators must possess an eponymous "technical" literacy as well as other proficiencies such as Cargile Cook's six literacies "that encompass the multiple ways people use language in producing information, solving problems, and critiquing practice" (Cook 2002, 5, 6). The traditional roles of the technical communicator have changed and the new responsibilities they hold give them greater influence over the creation, design, and dissemination of content. The technical communicator's personal philosophy, as well as technology and language influence the content that they create. It is important for TPC students to not only recognize that there is a link between language and ethics but also to understand how they personally influence the communication that is produced.

My findings show a varied TPC curriculum that may reflect the many roles that technical communicators fill, or can fill in the workplace. Technical communicators work today as

instructional designers, project managers, information architects, and many other titles. For TPC programs, teaching the ethics of using language and of effective communication educates graduates to fill the myriad roles, jobs, and responsibilities they will encounter in the workplace. As I discussed throughout this study, technical knowledge and competent writing are not concomitant with ethical technical communication. The link between language, technology, and ethics must be a priority in TPC graduate programs to help inform future technical communicators of their ethical responsibilities.

As technological devices continue to become more complex and have the ability to do so much—sometimes for great harm—the world needs technical communicators competent in the ethical treatment of language to be the ethical filters between technology and the people who use it. Additionally, an ethical approach to technical communications would not be complete without first understanding the power that rhetorical language has, and then recognizing that it is the technical communicator who has ultimate responsibility for disseminating the content. For these reasons, an effective technical communicator's education would not be complete without studying ethics.

Ethical knowledge must be part of TPC pedagogy. However, you cannot cultivate ethical knowledge from one section on ethics in a “practical writing” textbook. Ethical choices cannot be procedural—it is something that students have to evaluate and practice themselves. The ability to make an ethical evaluation stems from the interdependence of knowledge that a technical communicator gains from effective, engaging, layered instruction and not from a

textbook. Finally, it is this concept of the evaluation of discourse that takes one from *knowing* to *doing*.

Limitations and Future Research

Measuring ethics from syllabi

While I identified content analysis of syllabi as my primary method of data collection based on the prevalent method from similar research, I recognize the inherent limitations that it holds. As I illustrated throughout my paper, syllabi may not reflect a potentially significant portion of ethics instruction in courses because the instruction is opportunistic or “so intertwined with the course content that it cannot be separated from that content” (Williamson, 1993, 9). For this reason, it is difficult to truly measure ethics instruction from course syllabi alone (even apart from other limitations inherent to content analysis on syllabi—see “Incomplete Syllabi” below). However, there are other research methods that can validate the content analysis or contribute additional data on similar research. For example, Dragga performed similar research using interviews in “A Question of Ethics” and surveys in “Is This Ethical.” Both interviews and surveys combined with a content analysis would reflect a more accurate representation of ethics instruction because they can account for the dynamic nature of TPC graduate courses and how ethics instruction is layered with course content. Nevertheless, it is relevant to mention that while a dynamic approach to ethics instruction may be occurring and may be desirable, a syllabus that does not reflect ethics instruction may show its relative importance to other items that are delineated on the syllabus. For example, an instructor who addresses ethics topics when the topics arise during a course versus making

ethics instruction a priority by including dedicated time to ethics instruction as reflected on the syllabus.

Layered Literacies journal article examples is incomplete

Cargile Cook cites eleven articles that she uses as examples for each of the seven approaches to her ethical literacy pedagogy. The primary limitation of these examples is the date of publication of Cargile Cook's article. Published in 2002, the most recent article example is 1997 and examples that are more recent would probably be found in my research had existed.

Another limitation is the scope of the article examples. I do not believe that Cargile Cook intended the cited articles as constituting an exclusive list. For this reason, I think that expanding the list of example articles for each of the seven integrated approaches will be useful for future research.

I have submitted a research grant proposal to the Council for Programs in Technical and Scientific Communication (www.cptsc.org) to create an updated resource of citations for Cargile Cook's article. The title of the project is "Updating Cargile Cook's 'Ethical Literacy' Citations" and the full text of the proposal is in Appendix 4.

Ethics in electives

I chose to research only the extent of ethics instruction in required courses. For a more complete understanding of how much ethics content is included in TPC programs, research should include elective courses. This future research would include the same content analysis

methodology from my study along with Registrar data and surveys of professors and students about the enrollment in these courses.

Graded versus ungraded assignments

I did not distinguish between graded or ungraded assignments. If the task was assigned, I included it in the data collection. However, it may be useful for future research to distinguish between graded and ungraded tasks. Presumably, the graded assignments—and not other tasks or assignments such as class discussions—are the instructor’s topics of intended learning and not used to fill a knowledge gap or as context for another learning event.

Incomplete Syllabi

Many of the syllabi did not include full details for all assigned readings. For example, most of New Jersey Institute of Technology’s syllabi did not include detailed reading lists because they use Moodle for assigned readings and dates. Additionally, most Mercer syllabi assigned journal articles through their online learning platform. This limited my data and definitely affected the accuracy of the results. Future research would include receiving access to the missing content which would necessitate creating a narrow list of the minimum data needed to constitute a complete syllabus and if any of that information is missing, to supplement by contacting the instructor for more documentation.

Creating a single database of publically available syllabi will help to further research this topic. Because content analysis of course syllabi is a widely-used and effective method of analysis, it will benefit scholars, TPC programs, and prospective students to have course syllabi available for review. It will benefit prospective students because they will have a resource for

determining if a particular program offers the instruction that they need. For example, for a professional technical communicator who is going back to school to continue his or her education, a program with more theoretical perspectives may be more useful whereas a student with no professional experience may prefer a more skills-based approach. The Association of Teachers of Technical Writing (ATTW) has a “Course Syllabi and Materials” database but instructors do not update it frequently with current syllabi (<http://www.attw.org/teaching/course-syllabi-and-materials>).

Expanding research to more programs and to other regions

My research used the list of TPC graduate programs from the Society of Technical Communication’s Academic Database. Using such a narrow list limited the number of complete program syllabi available to include in my study. Future research should extend the number of programs included by using the lists compiled from other organizations. For example, the CPTSC offers a list of programs that includes more programs than the STC Academic Database (<http://www.cptsc.org/programlist.html>).

Subsequently, this study looks at TPC programs only within the U.S. and future studies could include programs from other regions as well, which would be helpful to gain a wider insight to the field and to compare and contrast the results by location. For Germany and the surrounding European region, tekomp (www.tekomp.de) could potentially be a source for such a list. For example, performing a web search, I found the following technical communication programs:

- University of Applied Sciences, Karlsruhe: (Information Management and Media)

- Donube University Krems (Knowledge and Communication Management)
- University Dusseldorf (Language Technology and Information Science)
- University Hildesheim (International Information Management)
- University Aachen (Technical Communication)
- University Chemnitz (Technical Communication)

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Appendix 1

List of programs from the STC Academic Database

Master of Arts

Minnesota State University, Mankato
Boise State
Carnegie Mellon
Iowa State University
James Madison University MA
Missouri State University
North Dakota State University MA
University of Minnesota MA
West Virginia University MA
Wright State University

Master of Science

Metropolitan State University
Auburn University MS
Illinois Institute of Technology
Drexel University
James Madison University MS
Mercer University MS
Missouri University of Science and Technology
Montana Tech of the University of Montana MS
New Jersey Institute of Technology MS
Northeastern University
Southern Polytechnic State University
State University of New York Institute of
Technology
University of Houston-Downtown
University of Minnesota MS
University of Washington
University of Wisconsin-Stout MS
Westminster College

Appendix 2

Email template for syllabi solicitation

Hi, these are the email addresses listed as the contacts for further information on the [Name of Program and school].

I am an MA student at Minnesota State University, Mankato, and I am researching the different graduate programs offered in technical and professional communication.

I will greatly appreciate some information regarding the required courses for your program:

- To ensure that my research is as accurate as possible, I would like to receive a recent course syllabus for each of the required courses in the program

[Course Number] [Course Title]

Thank you for your time, and if there are other means for obtaining this information, please let me know and I will inquire there as well.

Appendix 3

Textbooks from “Ethics in Conflict Making the Case for a Critical Pedagogy” (Barnes and Keleher 2006).

- Adler, R., Rosenfeld, L., & Proctor, R. (2004). *Interplay: The process of interpersonal communication* (9th ed.). New York: Oxford University Press.
- Anderson, P. (2003). *Technical communication: A reader-centered approach* (5th ed.). Boston: Thomson/Heinle.
- Beebe, S. A., Beebe, S. J., & Redmond, M. V. (2005). *Interpersonal communication: Relating to others* (4th ed.). Boston: Pearson Education.
- Bové, C., & Thill, J. (1992). *Business communication today* (3rd ed.). New York: McGraw-Hill.
- Cody, C., Canary, D., & Cody, M. (2003). *Interpersonal communication: A goals-based approach* (3rd ed.). Boston: Bedford/St Martin's.
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Other textbooks recorded in content analysis

- Arthur Asa Berger (2011). *Media and Communication Research Methods: An Introduction to Qualitative and Quantitative Approaches* (2nd ed.). Sage.

- Bizzell, P. & Herzberg, B. eds. (2001). *The Rhetorical Tradition: Readings from Classical Times to the Present*, Bedford/St. Martin's.
- Blakeslee, A. M., and C. Fleischer (2007). *Becoming a Writing Researcher*. Taylor & Francis.
- Booth, W. C., Colomb, G. G., Williams, J. M. (2008). *The craft of research* (3rd ed.). Chicago: University of Chicago Press.
- Elliott, D. (2008). *Ethical Challenges: Building an Ethics Toolkit*. AuthorHouse.
- Felke-Morris, T. A., and T. Felke-Morris (2012). *Web Development and Design Foundations with HTML5*. Pearson Education, Limited.
- H. Russell Bernard (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Sage.
- Hofstede, G. H., Hofstede, G. Jan. (2005). *Cultures and organizations: software of the mind* (Rev. and expanded 2nd ed.). New York: McGraw-Hill.
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- Jacques Derrida (1980). *Writing and Difference*. Chicago: U of Chicago P.
- James Kinneavy (1980). *A Theory of Discourse*. New York: Norton.
- Johnson-Sheehan, R. (2012). *Technical communication today* (4th ed.). Pearson.
- Kenneth Burke (1969). *A Grammar of Motives*. Berkeley: U of California P.
- Kimball, M. A., and Ann R. Hawkins (2007). *Document Design: A Guide for Technical Communicators*. Bedford/St. Martin's.
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Appendix 4

2013 CPTSC research grant proposal

Project Title

Updating Cargile Cook's "Ethical Literacy" Citations

Project Contact

Fer O'Neil
Minnesota State University, Mankato
[redacted]
[redacted]
[redacted]
www.linkedin.com/in/feroneil/
Faculty Collaborator:

Gretchen Perbix
Minnesota State University, Mankato
230 Armstrong Hall
Mankato MN 56001
[redacted]
[redacted]

Project Description

The purpose of this project is to create an updated resource that technical communication instructors can use in considering how to incorporate ethics-related content into their courses.

The basis for the project is Kelli Cargile Cook's article, "Layered Literacies: A Theoretical Frame for Technical Communication Pedagogy" (2002). Within the "Ethical Literacy" section of that work, she cites a number of articles that technical communication instructors can use to integrate ethics into their courses, for example, Sims' article on incorporating ethics into

discussions of language and stylistic choices and Martin and Sanders' article on ethics and the writing process (15).

Cargile Cook's citations in this section of her paper effectively serve as a directory of ethics-related articles and approaches to teaching ethics within technical communication pedagogy; instructors would be well served by an updated "directory," so to speak.

We intend to conduct a secondary source search for peer-reviewed journal articles that discuss ethics in technical communication – in essence, to create a 2013 version of the "Ethical Literacy" section of her article that technical communication instructors may find useful when considering how to incorporate ethics-related content into their own courses.

Significance to CPTSC Members

The importance of ethics instruction in technical communication programs has been examined periodically since the late 1970s and reaffirmed in each examination. The results of this project will create a valuable resource for technical communication program administrators and curriculum designers who would appreciate an updated version of the guidance that Cargile Cook's article provided.

Potential Publication Locations

We plan to present the results of this project at CPTSC's 2013 conference in Cincinnati and will also prepare a manuscript for submission to *Programmatic Perspectives*.

Project Methodology

Cargile Cook identified seven areas where "integrated approaches" to ethics could or had the potential to be found: language and stylistic choices, the writing process, social theory,

rhetorical choices, technology, visual literacy, and document design. We will search for ethics-related articles in technical communication published since 2002 and categorize them in one of those seven areas.

Searches will include keywords (see Table 1 below) and authors originally cited in Cargile Cook's article. For example, the fifth ethical literacy is "Technology" and since the publication of Cargile Cook's article, James E. Porter has written the article "How Can Rhetoric Theory Inform the Practice of Technical Communication?" that builds on his earlier work.

All of the keyword searches will be conducted via a Boolean search for "ethics" AND the specified (truncated) keyword.

Cargile Cook's Ethical Literacy Category	Keyword
Language and stylistic choices	language styl*
Writing process	writing compos*
Social theory	social public
Rhetorical choices	rhetoric audience
Technology	technolog* technic*
Visual literacy	visual graphic illustration
Document design	document design layout user interface information

Table 1: Ethical literacy categories and associated keywords

Projected Budget

The grant will fund the project in three areas: travel, supplies, and salary.