

A Pedagogical Model for Realigning the Priorities in Technical Communication Between Industry and Academia

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ABSTRACT

Although there have been many attempts to mediate the longstanding gap between technical communication academics and practitioners, the field has yet to become a unified community. This study tracks the history of the field to identify the causes of the breach. The goal of this thesis is to assess technical communication's current industry and academic environment based on data collected from interviewing selected academics and practitioners. For my research, I compared my interview findings to the information from my bibliographical research in order to contribute to creating a healthy research-to-practice loop by producing a course syllabus for a senior seminar for the Professional Writing option within Virginia Tech's department of English. This syllabus contains readings, assignments, projects, and industry tests that are meant to help students contribute to bridging the gap between academia and industry by combining the important components from both sides of technical communication.

Research indicates that important professional skills for the workplace include knowing how to transform writing into products through topic-based writing, structured authoring, and information typing. Examples of other important professional technical communication skills include search engine optimization and content repurposing. Advanced technical communication-related jobs in industry include content strategist and information architect.

Methods of diminishing the gap between academics and practitioners and providing an environment that is conducive to collaborative research include generating awareness among technical communicators about what the other group does, changing the paradigm for research and faculty requirements for technical communication academics, and the two groups collaborating to develop more technical communication-related internships for students.

Dedication

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Chapter 1

Introduction

I chose to pursue the technical writing track as an undergraduate in English because it seemed like a practical decision. In my mind, it made sense that any company could benefit from having strong writers on their team. However, I was often unable to answer questions like “what is a technical writer?” or “what does a technical writer do?”; my answers were never as articulate as one would expect from a person specializing in writing or communication. Sometimes, I would list courses that I was currently enrolled in; other times, I would shrug and say that I was learning to write in different environments for various audiences. In all cases, I was unable to provide an answer that convinced myself that I knew exactly what I would be doing upon graduation.

Now, as a graduate student who has also worked as a part-time writer for the Virginia Tech Department of Building Construction, I can see how the skills and programs that I learned as an undergraduate apply to the technical communication world. However, I still do not know which career path to choose and often feel inadequate and under-qualified for the technical communication jobs that I find. Coming across technical communication job postings that specifically instructed English, communication, and journalism students to avoid applying for these jobs further contributed to my confusion regarding what I needed to know to qualify for a technical communication-related job. If writers like me are banned from applying to these jobs, whom do they want?

Utterly confused, I wanted to understand why companies would want to fill positions with the title “writer” with people who do not have college degrees in technical writing; it makes sense that a technical writer would never be hired to fill an engineering position, so why wouldn’t that logic apply the other way around?

On one hand, one could make the argument that writing is a part of basic literacy; all college graduates, regardless of their major, know how to write, whereas it is unlikely that an English or communication major would know anything about thermodynamics or material science. Understandably, why wouldn’t a company employ subject matter experts to write their own

material? Although this argument is logical, these companies cannot deny that the quality of writing of students who spend four or more years in college learning the art of writing should be higher than the quality of writing of those who have only taken one or two semesters worth of first-year composition and maybe one semester of technical writing.

In this thesis I am using the terms technical communication and technical writing interchangeably because my research has indicated that technical communication is the more common and contemporary term for what used to be known as technical writing. I define technical communication as the area of work where writers translate complex and technical information into plain language; this form of writing always has an exigence and helps its audience accomplish tasks. I acknowledge that this definition may not be comprehensive.

While there are currently many successful technical communicators, the profession is struggling to maintain an identity because it seems to harbor a culture of “every man for himself.” There are many who were lucky enough to have entered the field before the restrictions and regulations that required technical communicators to possess more than just writing and communication skills and learned how to use computer programs and write in professional genres on the job. But, it would be helpful for the upcoming generations to have access to information and insight on how to market themselves as aspiring technical communicators without a double major in marketing, management, or engineering. One way to help resolve this issue would be to define what a technical communicator is and identify the sub fields within the discipline in a way that helps non-technical communicators and recruiters recognize and apply it to their own fields. Another useful step would be to unite as a professional field while exhibiting to others that our assets are worth investing in.

The goal of this thesis is to assess technical communication’s current positional and academic environment based on data collected from interviewing selected academics and practitioners. Comparing my interview findings to the information from my bibliographical research will help me to identify methods, as modest as they may be, of creating a healthy research-to-practice loop by producing a course syllabus for a special studies course in technical communication and suggesting teaching ideas for this course.

My primary intended audience is academics and practitioners who are interested in bridging the gap and establishing a partnership with one another. My secondary audience comprises of students who want to learn more about the field of technical communication and the methods of professionalization.

I will also address the following questions:

1. What does it mean to be a technical communicator? What are the different available roles for technical communicators?
2. What is the current status of the gap between technical communication practitioners and academics, and what are the methods for bridging this gap?
3. How has technical communication changed in the last fifteen years?

Understanding what a technical communicator's current job entails and recognizing the status of the field will allow me to distinguish the similarities and differences that exist between the two groups. Tracing the past will also allow me to identify events that may have contributed to narrowing or widening the current gap between academia and industry in technical communication.

In order to broaden the scope of my research, I reviewed the existing literature about technical communication. I then took a qualitative approach by interviewing five current academics and three practitioners of technical communication in order to gauge the current condition of the field. I chose some of the interviewees based on their established reputation in the field and selected others who are not necessarily "big names," in order to increase diversity in the responses to my interview.

During these informational interviews, I asked the technical communicators about their academic and professional backgrounds, about their past professional experiences, and for any advice they may have regarding the field, including insight on establishing a mutually beneficial relationship between the academic and industry sectors of technical communication. Cross-referencing the findings from my bibliographic research with my fieldwork data allowed me to gauge the similarities and differences between my primary and secondary source findings.

1.1 Problem Statement

My preliminary research about the current state of technical communication shows that there is a gap between the industry and academic sectors of the field. The differing priorities of academics and practitioners in technical communication have posed various problems and challenges. Although it is easy to assume that these differences mainly stem from the age-old battle of science and technology versus the humanities, there are other contributing factors that have affected the field's current position.

According to Connors (1982), tensions ran high between English and engineering faculty when technical communication emerged as an academic field. Because technical writing held a lower status than classical literature within English departments, those who were recruited to teach technical writing often taught this class with a focus on literature. Simultaneously, the engineering faculty did not appreciate this humanistic approach and were dissatisfied by the English instructors' refusal to meet their engineering students' needs. "There was almost no interdepartmental cooperation between English and engineering faculties" (Connors, 1982, p. 69). The differences in priorities forced many engineering programs to terminate their relations with English departments and implement their own technical writing courses within their departments (Connors, 1982).

Over time, the need for effective technical writing became increasingly pertinent. Soldiers fighting in World War II needed instructions on how to use their complex new weapons and

war machines. There was another spike in technological developments after the War, which further increased the demand for technical writers. It wasn't until the 1970's that the Modern Language Association (MLA) finally recognized the place of technical writing within English departments (Connors, 1982).

By the time that English departments had adopted technical writing into their programs and had faculty who identified themselves as technical communication professors, technical writing had already been a field of industry for decades, which may be why Carolyn Rude asserts that "technical communication is commonly defined as a practice, not as an area of research" (Rude, 2009, p. 175). The differing growth-rates of the two sections of technical communication make the discrepancies in priorities inevitable. It is likely that instances of successful technical communicators who lacked formal training contributed to the mentality that a formal education in technical communication is not necessary. Inconsistent educational backgrounds may also be grounds for many technical writers not identifying themselves as such, because the task of technical writing was incorporated into the duties of a variety of job positions.

A preliminary stage of my research showed that it is important for technical communication academics and practitioners to acknowledge and strive towards reconciling the gap within the field in a timely manner. Failure to do so will only exacerbate the disparate priorities within the field. These problems include the following:

- The lack of:
 - public understanding of the field
 - clearly defined parameters of the field
 - prerequisites for entry into the field
 - industry standards among practitioners
 - professionalization opportunities
- Inconsistent requirements across technical communication degrees

These problems negatively affect the field because the lack of a clearly defined identity not only diminishes the value of the profession, but also makes technical communicators more disposable in the workplace. Defining the field and addressing the aforementioned problems are also important because, according to Joel Kline and Thomas Barker's article, "Negotiating Consciousness in Technical Communication: A Community of Practice Approach," the professionalism of the field depends on bridging the gap between academics and practitioners. This reality presents a self-perpetuating problem that is difficult to resolve: the necessity for collaboration between academics and practitioners in order to solve this problem and their lack of participation, which is the initial cause the problem. Kline and Barker present the "conundrum" of how "professionalism in technical communication depends on

bridging the gap between academics and practitioners,” but it is difficult to bridge this gap without establishing the rules of professionalism (Kline and Barker, 2012, p. 34).

It seems that creating a body of knowledge (BOK) which, according to Hillary Hart and Craig Baehr’s article “Sustainable Practices for Developing a Body of Knowledge,” comprises but is not limited to “knowledge bases, portals, documented practices, [and] written standards,” could address many of these problems (Hart and Baehr, 2013, p. 260). Although the Society of Technical Communication (STC) is working hard to successfully develop a Technical Communication Body of Knowledge (TCBOK), “the breadth of the field is not the only, but it is certainly a major, challenge in developing a BOK for technical communication” (Hart and Baehr, 2013, p. 262). The STC’s set milestone for this project is “to deliver Version 2.0 of the TCBOK by spring 2014” and the project’s criteria for success is to have the TCBOK “officially open and operational on the STC website in 2013-14.” Based on the TCBOK collaboration site as of February 16, 2014, it seems that the project is in the process of building knowledge and is still open to accepting new contributions and collaboration.

Even with the STC’s impressive progress with the TCBOK, technical communication is not any more defined as a professional field than it was before. Hart and Baehr’s most up-to-date research still confirms the unknown status of the field and explains that “it is 2013, and anecdotal evidence tells us that most practitioners and teachers of technical communication still have some trouble explaining what it is that they do” (Hart and Baehr, 2013, p. 260). It is important for both groups to understand what they do in order to help others understand the field.

It is also critical that academics acknowledge the importance of industry’s influence on creating an effective technical communication curriculum. Doing so will promote a mutually beneficial balance between academic- and industry-focused courses in higher education. Carolyn Rude asserts that there is an undeniable connection between academia and industry, which means that, “pedagogical questions emerge from and are relevant to academic and corporate classrooms” (Rude, 2009, p. 179). Simultaneously, this middle ground is difficult to reach, especially because of the discrepancy in history and focus between the two groups.

Benavente et al. have indicated that academics focus on training while industry professionals value content strategies and measurement of productivity, optimization, and success (Benavente et al., 2013). Kline and Barker confirm that the two groups’ goals are disparate. In their article “Negotiating Professional Consciousness in Technical Communication: A Community of Practice Approach,” Kline and Barker highlight their findings of academics placing significance on process while practitioners place a higher value on the product. Beyond the difference in focus lies a larger problem: the topics that one group considers important are considered second-tier by the other. Helping members of both groups to understand the reasons for giving priority to the topics that they do may help the field move closer to forming a unified identity.

In order to meet my research goals of defining technical communication as a field and gauging the current status of the gap between academics and practitioners, I will trace technical

communication's recent history, or what has happened in technical communication during the past fifteen years. Through bibliographic research and interviews, I identify issues in technical writing that stem from the rift between industry and academia. In doing so, I seek methods for realigning the two parties' priorities in a way that accounts for the needs and concerns of both groups. Simultaneously, I acknowledge the limitations of my study, as the scope of my research cannot provide a holistic overview of the problem nor can it provide comprehensive solutions to the academic-practitioner rift within technical communication. My final deliverable includes a syllabus (Appendix A) for a technical writing course that accommodates some shifts necessary to realign the priorities of the two parties.

Bridging the gap between the academic and industry realms will allow industry leaders to suggest potential changes to faculty teaching technical writing, which will improve the relevance and effectiveness of the overall curriculum. According to Rebekka Andersen's *The Value of Reciprocal Relationship Between Research and Practice*, academics sharing their research and findings will also help industry professionals to solve problems that they may not have the time or resources to address previously. Academics, practitioners, and students will all benefit from closing the academic-industry gap in the technical writing field (Andersen, 2013).

Chapter 2

Literature Review

2.1 Introduction

Technical writing has grown as an academic and professional field during the past decade and is now more commonly referred to as technical communication. The field was once considered the “poor cousin to literacy studies in English departments,” but it has now grown into a distinguished professional and academic field, meaning that English professors are now willing to identify themselves as professors of technical communication rather than professors of English or literature (Connors, 1982, p. 173). Simultaneously, its interdisciplinary nature, as it “shares and borrows methods, theories, and content areas” such as “design and speech communication, rhetoric and composition, psychology, education, and computer science,” makes it difficult to distinguish as an independent field (Rude, 2009, p. 175).

Technical communication’s one unique factor is that “no one else pays such close attention to texts used to get work done” (Rude, 2009, p. 206). For example, even though technical communication and journalism are both centered on writing, “journalism sends information to a broad public. Readers are not necessarily expected to do anything with the information. By contrast, technical communication targets specific users, who are always as unique as the circumstances that require a text” (Rude, 2009, p. 207). This confirms that technical communication fulfills audiences’ needs, which provides a rhetorical exigence; the writing in this field is action-driven and helps solve the users’ problems.

It also means that “technical communication helps its audience to make informed decisions, and to take appropriate actions in the best interests of humanity” (Rude, 2009, p. 207). Although understanding the field’s current climate may feel sufficient, making it is easy for some to dismiss the history of technical communication as being irrelevant, the problems from the past “will undoubtedly play [a role] in shaping our future” (Connors, 1982, p. 174).

In order to understand how technical communication came about, especially as an academic

field and “understand the genesis of these early courses, we must first understand the context in which they grew” (Connors, 1982, p. 174). Carolyn Miller expressed that it is also important to expand the perspective of approaching the field “not [only] as a career path or job description based on current or past experience, but [also] as a network of social practices and needs” (Allen, 1999, p. 228). Closely following the field’s evolution can provide insight to technical communicators that can help them understand the current climate of the field, as well as predict future changes that may follow.

2.2 Historical Background

Most colleges in the United States that existed prior to the Civil War were “predominantly religion-based” (Connors, 1982, p. 174). The enactment of the Morrill Land-Grant Act of 1862, which provided land and funding for land-grant colleges institutions that primarily focused on teaching its students agricultural and mechanic arts helped technical writing expand as an academic field. At the same time, integrating technical writing into technical fields, such as engineering, produced challenges and disagreements that the two fields are still overcoming today. One of the greatest disagreements between the fields was over the humanistic approach of teaching technical communication.

Joseph Raleigh Nelson, professor of Engineering English at the University of Michigan between 1910 and 1943, saw the “unanimous demand for liberal and humanistic scheme of education” as the “complete reaction to the non humanistic training given to engineers during the period from 1870 to 1910” (Connors, 1982, p. 177). On the other hand, engineering faculty did not value this approach. As a result, there was a “problem of understanding between English and engineering faculties,” and “the process of technical communication classes was plagued from the beginning by certain problems, the most serious of which were the lack of interest in learning to read or write literature on the part of the students, the quality and experience of many English teachers assigned to technical writing courses, and the lack of cooperation between English and engineering faculty members” (Connors, 1982, p. 178). The discrepancy between what members of the engineering department wanted and the English faculty’s refusal to meet these needs set the foundation for the turbulent relationship between the two academic fields, which later extended into industry.

The outbreak of World War II precipitated a strong need for technical communication, making it necessary for colleges teach technical writing. Soldiers out on the battlefield needed to learn how to use complex machinery, especially “because WWII was the first truly technological war,” and they learned by reading manuals (Connors, 1982, p. 184). After WWII, the GI Bill, which was passed in 1944, created an influx of students who needed to take technical writing courses. In the 1950s, academic fields that required technical writing expanded from engineering into “agriculture, architecture, chemistry, pharmacy, and even home economics” (Connors, 1982, p. 184). The expanded breadth of fields that required technical writing contributed to the field’s expansion.

By this point, there was a large demand for technical writers. “After the war, technical writing finally became a genuine profession as wartime technologies were translated into peacetime uses” (Connors, 1982, p. 185). Furthermore, large companies such as, “General Electric, Westinghouse, General Motors opened separate departments of technical writing after finding that it was no longer cost effective to pay engineers to both design and write” (Connors, 1982, p. 187). “In spite of these changes, few colleges offered technical writing majors or structural changes in technical writing courses. Schools seemed to ignore the changing conditions of the field” (Connors, 1982, p. 185). This apathy became problematic because the professional field developed without academic input.

Later on, English departments that had technical communication programs noticed that these courses were “the only thing supporting the sparsely populated Milton courses” (Connors, 1982, p. 191). Finally, in the mid 70s, the MLA recognized technical writing as a “legitimate function of English scholars” (Connors, 1982, p. 191). At this point, there were English faculty who were proud to self-identify themselves as technical communication professors rather than professors of literature.

The expansion of technical communication as an academic field and the growing number of faculty has helped the field attract attention and gain recognition from academics and industry members alike. Even with these positive advancements, the field still struggles with the same challenges that existed at the beginning, the problem of mediating the discrepancy of priorities between the English department faculty who adhere to traditional English-studies roots and the STEM faculty and employers who need technical writers. Another important reality is that, “technical communication has grown opportunistically as a career field in service to other career fields, mainly engineering and information technology” (Rude, 2009, p. 205). These details bring forth the question, how has the evolutionary disconnect between the academic and industry sides of technical communication affected the current status of the field?

2.3 Current Positional Climate

Many aspects of technical communication overlap with other fields of study and professions. In many cases, technical communication has borrowed research methods, theory, and content areas from other fields, which means that technical communicators can have a difficult time setting themselves apart from other professionals from many other fields (Rude, 2009).

2.3.1 Technical Communication’s Recent History

Evidence shows that technical communication has a diverse background. From an academic standpoint, technical communication is often considered a practice rather than an area of research because of the interdisciplinary nature of the field (Rude, 2009). From the industry

standpoint, technical communication is not considered a profession because, according to Evetts (2003) and Trice and Beyer (1993), “there are professions that people have exclusive legal rights to perform, and then, there are jobs where people don’t have exclusive legal rights” (Carliner, 2012, p. 51).

Saul Carliner distinguishes the jobs that require legal rights from those that do not by categorizing the ones that require “legal rights” as “occupations,” and many of these occupations hold “white collar” status; on the other hand, he refers to jobs that “don’t have legal, exclusive rights” to perform as “professions.” Because technical communicators’ skills and tasks overlap with peoples’ skills from other fields, it is critical for technical communicators to distinguish themselves from others and articulate their added value. Being recognized as an occupation would give technical communication an ethos that the field currently lacks.

According to Rude, before the 1980’s, technical writing primarily focused on accuracy and clarity. Back then, text’s general purpose was to relay information to its audience. “The STC used the metaphor of conduits to describe the writers’ job. The metaphor implied that writers could get out of the way- to let accurate information speak for itself and not interfere with the transmission of meaning to a user” (Rude, 2009, p. 182). Back then, writers mainly focused on conveying accurate information and were not consciously aware of the importance of other factors that contribute to a text’s readability, such as the elements of the rhetorical situation.

Summarizing from Rude, although technical writing has always served the purpose of moving its readers into action, it was not until more recently that this purpose was prevalently recognized. During the 1980’s, technical writers started to understand that text serves a greater purpose than solely relaying information; consequently, they started considering factors other than accuracy and clarity during their writing process. Now, the knowledge transmitted through text was tailored in order to elicit action from different audiences with varying purposes and situations rather than passively passing on information to its readers. In other words, text became a “mediator” of information rather than solely being a “transmitter of information” (Rude, 2009, p. 182).

Presently, technical writers must consider even more factors that contribute to a text’s effectiveness, such the medium of publication. In both academia and industry, “design knowledge also develops as writers innovate in response to new situations, including new media, new tools, and different audiences” (Rude, 2009, p. 199). Overall, “technical communication has produced a body of research that influences not just the design of texts but also attitudes towards and engagement with users” (Rude, 2009, p. 207).

Undergraduate and graduate programs parallel the non-academic writing found in the workplace “and now include courses on visual information and design, user-oriented standards for defining document effectiveness, intercultural communication, web-site development, content management, and project management” (Rude, 2009, p. 194). Academia’s effort to follow the industry shifts of technical writing helps highlight the changes in the overall field. Simultaneously, “Our academic programs, with few exceptions, have not kept pace with changes

in the content industry and are still training students for the era of document-based information development” (Andersen, 2014, p. 13). That being said, a snapshot of the academic curriculum may not provide the most accurate picture of the field because, depending on the flexibility of changing the curriculum at their institution and their accessibility to resources, academic programs may not be able to keep up with the changes in the field.

2.3.2 The Role-Shift of Technical Communicators

As mentioned before, although writing remains a major component of a technical writer’s job, the job no longer focuses exclusively on this skill. Rude emphasizes that “so much of our expertise concerns text.” She then poses a research question that challenges technical communicators consider, “how do texts (print, digital, multimedia; visual, verbal) and related communication practices mediate knowledge, values, and action in a variety of social and professional contexts?” (Rude, 2009, p. 181). Andersen contributes to this notion by confirming that, “the era of document-based information development, which has shaped all aspects of TC research, training, and practice since the field’s inception, is coming to an end” (Andersen, 2014, p. 10). It is important to consider these factors regarding the changes in communication practices and social and professional contexts from the aforementioned question because:

the central question emphasizes text, [but] researchers seldom[ly] examine only the text. Texts are interesting as they are used within activity systems. The phrase *related communication practices* recognizes that the text itself exists in an activity system— situation analysis, development, production, and circulation all of which involve communication. Practices include interactions (meetings, collaboration, negotiation), research (audience analysis, interviews, analysis of technical support data, site visits), translation and localization, review (editing, expert review, usability testing), visual design and production, and circulation (content management, search systems, publication and other distribution). The use and development of tools to enable these processes are also related communication practices. (Rude, 2009, p. 181)

Seeing how a combination of these factors affect the communication process makes it easy to understand why technical writing is now widely referred to as technical communication. Although writing remains a key component of this field, the range of influence and the necessary processes for relaying information effectively requires a lot more than just writing.

In a way, technical communicators hold a lot of power within society because, now, their work allows them to make choices that influence “what readers know and do and even what issues get noticed. These choices include deciding whether to write and publish at all, where to publish and in what medium, whether to invest in usability testing and review, and how to make the text accessible and to whom. Choices at the textual content, emphasis,

organization, style, visual design also influence what readers and users know and do” (Rude, 2009, p. 181). A technical communicator’s priority can become their audiences’ priorities, the technical communicator’s methods for accomplishing a task or solving a problem can become their audiences’ methods, and so on because the technical communicator provides information to their audience.

Other aspects of communication have shifted with this changing field. Terms have expanded to encompass more factors than before. For example, the definition of literacy has broadened. According to Rude, literacy is no longer defined as “isolated skills but as an ability to negotiate a situation that requires communication... These new literacies include the ability to work as a part of a team, solve problems, use technology, understand complex communication, and listen, speak, and visually represent information” (Rude, 2009, p. 196). It is easy to see that technical communication field is constantly growing, and new expectations and requirements arise with this evolution. New technologies as well as societal movements, such as globalization, catalyze these changes (Carliner, 2012).

Andersen also points out technical communication is currently in the content management era, which is also referred to as topic-based information development. “This era is all about integration— that is, integration of organizational and user-generated content, disciplines and departments, expertise and roles, and business processes and tools” (Andersen, 2014, p. 10). Technical communicators are no longer producing long documents and books; their products are now in the form of stand-alone topics that adhere to strict genre conventions and are produced into information products that can be transformed into different outputs (Andersen, 2014). According to Rockley and Cooper, content is no longer “limited to any ‘one purpose, technology, or output’” (Andersen, 2014, p. 11).

Despite the new and shifting factors within technical communication, it is still the technical communicator’s goal to improve and maintain the quality of information that they relay to their audience.

2.4 TC Defined and the Importance of Collaboration and a Body of Knowledge (BOK)

2.4.1 The Importance of Collaboration

Many academic and industry professionals alike acknowledge the potential benefits of collaboration. Andersen suggests that “the time might be right to form a new habit of collaboration between industry and academia” because both parties now acknowledge the benefits of partnership (Andersen, 2014, p. 1). “Strong interest and momentum on both sides makes this an opportune moment for those of us in industry and academia to work together to develop, implement, and evaluate concrete solutions for improving information development practice

and education” (Andersen, 2014, p. 3). There is a major attitude-shift towards collaboration as “the specific professional identity of being an academic or a practitioner is greatly reduced in favor of the negotiated identity of being a community member working towards mutual goals” (Kline and Barker, 2012, p. 33). Better yet, the “academic community... has increasingly emphasized the need to build stronger academia-industry partnerships to improve both education and research in Technical Communication” (Rude, 2009). Practitioners also acknowledge the needs and benefits of implementing academic research strategies to industry-related topics (Coppola, 2010). Members of both parties recognize the benefits of collaboration and are eager to work together towards fortifying the field.

There are many incentives for finding collaboration methods between academia and industry, and doing so will not only benefit both parties but also the current students. For one, “effective collaboration among the academic and practitioner communities will improve professionalism through better research, better education, and a more comprehensive body of knowledge (BOK)” (Kline and Barker, 2012, p. 33). Another benefit is that collaboration can help establish standards, which will increase the number of people who recognize the field. Furthermore, this partnership would help establish standards, which “are important to many industries and many products” because it helps maintain “safety, consistency, and so forth” (Hart and Baehr, 2013, p. 265). Standards would require an overseeing professional organization, whose role would be “to govern the discipline and serve as its public voice” (Carliner, 2012, p. 62).

Unfortunately, optimism isn’t enough to bridge the current gap between the two groups. Before the field can enjoy these benefits of collaboration, Benavente et al. propose that “the first steps in developing a robust research relationship between academics and industry professionals is to define the research needs” (Benavente et al., 2013, p. 5). Based on Wenger’s Community of Practice Theory, Kline and Barker conclude that, although the technical communication community is on its way towards bridging the industry-academic gap, they cannot accomplish this goal under the current conditions.

Nevertheless, unification will assist with the current endeavors for collaboration in technical communication. According to Saul Carliner, the partnership will help technical communicators “establish domain over a particular type of work, should a profession choose to become an occupation (jobs with exclusive legal rights),” but in order to establish this domain over the field, there must be an infrastructure that contains “professional organizations, bodies of knowledge, education, professional activities, and certification” (Carliner, 2012, p. 51). The field of technical communication is missing components from each of these four elements.

Carliner reiterates that building a professional organization is an important factor for maintaining control over a line of work. According to Trice and Beyer, a professional organization, “provides people working in the same discipline a forum for exploring issues of common interest” (Carliner, 2012, p. 51). It also “acts as a central address for the profession, brings together people, and coordinates activities” (Carliner, 2012, p. 52). All in all, a professional society provides a professional group with “opportunit[ies] to share professional knowledge

and business contacts” (Carliner, 2012, p. 52). The collaboration between academics and practitioners on the Technical Communication Body of Knowledge (TCBOK) project is contributing to the growth of the STC, the professional organization for technical communication, as the TCBOK creators are soliciting information input and other contributions from the technical communication community for this project. As a result, technical communication as a whole is slowly progressing towards becoming a more unified field.

Professional organizations could potentially play another important role in the unification of technical communication. Kline and Barker assert that “membership organizations, not corporations, [are] the entities that can bring the two communities together. We have no bias against the workplace” (Kline and Barker, 2012, p. 42) . They present a logical argument as both academics and practitioners can join professional organizations. Simultaneously, they acknowledge Bernhardt’s assertion that the members in academe may complicate their theory regarding the role of the professional organization, as they mention that “Bernhardt is astute to note that there is an academic perspective that sometimes derives from English department culture and humanities-based conceptions of education. This academic culture can be at odds with technical communication programs within the departments, and against the workplace culture itself” (Kline and Barker, 2012, p. 42). In this case, the academic side of the academia versus industry battle would be English departments in general, and not specifically the technical communication faculty.

Branding is another necessary component for transforming technical communication into an occupation. “Branding is essential to marketing a service; if potential customers do not know what a product or service does or how it differs from similar services, they have no compelling reason to choose this service over others” (Carliner, 2012, p. 59). The TCBOK can house the identifying details that brand technical communication as a unique field. Collaboration between academics and practitioners will help to build a more comprehensive brand than what each sector would create on their own. This is because the two parties have different focuses and specialties. Combining the information from both groups for the TCBOK will result in a holistic survey of the field, although the discrepancies in perceived priorities between the two groups may pose a potential problem.

Internships’ Role in Bridging the Academic-Industry Gap

Technical communicators, both in academia and industry, have claimed that the gap within the field is exaggerated or no longer relevant. Other have said that this problem has only been addressed in special cases but there still isn’t one “comprehensive model” that can be used for bridging the gap (Kline and Barker, 2012, p. 45). Kline and Barker assert that “this problem [the gap between academics and practitioners] persists despite generalizations about how to overcome it” (Kline and Barker, 2012, p. 34).

Research indicates that one potential solution to the academia-industry problem may involve internships. Internships are critical because they enable technical communication students

to become liaisons between the two groups. Many students who go through the academic programs in higher-education go on to become technical communication practitioners, which means that this body of practitioners get exposed to both the academic and industry sides of the field. “Academics (university professors)” first introduce these students to the field and remain as “intermediaries who provide pre-professional training to students.” (Jennings, 2012, p. 325). Because academics play a significant role in introducing students into the field, Jennings thinks that it would be appropriate for academics to “introduce practitioners and students to each other before the students apply for paid positions in the field” (Jennings, 2012, p. 325). One method of implementing this would be by establishing programs that help students find internships.

Bloch asserts in her report on technical communication internships that “practitioners should maintain contact with academic programs in technical communication, which continually seek internship opportunities for students” (Bloch, 2011, p. 308). Sustaining this relationship through internships will provide students with invaluable opportunities to gain first-hand industry experience while applying their academic knowledge to “real world” situations. Students will also have the opportunity to “reflect on the connections between the work done on the job and the knowledge learned in school” (Bloch, 2011, p. 308). Simultaneously, employers can discern what knowledge and skills that the students, and their future employees, can offer. Lastly, the “faculty can stay connected with workplace needs” (Bloch, 2011, p. 308). All in all, internships will help academics and practitioners stay connected to each other and allow them to look to the other party for solutions for any problems and challenges that they be face.

2.4.2 Body of Knowledge

According to Carliner, a body of knowledge is “content with which all members of a discipline should be familiar. A BOK serves as a basis for determining competent performance in the field, which is used to assess entrants to the field and evaluate the performance of professionals afterwards” (Carliner, 2012, p. 52). Bodies of Knowledge are not exclusive to technical communication; there are several examples of other professional fields whose bodies of knowledge have helped them maintain healthy partnerships between their academics and practitioners, establish the parameters of their field, and set standards, guidelines, and professionalization expectations for all who are involved. A few examples include the American Society of Civil Engineering Body of Knowledge, the Project Management Body of Knowledge, and the Software Engineering Body of Knowledge (Hart and Baehr, 2013).

A great example of a successful BOK that is worth examining is the ASCEBOK. According to the 2012 version of this BOK, a body of knowledge “represents a strategic direction and foundation for a learned profession, defining the knowledge, skills, and attitudes/attributes necessary to enter practice at the professional level” (Hart and Baehr, 2013, p. 261). Hart and Baehr go on to explain that “the primary purpose of the ASCEBOK is to ensure that

engineers entering practice are adequately prepared and have proven their preparedness by becoming licensed” (Hart and Baehr, 2013, p. 261). This concept is important to note because technical communicators should also prove their preparedness before entering practice, more so in some industries than others. Even though, at a glance, it may seem more relevant and important for civil engineers to get licensed, since it is obvious that structural failures endanger lives, it is important to acknowledge that incorrect, confusing, and poorly written technical documentations can also lead to disasters. It may be easy to dismiss the idea of imposing strict conditions for technical communicators, but this view is worth reconsidering.

For example, technical writing could have contributed to the explosion of Challenger space shuttle (Winsor, 1988). Although this claim is debatable, it is difficult to deny that technical communicators are branching out into more and more industries, which makes it inevitable that some will work on projects with greater potential risks. In these situations, miscommunication can have in fatal outcomes. Although it may not be necessary for all technical communicators to prove their preparedness in the way civil engineers have to, it may be wise to test for competency as companies see fit. All in all, it is the duty of the professional organization that creates the BOK to maintain quality control of their field, which is evidently important, even in technical communication.

Building the Technical Communication Body of Knowledge

According to the Society of Technical Communication’s Technical Communication Body of Knowledge website, the STC started working on creating the TCBOK in 2007. The organization is working on Phase Two of the project, which includes incorporating feedback and suggestions from Phase One into the TCBOK. Hart and Baehr report in *Sustainable Practices for Developing a Body of Knowledge*, that the developers of bodies of knowledge “see themselves as constructors of a knowledge base that attempts to capture the essential concepts, skills, theories, and practices that define the particular field” (Hart and Baehr, 2013, p. 261). The need for a holistic view of the field makes it essential for the TCBOK creators to take the suggestions that they receive into consideration.

In *The Tech Comm BOK Initiative: An Academic-Practitioner Partnership*, Nancy Coppola, a contributor to the TCBOK, documents the group’s process of producing the TCBOK. Coppola shares that the BOK’s intended audience, as determined by the contributors of the BOK, include “practitioners, managers, students, and instructors” (Coppola, 2010, p. 18). She also notes that, “when the STC job competencies committee fulfills its mission, we [technical communicators] will be able to proclaim clearly who we are, what we do, and how we make a difference” (Coppola, 2010, p. 12). Establishing the grounds and parameters of technical communication will help the field progress towards bridging the gap between industry and academia.

Coppola also quotes Davis and Hart who “drafted the initial framing document that would describe why defining a body of knowledge is necessary,” and says that “their purpose and

rationale statement is worth quoting (2008)”:

First of all, a profession cannot be recognized as a profession until it is defined as such. Engineers, for instance, have a body of knowledge they must master before they can practice as engineers... Although technical communicators may not yet want such a highly codified and subdivided set of skills and practices, we do need an authoritative place to find answers to that eternal question: “What do technical communicators do, anyway?” New practitioners need to see their professional development pathways spelled out, along with concomitant educational/training opportunities. Veteran practitioners need a means for assessing their progress and determining what additional training they may need. Or they may simply need quick access to guidelines for new techniques and technologies... And executives, who may never have heard of technical communication, need a place to find out what it is that technical communicators can do for their company. (Coppola, 2010, p. 15)

Based on Davis and Hart’s explanation of technical communication’s need for a body of knowledge, all sections of the BOK’s audience urgently needs it. Furthermore, technical communications researchers, such as Carliner, Kline, and Barker, show the different aspects of technical communication, such as achieving professional status and building a cohesive community, that confirms that technical communication needs to establish a body of knowledge before it can establish itself and be recognized as a field outside of the tech comm community. An important step to take early on would be to establish in the TCBOOK, the important skills and knowledge for technical communicators.

Important information to Include in the BOK

The TCBOOK should provide a guideline of steps and provide a path that practitioners or future practitioners must take in order to get where they want to go. The BOK needs to share different information on professionalization and how to stay up-to-date on the relevant technologies and information to the field. Other components that the TCBOOK needs to include are the core competencies for the field.

In the article “Technical Communication in Practice: Who Needs Professionals?,” De Jong states that the core competencies for technical communication are difficult to identify because of the wide range of skills technical communicators must master, but critical components include, “an affinity with and understanding of technology and technological development processes. Empathy with the user and an understanding of professional and organizational contexts are also essential. Insight in the body of knowledge of our field (as well as adjacent fields) is very relevant as well, and so are analytical and (applied) research skills. And last, but not least, writing skills and insight in the use of visual presentation formats are competencies

that are most generally attributed to the technical communication professional” (de Jong, 2011, p. 97). These core competencies are important to highlight in the BOK.

It is as important to investigate components that are missing from the BOK as it is to research the topics that are commonly accepted. According to De Jong, “The under use and inefficient use of software and devices does not seem to be a major topic in the academic literature, even though it could help us to emphasize the role technical communicators may have, and it could be a fruitful starting point of analyzing how users develop their skills over time” (de Jong, 2011, p. 1). This information is a good start to finding more information on the topics that the TCBOK is currently missing. Examining the portions that are obviously missing will also help technical communication build a more comprehensive BOK.

The TCBOK also needs to provide information regarding the education and professionalization process that technical communicators should undergo. According to Carliner, “both formal academic education and continuing professional education prepares people to practice in the field and is a primary means of ensuring ongoing professional development. Formal academic training refers to degree programs... offered by colleges and universities,” as well as “apprenticeship programs” (Carliner, 2012, p. 52). Such information regarding options for higher education and methods of obtaining formal training should be included in the TCBOK so that future practitioners can gauge the direction of their career paths while they are earning their academic degrees. This information will also help current practitioners decide whether they want to continue their education and will also direct them towards the best route for continuing education.

The TCBOK should not only provide information on how to get educated, but should also contribute to the decision of what materials these program should cover and provide students with access to important educational resources. One method of accomplishing these goals would be by “support[ing] academic education by offering scholarships and other types of material support to participate in, and influence the content of, formal education” (Carliner, 2012, p. 52). Another would be by providing a “verification process” so that “educational programs can adhere to established standards of performance. These standards affect not only the curriculum itself, but also the qualifications of the instructors, the facilities for teaching. library and laboratory facilities, and other support services (STC Certification Commission, 2012)” (Carliner, 2012, p. 53).

It is also important for the BOK to include information on continuing education and professionalization. It is up to the creators of the BOK to refer its community members to available “workshops, seminars, and self-study programs that address topics of interest to the discipline. Continuing education programs are offered by a variety of organizations, including colleges and universities, adult education arms of public schools, private providers (often for-profit), and professional associations” (Carliner, 2012, p. 52).

Professional events are also important and should be managed by the institution creating the BOK. These events “serve a variety of purposes. Some events have an educational or informational agenda and serve a purpose similar to formal education; others have social

or business agendas, or multiple agendas, and play as much a role in establishing a central position for the professional organization as they do in achieving other purposes... These meetings typically feature a guest speaker and, thus, have an educational focus. But most include networking events” (Carliner, 2012, p. 52). Now that the purpose and goals of the TCBOK are established, it is important to find methods of implementing these goals in the technical communication community.

2.5 Professionalism and Certification

The content of the TCBOK overlaps to a degree with the certification process. Some topics that the two initiatives have in common include focus on technical communication core competencies, the importance of professionalization for the field, and the movement towards identifying the field’s perimeters and branding the field.

2.5.1 Introduction

Research indicates that the field is moving towards a more unified identity, but what currently exists may not provide a sufficient foundation for establishing a concrete identity for the entire field. One sign of progress, though, is that the United States Bureau of Labor Statistics recognizes “technical writer” as a profession and has enough information to define the job and provide the public with information such as the average salary of a technical writer, the job outlook for the field, common work environments, and steps for becoming a technical writer.

In addition, the USBLS website notes that technical writers are also known as technical communicators, which provides evidence for the field’s evolution. Nonetheless, the fact that the government defined the field does not mean that general public, or people without connections to the field, recognizes this profession or understands what technical communicators do; it is possible that many people have never even heard of the job title, technical communicator. Even worse, as previously mentioned, Hart and Baehr provide anecdotal evidence that confirms that technical communication practitioners and teachers still have trouble explaining their field; even if people were to ask technical communicators about their job, there is no guarantee that every technical communicator could provide a satisfactory answer.

Another reason for needing a unified identity is that technical communicators must be able to define their roles before they can help others understand their professional value. It is up to the technical communicator to “use their rhetorical skills to demonstrate— in ways that are meaningful to their colleagues— the value they provide” (Bloch, 2011, p. 311). Technical communicators may be able to contribute additional value to some, but not all, industries. For example, technical communicators may “add value to the product such as equipment and software,” but coworkers and supervisors may not be aware of this contribution until the

technical communicator informs them otherwise. This makes it the technical communicator's responsibility to provide information that helps other people recognize their value (Rude, 2009, p. 205). This way, technical communication solves the problem of "lack[ing] external recognition" (Rude, 2009, p. 205).

The need for an established and unified identity makes sense, especially in this situation, where professionals can take many different paths to enter the technical communication field. "Even now, it is possible to become a technical communicator with a degree in another field, and existing technical communication degree programs have differing requirements" (Bloch, 2011, p. 301). If there were a uniform track, or even an accreditation process, employees and coworkers could infer a technical communicator's academic background and create jobs that are tailored towards utilizing these skills. As of now, it is difficult to know or even guess this information about any given technical communicator because there are no education standards for entering the industry or academic field. Furthermore, it is difficult for technical writers to find jobs because many technical writing jobs are not labeled as such.

According to Zimmerman and Muraski's 1995 research, quoted by Bloch, "less than 20% of STC's members have reported having degrees in technical communication. Most have degrees in English, journalism, social sciences, or scientific, engineering, or technical fields" (Bloch, 2011, p. 301). According to Bloch, Zimmerman and Muraski go on to recommend that "more technical communicators pursue educational opportunities specifically related to technical communication," (Bloch, 2011, p. 310). The absence of standards means that the current technical communicators, both academics and practitioners, did not need to meet any requirements or undergo any training before assuming the title of technical communicator or entering practice. The lack of academic uniformity makes it important for there to be established professional standards in order to provide quality control throughout the field.

2.5.2 Certification

The TCBOK initiative seems to be less controversial than the idea of enacting mandatory certification for technical communicators; interestingly enough, one disputed topic of the TCBOK is related to the methods and procedures for professionalization, which include the certification process (Coppola, 2010). Other overlapping topics between the two initiatives include technical communication core competencies, the importance of other forms of professionalization for the field, the movement towards identifying the field's perimeters, and branding the field.

I did not initially distinguish the difference between the TCBOK and the field's discussion on a certification process. It was not until later in my research process that I learned that "the current TCBOK effort is unique because it separates the process of building a disciplinary knowledge base from the process of professional certification for technical communication" (Coppola, 2010, p. 12). The certification process and the BOK are separate endeavors, which explains why the two can coexist. The progress that the STC has already made may not

have been possible had the TCBOK and the certification process been linked.

Another factor that differentiates the current effort to establish field knowledge from previous attempts is that “this time, the STC, a practitioner-oriented organization, made a serious effort to incorporate academics into the process, recognizing the value of theory and research to a robust knowledge base” (Coppola, 2010, p. 12). Although excluding the academics may have helped avoid more complications during the process, especially when it came to topics that reinforce the academic versus industry chasm, such as information access and availability, the STC’s effort to adhere to its goal for creating a stronger knowledge base and its willingness to extend a partnership to academics offer promising future prospects (Coppola, 2010).

Current Inconsistencies in Academic and Certification Standards

There are three forms/levels of certification for technical communicators to pursue. The first are academic degrees from colleges and universities. This often applies to undergraduate and master’s students (Rude, 2009). The second are certificates, which are also offered by higher-education institutions as well as commercial entities, such as software developers or professional associations. These certificates require less time to complete than an academic degree but still provide evidence of a person’s competence regarding specific skills and programs. The last form is mandatory certification, such as the EIT (Engineer in Training) or PE (Professional Engineer) for engineers, which are administered by the National Council of Examiners for Engineering and Surveying (NCEES). (It may be useful to note that not all engineering fields require certification; this same concept can apply to sections of technical communication that deal with higher-risk situations. This distinction may reduce the amount of resistance for required certification) This level of certification is not currently required for technical communicators; there is a lot of controversy around imposing mandatory certifications, and I will address that topic at a later time. For now, I will focus on the two existing forms of certification.

Academic and industry certification both have their strengths and weaknesses. According to Meloncon, academic-institution-issued certificates provide more breadth within a subject while professional development and continuing education certificates provide more depth. To date, both technical communication degrees and certificates have not been widely accepted or acknowledged because of the lack of consistency and uniformity among institutions and programs (Meloncon, 2012). Evidence shows that there is a growth in technical communication programs, but establishing new programs while there are no set standards could perpetuate and magnify the problems created by the current inconsistencies.

Technical communication, as an academic field, has grown exponentially since 1994. In 1997, Norman and Wells published their findings from their study that they conducted in 1994, and reported that there were “23 undergraduate certificates and 15 graduate certificates. Currently, there are 67 undergraduate certificates and 43 graduate certificates. Thus the growth

rate for undergraduate certificates is 191%, and the growth rate for graduate certificates is 186%. This growth rate makes it more imperative for the field to have a better understanding of the curricula of academic certificates.” (Meloncon, 2012, pp. 209-210). Standardization of education would help this growing number of people who are entering the field benefit from investing in a technical communication degree or certificate.

The variations among technical communication degrees and certificates not only apply to the set of required courses but also to the admissions requirements, degree names and titles, “credit hours, internships, and cumulative experience requirements” (Meloncon, 2012, p. 209). There is also no accreditation process, which makes it difficult for students to prove their competency; proficiency in technical communication also remains undefined. Failing to address these differences can be detrimental to a fast-growing academic field because the problems will become obstacles for future practitioners during their job searching process.

Despite the numerous differences, there are similarities among the basic required courses for technical communication programs in higher education (Meloncon, 2012). “Within writing studies as broadly defined, technical communication in the 1970’s reestablished an emphasis on audience to guide responses to rhetorical situations” (Rude, 2009, p. 194). This emphasis on audience analysis and rhetorical situations has manifested through basic courses that are required for technical communication degrees. The topics for these courses now include “visual information and design, user-oriented standards for defining document effectiveness, intercultural communication, web-site development, content management, and project management” (Rude, 2009, p. 194). Other basic course materials include editing and genre conventions (Meloncon, 2012).

The purpose of these courses is to prepare students to write in nonacademic settings, and these course materials and methods reflect these objectives as the course assignments “often emulate the writing done in nonacademic settings” (Rude, 2009, p. 194). The goal is for “graduates of degree programs in technical communication [to] understand, at least on a basic level, that writing mediates knowledge, values, and action” (Rude, 2009, p. 194). Although there is continuity in course titles and descriptions for these mandatory classes, there is no guarantee that the students are learning the most up-to-date technological skills, computer tools, and genre conventions that are relevant to today’s professional climate. For example, Bloch reports that her “study shows a continuing lack of awareness of the technical communication skill set” among student interns (Bloch, 2011, p. 307).

Today, the technical communication curriculum may not be sufficient in preparing students for the workplace because technical communicators are expected to have subject-matter expertise before starting a job (Bloch, 2011). This competitive professional climate makes it almost necessary for students to pursue a second major or a minor, just to find a job. Bloch’s explanation for this circumstance is that, “the need for technical communicators to possess specialized subject-matter knowledge is becoming even more essential in this age of distributed work” (Bloch, 2011, p. 307). Not only is it difficult for technical communicators to convey complex ideas and concepts in writing without understanding the content, but it is

also difficult for them to add additional value to their work without a general understanding of what they are writing about.

The importance of subject matter knowledge extends beyond writing requirements. Collaboration skills are critical for technical communicators in contemporary professional culture because their jobs often require them to produce content by working with people outside of their field. Sharing subject matter expertise with their partners helps facilitate the collaboration process because the two parties share common knowledge. In order to further increase efficiency, Andersen emphasizes that the technical communication field needs “to develop a framework for its work that centers on collaborating with other fields and achieving cross-disciplinary goals” (Andersen, 2014, p. 11). Technical communication is no longer a solitary job; the field’s interdisciplinary nature makes communication and collaboration vital for technical communicators, especially when they are working with people with different academic, professional, and even cultural backgrounds from their own. Bloch asserts that technical communication programs could address this issue by requiring their students to pursue second majors or minors in specialized fields. Earning a minor would not only help technical communication students learn subject matter outside of writing, but it will also expose them to working with people with different academic backgrounds.

Obtaining a professional or academic certificate is less time-consuming than earning a full academic degree. Furthermore, “certificates are an important touchstone in the field because more so than other academic programs they sit at the intersection between academia and industry providing an interesting mix of training and education, a bridge between theory and practice” (Meloncon, 2012, p. 220). Certificates can play an important role in the discussion regarding the professionalization of technical communication because they can be completed in shorter amounts of time, which allows certificate-developers to modify and update their programs. They can also provide useful information regarding the “expectations and sustainability of such programs in times of limited resources” (Meloncon, 2012, p. 221). All in all, these certificates have a lot of potential for success and could provide invaluable information that could help the STC and other professional organizations make informed decisions regarding the next steps for professionalization in the technical communication field.

2.5.3 Professionalism and Professionalization

Professionalism is the new issue/challenge that technical communication has to face. From some angles, the issues between academics and professionals may be deemed as trite and cliché. Carliner cites himself as well as Savage and Kynell-Hunt when he says, “when we explore discord within the profession, we usually focus on the well-documented tensions between the academic and professional segments of the technical communication community” (Carliner, 2012, p. 50). Now, the more pertinent issues that extend beyond the academia versus industry boundaries include challenges such as the “struggles for recognition as an academic discipline and struggle for legitimacy and respect as a distinct profession” (Carliner, 2012,

p. 50). For example, “certification has its proponents and opponents in academe as well as industry”; “the new problems extend beyond the academic/industry divide” (Carliner, 2012, p. 50). The current environment makes it is important for technical communicators to look outside of the field and address the issues surrounding professionalism and the methods for professionalization in order to determine how they can gain recognition and acknowledgment from the outside world; one way of getting noticed would be through professionalization.

As a start, I would like to define professionalism. According to Carliner, professionalism is “the conceptual basis of professionalization actually emerges from theory and research on occupations and is rooted not in how one presents oneself, but in one’s exclusive right to perform a job” (Carliner, 2012, p. 51). Carliner’s views on professionalism adds an interesting layer to the academic versus industry dispute because, although technical communicators in general do not have to meet any requirements before entering the field, faculty members have to undergo a rigorous process to reach their current status, even if their academic background is not in technical communication. Although this is my personal speculation, it makes sense that the gap in academic levels between faculty and practitioners may be a contributing factor to the differing ideas regarding professionalization, and ultimately the gap between the fields. Establishing academic and professionalization requirements may help reduce the gap by offering opportunities for both groups to establish commonalities that the two groups can bond over.

Professionalization is the process towards professionalism, and there are different views of necessary professionalization methods and requirements for technical communication. Coppola reports that in 2004, Marjorie T. Davis wanted “our professional societies to [be required to] set standards and establish minimum qualifications for practice” (Coppola, 2010, p. 12). On the other hand, Coppola quotes Robert R. Johnson who “argue[d] for a professionalization process that orients our field to ethical conduct, stewardship of technology, and social responsibility” (Coppola, 2010, p. 12). According to George Hayhoe, quoted by Coppola, “Professionalization requires that academics and practitioners develop a shared understanding of theory, research, and practice. Common to all strategies, however, is building a unified body of knowledge, or the complete set of concepts, terms, and activities that make up a professional domain” (Coppola, 2010, p. 12). All of these perspectives are on professionalization, but the suggested approaches focus on different priorities. Even though Davis, Johnson, and Hayhoe’s viewpoints are different, they are not distinctly contradictory. You will later see that other views on professionalization are not as compatible as these three.

Professionalization is important for establishing and maintaining a field’s professional status. It will help keep the current practitioners and academics up-to-date on the skill that they need in order to perform their jobs. Professionalization is necessary, and without it, TC will forever lack a concrete identity. Bloch supports this idea by quoting Giammona, Hayhoe, and Jones: “Another aspect of professionalization repeatedly noted in the literature is that technical communicators are sometimes difficult to identify, and when they are identified, there is no clear understanding of what they can do” (Bloch, 2011, p. 311). This lack of identifiability indicates the absence of “market closure,” which Savage (1999) argues is a

characteristic of true professions: An occupation with market closure has an “identifiable status in the marketplace, to the exclusion of other occupation groups who would offer or claim to offer comparable services (p. 357)” (Bloch, 2011, p. 311).

Another factor that hinders technical communication’s perceived level of professionalism is the “lack of subject-matter knowledge” (Bloch, 2011, p. 313). As previously mentioned, it is becoming more critical than ever for technical communicators to understand the content that they are writing about. When they lack the knowledge that is required to effectively relay the information that they are hired to communicate, they are essentially incapable of doing their job.

Even though professionalization is important, there is a lack of agreement regarding what professionalization should entail and the level of professionalization the field should require. The battle among the proponents of the different levels of professionalism, which I will discuss next, may be a major contributing factor as to why the field lacks standardization.

The Three Levels of Professionalization

Carliner explains that technical communicators are currently facing “challenges in branding the profession, promoting certification, and building professional organizations because of differing views on professionalization” (Carliner, 2012, p. 49). His definition of the three positions on the “professionalism spectrum” are formal professionalism, quasiprofessionalization, and contraprofessionalization are listed below (Carliner, 2012, p. 54):

Formal Professionalism

- **Perspective:** values expertise and experts are entitled to determine who enters the field, how to prepare for the field, and how to evaluate expertise
- **Roots:** roots lie in the “traditional guild systems and, more recently, in licensed occupations” (Carliner, 2012, p. 54)
- **Exclusivity:** promotes exclusivity and restrictions
- **BOK:** the BOK is central to defining the profession but is not considered a static document
- **Education:** “under ideal circumstances, formal professionals require accreditation (the process of verifying that the program covers particular content and skills to meet standards of academic performance” (Carliner, 2012, p. 57)
- **Certification:** certification is for gatekeeping as well as making a strong political statement about the “nature and value of the profession” (Carliner, 2012, p. 57)

Quasi-Professionalism

- **Perspective:** “appreciates the support that the infrastructure of professionalization provides, but do[es] not necessarily see these activities as leading to occupational status, nor do they see the professional association as the only sources of knowledge, education, professional activities, or validation of competence” (Carliner, 2012, p. 55)
- **Roots:** rooted in “professional identity and finding like-minded individuals with whom to interact rather than an exclusive right to perform work” (Carliner, 2012, p. 54)
- **Exclusivity:** Not applicable
- **BOK:** “ambiguous about a formally documented body of because, in addition to specifying what the discipline is, it also specifies what the discipline is not” (Carliner, 2012, p. 57)
- **Education:** “values formal degrees and continuing education in the field, but does not see them as exclusive routes to entering the field or building competence” (Carliner, 2012, p. 57)
- **Certification:** no single certification fully represents the breadth of a professional’s knowledge, which is why multiple certifications may be necessary to reflect different aspect of a person’s professional profiles

Contraprofessionalization

- **Perspective:** offers or promotes professional services outside of parts of, or the entire framework of, the profession or occupation
- **Roots:** has its roots in free market theory and opposes everything that restricts people from entering the profession
- **Exclusivity:** does not believe in boundaries or obstacles for entering the profession
- **BOK:** actively resists the establishment of a body of knowledge, often suggesting that doing so restricts the field
- **Education:** sees little value in formal degree programs in the field, because degrees can restrict entry into the field
- **Certification:** resists certification because it limits opportunities for people who might otherwise be capable of performing the work

The level of variation and conflict among the three levels of professionalism makes it easy to conclude that agreeing on one of these levels would be challenging task. This situation may no be conducive for a compromise because there is no entity to enforce compliance. The level of professionalization is an issue that needs to be addressed before the field can require certifications and maybe even before technical communication procures a public identity.

Reasons for Requiring Certification

Certification is a controversial topic in technical communication, and only those who support formal professionalism truly support this cause. Proponents of certification claim that it is a necessary component of professionalism. Opponents claim that certifications can be limiting and that certifications cannot represent the full extent of a person's knowledge or abilities. Although no formal certification process for technical communicators currently exists, important topics have been identified in the case that a certification process gets approved.

Before going into the topics, it is important to understand the purpose of certification and how it is useful. Carliner quotes Hale who said that "Certification assesses the competence of individual practitioners against the norms of the profession" (Carliner, 2012, p. 53). Carliner continues to explain that certification "is intended to control entry into the field and provide the means of assessing competent performance" (Carliner, 2012, p. 53). Although having one standardized text for all technical communicators, regardless of their academic background or industry experience may not be practical, a testing and ranking system that helps determine a potential employee's competence may increase the competition in the field and motivate practitioners to stay updated with the information, skills, and technology that is relevant to the field.

Ken Rainey shared his positive outlook on certification and explained that an "objective, fair, and meaningful" certification system would benefit the profession and individual technical communicators. He went on to explain that "any reputable profession offering services to the consuming public owes itself and its consumers the validation that an objective, fair, and meaningful certification system would bring" (Carliner, 2012, p. 50). According to Rainey, technical communication needs a certification process before it is recognized as a professional field. Supporters of certification also value the standardization and consistency that the process would provide the public.

According to Carliner, The STC Certification Commission "updated and validated the list [of key competencies]" in 2011 "to reflect current working conditions" (Carliner, 2012, p. 61). The competencies that the commission identified as worthy of testing for included:

- Project planning
- Project analysis
- Solution design
- Organizational design
- Written communication
- Visual communication

- Content development
- Content management
- Final production

Surprisingly, the key competencies to test for during the certification process are not new, and are similar to what Carliner defined nearly a decade earlier. This list's lack of change may be an indicator that it needs to be updated, especially because of the significant changes in technology and technical content over the past decade. Another detail to note is that the competencies that are "assessed through certification might not be as unique to technical communication... as, none of these descriptions of competencies address what is believed to be a unique characteristic of technical communication: the ability to easily communicate highly technical content in an appropriate way to the intended audience" (Carliner, 2012, p. 61). Either way, it seems that technical communication has not made much progress in determining a certification process for the field.

The STC acknowledges the difficulty of the certification process and referred to it as an "unsustainable burden on the STC" (STC, 2014, p. 9). They admitted that the administration was "cumbersome and complex; process for evaluation and submission were difficult and overly complicated." The organization declared that they are suspending the certification initiative, not because they don't see the value in the process, but because they to "clear the application pipeline so that the program can be reconfigured." They report that the process is too costly and time-intensive, so they need to find more sustainable methods of continuing the process. They also mention that there was not time for the "STC educational offerings to be aligned with the skills being tested," and that they hope to reconfigure the process in a way that makes certification more attainable for practitioners who do not have many years of experience (STC, 2014, p. 9).

2.6 Contemporary Challenges

2.6.1 Introduction

As previously established, the groups within technical communication have yet to agree on topics regarding the professionalization. It is widely established that both parties support the partnership but have yet to figure out a method for achieving consistent and successful collaboration. Even though both groups are interested in improving the field, they must work harder at establishing methods for building a stable and durable partnership. There is not one group to blame; according to Rude, "to date, neither group has done a good job developing sustained, mutually beneficial relationships" (Andersen, 2013, p. 2). Hopefully, with the professional organization's current progress and the increase in the number of academic

programs in technical communication, the field can continue to move closer towards reaching this goal.

2.6.2 Information-Research Disconnect

Both academics and practitioners have expressed their interest in research collaboration, and even though there are individual cases of successful partnerships, there is not an established protocol or an existing algorithm that directs this form of collaboration. The problem with the current research that focuses on bridging the gap in technical communication is that it “often point[s] to cases of successful interactions among academics and professionals” but the studies “rarely suggest concrete strategies to build new professional communities” (Kline and Barker, 2012, p. 34).

According to Kline and Barker, establishing a research community of practice would be beneficial because doing so would allow academics to “craft research agendas that are still independent but bounded by workplace and industry needs” (Kline and Barker, 2012, p. 44). Having a community of practice would also help ensure that these industry-bound research questions focus on alleviating general problems that are pertinent throughout the field rather than focusing on solving a specific company’s problems or finding ways to give that company a competitive advantage over others. Lastly, the research community of practice would also help reduce the stigma of conducting industry-driven academic research because currently, “academics often believe that choosing an applied research topic shackles their independence and reduces them to the level of corporate shill” (Kline and Barker, 2012, p. 40).

Coppola and Eliot mention that another important component to consider while establishing the research community of practice is that, even in academia, knowledge is “transdisciplinary and socially produced” (Hart and Baehr, 2013). It is important for both academics and practitioners to establish compatible methods of collaboration for producing knowledge so that they can maintain a positive relationship. The metaphor that Coppola and Eliot use to describe this ideal relationship is “an interactive trading zone in which the two groups may ‘trade one another’s’ expertise in order to solve a specific problem” (Hart and Baehr, 2013, p. 263).

Although there is no set protocol, there are other suggestions for collaboration methods. Kline and Barker quote from Mirel and Spilka’s book *Reshaping Technical Communication*, which suggests that the relationship between the two groups would “improve significantly” through what they call “active practice, an approach that involves educators and practitioners working together through project-based activities to achieve more fruitful and fulfilling working partnerships” (Kline and Barker, 2012, p. 34). These project-based activities could be a useful alternative to traditional research, and the information gained from these partnerships can perhaps contribute important information to the field of technical communication.

There are a few potential explanations for why this research partnership between academe

and industry has been largely unsuccessful. For one, “Blakeslee and Spilka (2004) decry the paucity of scholars working on contemporary research questions leading to a coherent body of knowledge. They note that ‘too much research in our field is driven by individuals and inclination rather than by some overarching initiative’” (Coppola, 2010, p. 23). Contributing to this problem is that, “the field does not have good ways to involve practitioners in identifying research questions,” which, according to Rude, “is another reason for this strained relationship” within the field (Andersen, 2013, p. 2).

According to Spilka, another reason for information and research disconnect between academics and practitioners is that researchers have not “done a good job feeding the research results back into practice in ways that are accessible and useful” (Andersen, 2013, p. 2). Rude agrees and notes that the research results often do not even reach the practitioners. This information disconnect is a shame because it makes the “research inaccessible to those who are best positioned to apply the research findings,” but Andersen suggests a potential solution: publishing these findings in industry-focused channel rather than in academic journals target an academic audience (Andersen, 2013, p. 2).

2.6.3 Clashing Views on Intellectual Property

Generating information that targets both groups in technical communication can be a challenge, but information-related problems do not stop here. The next stage of complications stem from the conflicting views on the access to and the availability of the information. Kline and Barker report that this dispute even became “controversial and contentious” even for the TCBOK team, which has worked together to “solve several problems and worked together to build a framework for the portal” (Kline and Barker, 2012, p. 40). They reveal that “during the intellectual property discussion there was no shared activity to engage on this topic... There was little middle ground to compromise because charging for any type of access to the portal was ideologically flawed from most academics’ perspective, and providing significant content for free meant very little competitive advantage from the practitioners’ perspective” (Kline and Barker, 2012, p. 40). This ideological difference resurfaced the academia versus industry gap and made it difficult to ignore the academic versus practitioner conflict.

Kline and Barker focus on how the conversation on intellectual property is a major obstacle for the TCBOK team and other technical communicators to overcome. This dispute was almost debilitating for this group as members reverted to identifying themselves as academics or practitioners rather than technical communicators. “Two interviewees, one from the original group of 10 and one from a later group, indicated that they left the project because of the issues of content openness and ownership” (Kline and Barker, 2012, p. 40). Kline and Barker also cite an interviewee who expressed their concern on the topic as they noted that, “compromise was made more difficult because the option on the issue fell primarily along academic/practitioner lines” (Kline and Barker, 2012, p. 40). Although it makes sense that business-oriented people would want to monetize this information, it also makes sense

that reaching out and making this information to as many people as possible would greatly benefit the field's professional identity.

2.6.4 Skill-Set Disconnect between Practitioners and Industry Needs

There are multiple contributing factors for why technical communicators have a difficult time establishing themselves as professionals. According to Benavente, et al.'s *Results of the April 2013 Technical Communication Industry Research Needs Survey*, several topics that academics consider to be important and teach in their technical communication courses do not align with what the practitioners consider to be important, or even relevant (Benavente et al., 2013).

Another challenge that technical communicator practitioners face is that the writing portion of their jobs is being outsourced (Giammona, 2004a), (Evia, 2008). One possible explanation is that, "consumers of all types of services are realizing that they do not need perfect products and services, they just need ones that reliably perform the most basic tasks... Now the technology, to some extent, could be replacing technical communicators" (Carliner, 2012, pp. 55-56). Not only are technical communicators competing with an international job market, but they are now also competing with technology for their jobs.

Another source of professional competition are the document users, as "some opportunities for technical communicators will be completely lost to DIY documentation. For many, 'Good enough is the new great,' as declared by the New York Times in its review of major developments in design (New York Times, 2009)" (Carliner, 2012, p. 63). There are many different entities who are replacing technical writers and doing their jobs, which makes it vital for technical communicators to ask themselves how they can "sustain and add value" (Hart and Baehr, 2013, p. 259). Doing so will hopefully help technical communicators make themselves less expendable by motivating them to learn new and unique skills that are in demand.

Technical communicators can undertake roles in addition to writing, where they help other people write and produce content. According to Andersen, some of these roles include project manager, business analysis, and content engineer. Many of these positions put the technical communicator in a position where they can assist teams with the process of collaborative writing. Unfortunately, it is "too often the case [that] most technical communicators have no been trained to think like managers, business analysis, or content engineers, and they have little to no experience analyzing a large corpus of content and architecting and modeling that content for topic-based ID (information development) across the enterprise. Most technical communicators are thus ill-prepared to help orchestrate CM (content management) initiatives. Our academic programs, with few exceptions, have not kept pace with changes in the content industry and are still training students for the era of document-based ID" (Andersen, 2014, p. 13). In this case, it seems that neither academics nor practitioners are fully prepared to overcome the challenges that are changing the field. It is up to both groups to find new niches and become proficient in them.

Chapter 3

Methodology

3.1 Research Questions

My primary research questions that stemmed from my preliminary research include:

1. What does it mean to be a technical communicator? What are the different available roles for technical communicators?
2. What is the current status of the gap between technical communication practitioners and academics, and what are the methods for bridging this gap?
3. How has technical communication changed in the last fifteen years?

Seeking to answers these three driving research questions during my bibliographic research introduced me to the following topics, which led me to develop secondary research questions for my interviews:

- The Technical Communication Body of Knowledge
- Technical communication certificates and certification
- Technical communication core competencies
- Importance of internships for bridging the academic-industry gap

Addressing these additional topics during my interviews contributed to my overall ability to address my primary research questions.

3.2 Bibliographic Research

I initially conducted bibliographic research to look for trends across the research and to extract a cross section of important opinions and findings regarding my topic. My goal was to familiarize myself with the previous research, as well as the current ongoing conversations surrounding my topic (Hughes and Hayhoe, 2010). My secondary sources included academic, industry, and professional society-produced publications, which all helped me learn about each group's history and priorities. It was important for me to include ideas and opinions from all of the groups in order to offer a holistic overview of the current status of the field of technical communication. Overall, this research process helped me craft interview questions, as reviewing the existing literature before my interviews allowed me to develop research questions that were grounded on existing research and data. Afterwards, I consulted current academics and practitioners in order to compare the information from the publications to how academics and practitioners perceived the current status of the field.

In order to maintain the integrity of my research and to report accurate and commonly accepted information, I only used published books and peer-reviewed journals articles from publications that are widely accepted across the field.

3.2.1 Keyword and Content Analysis

After identifying relevant journals for my research, I conducted keyword searches and content analysis in *Technical Communication Quarterly*, an academic journal, and *Technical Communication*, an industry-focused journal. This process increased my likelihood of finding relevant, practical, and accurate information, since these articles are peer-reviewed, expert materials. The purpose was to pick ideas and terms to focus on later during my research. This process helped me to identify key terminologies and provided me with a cursory taste of the current environment in technical communication.

After learning about the many shifts within technical communication in the recent past, I narrowed the scope of my data collection from these journals to the last five years of publications. That way, I could avoid, to the best of my ability, reporting information that is no longer relevant to the field. This process helped me track the shifts in topics and ideas that the authors wrote about during this time span. Doing so helped me distinguish the common practices and shifting trends within the field.

Simultaneously, I did not neglect researching the field's overall history because I want to understand the root of the problem and see where it stems from. Understanding how the rift began and how long it has existed will help me situate the problem into the overall context of the situation.

3.3 Interviews

I conducted informational interviews for the primary research component of my thesis. I interviewed academics and practitioners about their personal experiences as technical communicators, their thoughts about the academia-industry gap, and their recommendations for improving the overall quality and status of the field of technical communication. Interviewing both groups helped me to avoid being biased towards one of the groups.

3.3.1 Justifying Qualitative-Research Data Collection

I chose a qualitative approach for my research because I wanted to “carefully examine the behaviors for a cross-section of a larger population” (Koerber and McMichael, 2008, p. 463). I hoped that these interviews would, as Giacomini and Cook put it, “offer a ‘window-like’ view” of technical communication’s Current Positional environment (Koerber and McMichael, 2008, p. 462). My overall goal was to “gather insight or knowledge about” technical communication “in an attempt to understand perceptions, attitudes, and reasoning behind actions” going on in the field, especially because according to Andersen, “by using qualitative methods, researchers are able to understand not only what is happening, but more importantly, why it is happening” (Andersen, 2013, p. 3). Through these interviews, I wanted to collect a diverse range of answers to my questions regarding the current status and challenges in technical communication in order to better understand the climate and compare these answers to my literary research findings. I hoped that interviewing professionals from both groups would provide me with a fundamental understanding of the field.

One of the limitations for qualitative research is that the “data is harder to analyze than quantitative data because it can be more susceptible to subjective interpretation” (Hughes and Hayhoe, 2010, p. 11). I took care to eliminate jargon and ambiguous words in my interview question in order to accommodate for this challenge. I used plain language in hopes that doing so would set the tone for the interview so that the interviewees would also respond in simple terms. This was an attempt to increase consistency in my data. I asked the interviewees to rephrase their answers in cases when I did not fully understand their initial answers.

Using plain language was also an attempt to reduce the possibility for an interviewee’s personal experiences to cause them to interpret my questions in a drastically different way from the other interviewees’ understanding of the question.

Limitations of Qualitative Research

A major limitation to my research process is that, “because our field’s attention to qualitative sampling has so far been minimal, we have not sorted out which kind of sampling techniques

might be most appropriate in which type of study, and we have not agreed on a consistent terminology to describe sampling in qualitative research” (Koerber and McMichael, 2008, p. 460). Due to the lack of set standards, I researched the different available research methods for quantitative research, and chose the ones that I considered the best fit for my study based on the scope of my project, the types of questions that I wanted to ask, and my limited resources.

The sampling techniques I chose were purposeful sampling, maximum variation sampling (to the extent that was possible for me), and convenience sampling. I did not have any interactions with six of my eight interviewees previous to my study. I chose these interviewees because they were authors of the sources that I cite in my literature review or technical communication conferences participants. I emailed most of the candidates. I Tweeted some of the candidates who did not have publicly available email addresses. I also left messages in the comment boxes of other candidate’s websites asking for an interview. Using a variety of sampling methods allowed me to further diversify my interviewee population and increase the different jobs and experiences represented in my interviewee pool. This was an effort to diversify my data collection.

Identifying the Interview Candidates

It was logical for me to interview both academics and practitioners for this research project because I needed to understand each group’s perspective regarding the other group. At the same time, I was careful to avoid making broad generalizations and conclusions solely based on the answers collected from my interviewees. Apart from answering the questions about the academic-industry gap, it was beneficial to interview both parties because industry members can provide “relevant and practical information” while academics provide “continuity and expertise” (Hughes and Hayhoe, 2010, p. 14).

I initially planned on interviewing five academics and five practitioners in technical communication. Upon the IRB’s approval, I emailed nine practitioners and nine academics requesting informational interviews during the course of two weeks; three practitioners and five academics agreed to an interview. Because of time constraints, I was unable to find two more practitioners who would agree to an interview. Simultaneously, a few of the academic interviewees were currently involved in practice and offered their insight from both an academic and industry perspective.

I conducted these interviews in order to gauge each individual’s experiences and priorities within technical communication. This helped me gain a deeper insight on the common practices and trends in both parts of the field.

The scope of my research made it impossible for me to gather interviewees that could represent every portion of academic and industry population within technical communication. I diversified my population to the best of my ability by interviewing people whom I already

knew and people who I had not previously interacted with; I also interviewed well-known individuals within the technical communication community as well as those who are every-day professionals.

My interviewees possess a wide range of knowledge about technical communication, are located in the United States and Canada. Some have international experience in technical communication in Europe, Asia, Australia, and the Middle East.

Among my academic interviewees, I included professors from different universities. Some teach at schools that have official technical communication programs while others teach at schools that do not offer formal programs but have technical communication degree options and courses. Many of these academics have industry experience, and some of them continue to work in industry as they teach.

My practitioners also differ in background and experience. I interviewed technical communicators who write on a daily basis, as well as people who manage or oversee other technical communicators. Those who are in managerial positions no longer identify themselves as technical communicators, but all have more than a decade of experience in technical communication. These practitioners are also located across the U.S., and one was finishing up a consulting job that required her to travel across Asia, and was starting a new job project in England.

Qualitative Sampling Methods

I used a combination of three qualitative sampling methods purposeful, maximum variation, and convenience- during my study. This was to increase the diversity of my sample population.

According to MacNealy, *Purposeful sampling* involves interviewing people who poses the “characteristics necessary to answer questions about a certain matter or product” (Koerber and McMichael, 2008, p. 459). In the case of my study, the purposeful sampling justifies my choice for interviewing people who are actively involved in the conversation involving the gap between academia and industry. Higginborrom explains that, “in purposeful sampling, the most important guiding principled is maximum variation,” which is why I chose people with different professional and academic backgrounds. Doing so helped minimize the overlap in experiences among the interviewees (Koerber and McMichael, 2008, p. 464).

Maximum variation sampling is a “variation of purposeful sampling,” and has overlapping qualities with it. In purposeful sampling, says Blakeslee and Fleischer, “cases are usually selected serially, with each adding a different, contrasting element to the overall sample” (Koerber and McMichael, 2008, pp. 459-460). In order to find interviewees who contributed different elements to the overall sample, I researched the backgrounds of the authors of the publications that I used in my literature review. This helped me identify technical communication academics. I read biographies on industry-oriented communication conferences, such as LavaCon and the Intelligent Content Conference (ICC) and emailed practitioners whose backgrounds were relevant to my study.

A widely acknowledged pitfall for this sampling method is not choosing a sample that is diverse enough to represent “the variation known to exist in the population being studied” (Koerber and McMichael, 2008, p. 464). Unfortunately, this pitfall was unavoidable. In order to decrease the effects of this pitfall, I followed Koerber and McMichael’s suggestion to “include participants from more than one organization and make sure that we [the researchers] are less familiar with some of these other organizations” (Koerber and McMichael, 2008, p. 464).

Higginborrom explains that *Convenience Sampling* consists of “participants who are readily available and easy to contact” (Koerber and McMichael, 2008, p. 463). I had two convenience samples, one from academia and one from industry, in my study. These interviewees also fell in the scheme of purposeful sampling, as they provided unique perspectives to my overall data collection.

One benefit for this method of sampling is that the interviewee’s personal connection to the interviewer allows them to be more invested and provide more in-depth information (Koerber and McMichael, 2008).

Obtaining Permission for Human-Subject-Based Research and My Interview Process

In order to protect the rights of the interviewees, I received IRB approval for my human-subject-based research. I sent out recruitment emails at least two weeks prior to the interview date. All interviewees returned a signed consent for acknowledging the purpose, procedures, risks, benefits, and time commitment that this study requires. Only then did I continue to arrange an interview date and time and send them the preliminary background information interview questions.

During the phone interview, I asked again for each interviewee’s permission to record our phone conversation, and GoogleVoice notified both parties that the conversation was being recorded. The length of these interviews spanned between approximately thirty minutes to an hour and fifteen minutes. I stored the recordings of these interview on my GoogleVoice account as well as on iTunes on my password-protected personal computer, in the case that I needed to refer back to the original source during my data analysis.

3.3.2 Crafting Interview Questions

According to Seidman (Seidman, 2012), it is important to build and follow a structure for the interviews and to make sure that each piece of the interview serves a purpose. This book suggests conducting three separate interviews with each participant in order to for the interviewee to understand the context of these experiences, and for the interviewee to accurately reconstruct the details and reflect on their past. Time constraints made it impossible for me

to interview each person three times, but I made sure to include questions that allowed me accomplish each of the outcomes of the three interviews into my one interview.

First Interview

During the first interview, it is up to the interviewer to “put the participant’s experiences in context by asking him or her to tell as much as possible about him or herself in the light of the topic up to the present time” (Seidman, 2012, p. 21). The purpose of each of the questions that fell in the “first interview” category was to encourage the interviewees to share stories about their background and experiences.

Because Seidman emphasizes the importance of establishing a rapport with the interviewees, I had five questions regarding the interviewee’s personal background. In order to reduce the length of the phone interview, and in order to get a more thorough sense of each interviewee’s background, I emailed the first section of these questions for the interviewees to answer before our formal interview. In the end, only a minority of participants answered these preliminary interview questions, so I tried my best to ask these questions during the phone interview. I saved the remainder of these questions to ask over the phone. Below are questions that I asked; these are questions that were meant to help me understand the interviewee’s background information and are what Seidman considers to be appropriate “first interview” questions.

“First Interview” Questions— Part 1: Questions asked over email:

- What is your academic background?
- How did you get into the field of technical communication?
- ***Practitioner:*** What is your role as a technical communication practitioner?
- ***Academic:*** What is your role as a technical communication researcher/instructor?

“First Interview” Questions— Part 2: Questions asked during the phone interview:

- What are your experiences as a technical communicator? Which of these experiences have been most beneficial to your career?
- What past challenges helped you prepare for your current job?
- How would you define technical communication based on your experiences/work during the past fifteen years?

The primary goal of this second set of “first” interview questions was to identify important experiences for technical communicators to undergo in order to better prepare for the job, to get an idea of common challenges that technical communicators face on the job, and to track the changes within different sections of technical communication during the last fifteen years.

Each of these questions was grounded in my bibliographic research. The first question was to identify any common experiences among technical communicators, since research indicates the variability and lack of consistency in the field. The second question was in order to identify any common challenges among professionals that the field should address. The last one was to track the changes within the field from the different perspectives that the interviewees had to offer.

Second Interview

Siedman explains that the second interview is for “concentrat[ing] on the concrete details of the participants’ present lived experience in the topic area of the study. We ask them to reconstruct details... then, our task is to strive, however incompletely, to reconstruct the myriad details of our participants’ experiences in the area we are studying” (Seidman, 2012, pp. 21-22).

The “second interview” questions that I compiled were to uncover the interviewee’s personal experiences as technical communicators. These questions were more in-depth than the first set of questions and required more detailed responses.

“Second Interview” Questions

- Based on your experience, what are the top priorities for changes that technical communication needs to go through? How will these changes improve the field?
- **Practitioner:** What aspect(s) of your job would you change in order to increase efficiency?
- **Academic:** What professional development courses or tools would you like to learn to improve your teaching and research of technical communication?

The second set of questions are aimed at identifying gaps between academics’ and practitioners’ perspectives on technical communication priorities; having this information allowed me to compare my findings with those from the bibliographic research. They also provided interviewees with the opportunity to share their insight on what they thought were necessary changes in their professional lives. The practitioners can voice their frustrations or challenges that they face in the workplace, which may be applicable in more than one area of technical writing. The academics can also identify the tools that they lack access to, that could help increase the knowledge on the topics that they teach; this question was directly inspired

by Rude quoting Witburn, who said that “professors must become actively involved in professional and public affairs. Only through such involvement can they familiarize themselves with the problem contexts of civilization and acquire the power to participate in deliberations about choice” (Rude, 2009, p. 244). All of the information that I gather from these questions could help predict changes that technical communication, as a whole, may need to experience in order to improve the field.

Third Interview

According to Siedman, the objective of the questions that are asked during the third and last interview are supposed to help the interviewees “reflect on the meaning of their experiences. It address the intellectual and emotional connection between the participants’ work and life” (Seidman, 2012, p. 22). This is a critical step for qualitative research because only the interviewee can accurately make sense of his or her experiences. The third set of my interview questions require my interviewees to reflect on their past and to synthesize what they have experienced and learned in order to offer advice on methods of reshaping and improving the technical communication field.

“Third Interview” Questions

- For many years, there have been discussions in academia and industry that have alluded to the benefits of a certification process in technical communication. What is your general opinion on a certification process for technical communicators? What would be its main costs and benefits?
- Research shows that lack of consistency and quality control are major problems that diminish the professional identity of technical communicators. What are some skills and attributes (core competencies) that technical communicators should be required to have before entering professional practice?
- What courses and/or skills should students in technical communication-related programs learn before entering the profession?
- **Practitioner:** What can students learn in the classroom that they cannot learn as practitioners?
- **Academic:** What can students learn from internships and interactions with practitioners that they cannot learn in the classroom?
- Are there any other comments and suggests that you have for improving the relationships in industry and academia?

My first question was inspired by the controversy between the proponents and opponents of mandatory certification. I wanted to hear about my interviewees’ personal experiences

with certification and understand how they personally felt about the subject. Learning this information would also allow me to gauge how they are received among a random sample of technical communicators.

During my research, I encountered many articles that indicated that the lack of consistency among technical communication programs and technical communicators' skills were a major detriment to the perceived professionalism of the field. That being said, I wanted to build a list of core competencies from my interviews and compare them to what I found during my bibliographic research to see how they matched up.

Along that same vein, the next question had a similar objective, but I wanted to focus the answer in a way that could help technical communication students. I hoped that I could compare the answers from my interview to what I found were common topics taught in academia to distinguish any similarities and differences.

I created the next two questions, one specifically for academics and the other specifically for practitioners, based on Bloch's findings in "Glorified Grammarian or Versatile Value Adder? What Internship Reports Reveal About the Professionalization of Technical Communication." I wanted to discern the roles and the types of knowledge that students could gain from the classroom versus what they could learn through internships. I thought that the relevance of this information could extend beyond student benefits to show the advantages of having an academic background in technical communication, regardless of whether it is an undergraduate degree, a graduate certificate. Simultaneously, I wanted to be able to highlight the importance of internships, especially for technical communication students.

The last question's purpose was to provide my interviewees with an opportunity to share any additional thoughts or opinions that they might have had that were not directly related to my questions and to provide any additional information that they might have forgotten to include or remembered during the course of the interview.

Chapter 4

Findings and Analysis

4.1 Research Questions

My primary research questions that inspired me to research the academic-industry gap in technical communication for my thesis are:

1. What does it mean to be a technical communicator? What are the different available roles for technical communicators?
2. What is the current status of the gap between technical communication practitioners and academics, and what are the methods for bridging this gap?
3. How has technical communication changed in the last fifteen years?

Answering these questions through my bibliographic research led me to more complicated dimensions of the problem that I never considered. This new information inspired my secondary research questions that I asked during my interview, which are grounded on my primary research questions.

- What are the different methods of entering the technical communication field?
- What are beneficial experiences to have as a technical communicator? What are common challenges among technical communicators?
- What could core competencies for technical communication entail? Is there a way to provide quality control for the field?
- What are potential improvements for technical communication and technical communicators?

- Is there a place for certification in technical communication?
- What are potential methods of bridging the gap between the two groups?
- How can technical communication students better prepare for the workplace?

I felt that collecting answers for these questions from a diverse group of technical communicators would provide me with a strong horizontal sample of the field. That way, I could compare and contrast my interviewees' responses with one another as well as compare them to my findings from secondary research. I was fortunate enough to have the opportunity to interview a few important authors whom I cite in my literature review, which allowed me to collect their most current thoughts and ideas regarding this topic. Below are basic biographies of my interviewees, which show each individual's academic background, their current job, and job roles, if they provided me with this information. It is important to note that many of these interviewees possess both academic and industry experience, but I separated the participants into two categories based on their current job for organizational purposes.

4.2 Biographies

These basic biographies are meant to provide readers with a basic understand my interviewees' backgrounds, help illustrate the diversity of my interview population, and provide evidence of the variety of academic and professional backgrounds within technical communication. What is provided is not, by any means, a comprehensive description of my highly accomplished interviewees.

4.2.1 Academics

Name: Rebekka Andersen

Academic Background

- Ph.D. in English Area of Concentration: Professional Writing, University of Wisconsin-Milwaukee, Milwaukee, WI
- M.A. in English Area of Concentration: Rhetoric, Composition, and Technical Communication Certificate in the Teaching of Writing, Eastern Washington University, Cheney, WA
- B.A., double major in English and Music Areas of Concentration: English, Writing Track and Music, Piano Pedagogy, Whitworth College, Spokane, WA

Current Position

- Assistant Professor in the UC Davis University Writing Program
- Teaches courses in professional and technical communication and digital literacy

Name: Tatiana Batova*Academic Background*

- Ph.D. in English (Professional and Technical Writing), University of Wisconsin-Milwaukee, Milwaukee, WI
- M.A. in Foreign Languages/Literature (German English Translation), University of Wisconsin-Milwaukee, Milwaukee, WI
- M.A. and B.A. in German, English and Foreign Language Pedagogy, Tula State Pedagogical University, Tula, Russia

Current Position

- Assistant Professor in Arizona State University Technical Communication Program
- Teaches students the fundamentals of communicating effectively in scientific and engineering contexts

Name: Saul Carliner*Academic Background*

- Ph.D. in Instructional Technology, Georgia State University, Atlanta, GA
- Masters in Technical Communication, University of Minnesota Twin Cities, Minneapolis, MN
- B.A. in Economics, Professional Writing, Public Policy and Management (minor in Administration and Management Science), Carnegie Mellon University, Pittsburgh, PA

Current Position

- Program Director, PhD in Education
- Associate Professor of Education

Name: Bill Hart-Davidson*Academic Background*

- Ph.D. in English, Primary Area of Concentration: Rhetoric and Composition Secondary Areas: Professional Writing, Cultural Studies, Purdue University, West Lafayette, IN
- M.A. English, Primary Area of Concentration: Primary Area: Rhetoric and Writing, Bowling Green State University, Bowling Green, OH
- B.S. Education, Primary Area of Concentration: English Secondary Education, Bowling Green State University, Bowling Green

Current Position

- Associate Professor, Department of Writing, Rhetoric, and American Cultures, Michigan State University
- Associate Dean for Graduate Studies, College of Arts & Letters
- Co-Director, Writing in Digital Environments @ Matrix

Name: Laura Palmer*Academic Background*

- Ph.D. in Technical Communication & Rhetoric, Doctoral Minor: 20th Century Visual Theory, Texas Tech University, Lubbock, Texas
- M.A. in Technical Communication (M.A.T.C), Texas Tech University, Lubbock, Texas
- B.A. in Psychology, University of British Columbia, Vancouver, BC, Canada

Current Position

- Director of Southern Polytechnic State University's master's program in Information Design and Communication
- Teach courses where humanities ideas and technology intersect: Information architecture, web design, content strategy, SEO/Analytics

4.2.2 Practitioners

Name: Rahel Anne Bailie

Academic Background

- Accreditation, Cognitive Edge
- Certificate, Management, Not-for-Profit and Voluntary Sector, Centre for Philanthropy/SFU Continuing Studies
- B.A. (double major) in English concentrating on creative writing and in Women's Studies, Concordia University, Montreal, Canada

Current Position

- Principal of Intentional Design at Intentional Design Inc.
- Consulting: Content Strategy, Content Management, Information

Name: Stephanie King

Academic Background

- B.A. in English, Virginia Tech, Blacksburg, VA

Current Position

- Senior engagement consultant (proposal manager) at Hewlett-Packard
- Manage collaborative writing projects, such as proposals

Name: Jack Molisani

Academic Background

- B.S.E. in Computer Engineering, Tulane University, New Orleans, LA

Current Position

- President of ProSpring Technical Staffing
- Executive Director of the LavaCon Conference

These individuals are successful technical communicators, but they all came from different academic programs, hold different jobs and responsibilities, and work for different institutions.

4.3 Preliminary Background Information

The following questions adhere to Seidman's requirements for the "first interview" questions.

4.3.1 Defining Technical Communication

Interview Question: How would you define technical communication?

This first question was not an official interview question, but my personal introduction solicited, from most of my interviewees, explanations on what technical communication entails. Their responses helped me better understand the field, which is why I chose to include this information in my findings.

Technical Communication's Place within Communication

Rebekka Andersen categorizes technical communication as a subset of functional communication and explains that it is "communication required for decision makers to solve problems, perform tasks, make decisions, and manage situations," among other things. This form of communication is action-inducing and helps people effectively perform their jobs whereas, the closely related field, professional writing does not.

Professional and business writing, on the other hand, is for "cultivating and maintaining relationships;" its goal is to establish and maintain rapport with the reader. Stephanie King also distinguishes technical communication from marketing communication (mark-comm), which she explains is more focused on "trying to sell something or convince an audience to do or try something" rather than helping the users make technical decisions.

Technical Communication as an Academic Field

Hart-Davidson explains that when he defines technical communication to his colleagues in industry, he doesn't "talk much of the degree's name or the field's name at all." Instead, he explains that "the way to engage people is to talk about skills and competencies to gain their interest." He informs his colleagues that his students not only have the skills and competencies [that he talks about] but also have evidence to prove these skills and competencies. For example, he explains to his colleagues that he is confident that each of his students can sit in a room with developers, clients, supervisors, and subordinates on their first day of work and make themselves understood by everyone while representing the ethos or the knowledge that the company needs them to represent. Hart-Davidson reports that when he asks his colleagues how many of their current employees they would feel comfortable putting in this position, only a few say that they would feel comfortable doing this, which

is why Hart-Davidson considers “shifting the conversation to skills and competencies” to be important when explaining the field.

When explaining the purpose of a technical communication degree to his students, Hart-Davidson tells his students that “our program in professional writing is the thing you study. It isn’t the name of your job.” He goes on to compare professional writing to biology; students who study biology do not all become biologists. They pursue other career paths. Likewise, “professional writing is just a field that gives you the tools to do a job.” He notes that it is up to each student to dictate what they want to do with their degree.

Laura Palmer takes a different approach to helping her students understand the value of their degree. She asks her students “what is your degree?” and makes them figure it out. She said that she tell her students to check LinkedIn and translate what they do in their classes into skills that they find on this website.

Writing in Technical Communication

One undisputed component of technical communication is writing. Simultaneously, interviewees agree that writing is a skill that applies to jobs apart from technical communication. Even though writing is a basic skill, Carliner asserts that meeting an audience’s needs or fulfilling a purpose is not intuitive, which is why people who are not formally trained in technical communication run the risk of “writing what they want to write rather than what needs to be documented, so there are many holes” in their writing. Carliner acknowledges that there are subject matter experts who know how to write (to the standards of a formally trained technical communicator), but “you can’t expect or assume that they are good writers and know exactly what they need to write.”

Batova and Carliner both indicate that there is a high demand for technical communicators, and according to Carliner, “most organizations know that they need to hire someone to document things, because, either, they are required to by law, their users need it, or because it’s the right thing to do.” Despite this seemingly high demand, the reason behind needing the technical communicator dictates how particular the organization is about filling this position.

One reason why companies often settle for technical communicators without formal training is because “people don’t know the value-added of technical communicators, and they don’t know what we do or what we can add” (Carliner, 2012). This is partially because there is “no standard formula to gauge the value added for technical communication, it is always determined on a case-by-case basis, and everything [solutions] that has been proposed is situational. What we do is difficult to measure, whereas you can [measure the value added] for advertisement” (Carliner, 2012).

Because the added value is difficult to determine, Carliner explains that a company’s motive for hiring technical communicator dictates, to an extent, their willingness to sacrifice quality

to save costs. He notes that “when people do it [hire technical communicators] because they have to, they try to minimize the cost, and they turn to alternatives such as user-generated documentation and subject-matter generated documentation; the users and subject matter experts are the ones making the writing rather than having professional writers doing the writing because it is free for the company.”

Collaboration in Technical Communication

The interviewees also agree that writing process is no longer solitary. Saul Carliner explains that regardless of whether the content is created in formal teams or is generated by users, the writing is generated in teams rather than individuals.

Batova adds that collaborative writing happens among people with similar backgrounds as well as people from different fields, experiences, cultures, and perspectives. She shares her observation that content management systems are causing departments to merge within companies, which makes collaboration skills an even more important requirement.

She also points out that technical communication is a relatively new field, compared to well-established fields such as economics and marketing. It is a “combination of different fields, which is great and problematic.” She is excited about the collaborative aspect of technical communication but is weary of the communication disconnects that can result from this combination of differing backgrounds.

Nonetheless, Batova notes that the diversity in academic and professional backgrounds is inevitable because of the field’s relative newness; older technical communicators have different, non-technical communication backgrounds because it didn’t exist as an academic field. However, according to Bill Hart-Davidson, this diversity is not problematic.

4.3.2 Beneficial Experiences

Interview Question: Which of your technical communication experiences have been most beneficial to your career?

I asked my interviewees this question in order to compare the similarities and differences in academics’ and practitioners’ professional experiences. The answers from this question would help me identify points of disconnect that further drive the gap between academics and practitioners. My findings indicate that the academics and practitioners with academic backgrounds in English or technical communication have similar stories about how their passion for writing and their desire to write for an audience led them to pursue technical communication.

This question was also meant to address the question, “what does it mean to be a technical communicator,” because answers provide insight into the different experiences and roles of

current technical communicators. Both academics and practitioners emphasized the importance of a diverse range of professional experiences, including how different experiences help technical communicators understand problems, find solutions, and predict user and client needs, even when the users and clients cannot articulate or understand their own problems. Another benefit of a diverse repertoire of experiences is that technical communicators are more equipped to undertake managerial jobs. For example, people with diverse experiences know what to look for when hiring other technical communicators.

Discovering the Field of Technical Communication

Many of the interviewees who have academic backgrounds in English or technical communication have shared their stories of discovering technical communication. For many, it was a way of coupling their writing skills with different aspects of technical communication that they enjoy. For example, King shares that even with a degree in English, her writing abilities and her love for writing helped her enter the technical communication field as a proposal writer.

Andersen was drawn to the field because, as a graduate student, she was disheartened that her professors were the only audience for her work. She took professional writing courses, starting with proposal writing, because she wanted to impact her audience. It was then that she had decided that “I wanted my writing to matter, and that has stuck with me since my master’s degree, and that is why I am so driven to bridge this gap between academia and industry.”

Hart-Davidson shares a similar experience as he was first exposed to technical communication as an undergraduate in English. He didn’t like literature, so he decided to study tech comm. He did well in his introductory course and the instructor offered him an opportunity developing documentations for the university’s computer labs. He enjoyed talking to the subject matter experts and like sitting down with the users to make sure that the procedures worked and noted any troubles to make revisions. After graduate school, he entered the corporate market and became an industry fellow at IBM as a user-experience engineer. This industry experience helped him shape his research interests and he continues to apply the skills and knowledge that he learned from this job to his own software company that he co-owns.

Palmer’s intrinsic motivation was also the driving factor for pursuing degrees in technical communication. After majoring in Psychology, she decided that she liked doing graphic design and working with words, so she took the initiative to earn a second degree in graphic design and computers. After 14 years of working in industry, she returned to school to earn her master’s, which was “easy compared to working.” She notes that the technical communication courses that she took as a student helped her get jobs before she became an academic.

Carliner's significant experience that most benefited him was having a multiple, unique opportunities ranging from working a summer for a non-profit in Africa to hosting conferences around the world, in Europe, Asia, and North America, has provided him with invaluable experience in intercultural communication. He says that he had the "fortune of working on really good projects throughout the years, and each one provided me with really amazing opportunities, which added up, gives me an advantage."

The Benefits of Diverse Experiences

Bailie, Molisani, and King either currently manage or held management positions managing other technical communicators. Hart-Davison and Molisani also run their own technical communication companies. They all emphasize the importance of holding a variety of positions and having a range of experiences that allow technical communicators to understand the logic behind the systems and programs that they use, the purpose of documents, the audiences' needs, and other factors that allow them to make the best informed decisions to meet their clients' needs.

Bailie emphasized the importance of technological experiences as she had to figure out, early on in her career, how to write increasingly difficult technical material on increasingly complex software. Writing about these complex software required her to learn how to use them in order to write technical materials. She explains that what was more important than learning how to use the software was learning the concepts behind the software and applying these concepts to different documentations. When content management systems first emerged, she volunteered to write free documentation for a local company in Vancouver in exchange for a free license to their software. This started her process of learning advantages and disadvantages of the software that was relevant to her job. This understanding allowed her to figure out ways to use various programs to solve business challenges with her knowledge.

King also has a plethora of experiences in different sub fields and industries within technical communication, as well as other fields within functional communication. Throughout her career, she worked in marketing and sales communication, creating training material, proposal writing, pharmaceutical writing, government contracting, and IT. She notes that her diverse range of experiences have been beneficial because "I can see the different points of views of a writer. The first question that I ask myself is, 'who is the audience and what is their background?' Having had the opportunity to write for different audiences helps me make the end product better because I can understand who the end user is going to be and who will be reading it."

Jack Molisani has benefited from his different professional experiences. He explains that "having been a technical communicator, I understand what the clients need and having done the job, I understand what to look for when hiring technical communicators." His process for matching technical communicators to certain projects entails "looking at what the job title the company is looking to fill, i.e. an instructional designer, technical writer, asking, 'do

they [the hires] have experiences in the industry that they need to work in?’ i.e. bio-tech, computer engineering, ‘do they [the hires] have the tools that they need/ the employers are looking for?’ i.e. FrameMaker, RoboHelp, Author-it, ‘do the clients want certain degrees?’, and where is the job located in relation to the hires?” Although Molisani claims that there is “no one list of requirements or a one-size-fits-all equation for a good technical writer,” his previous experiences working in this field has helped him with his current job of being President of ProSpring Technical Staffing by helping him to distinguish the general qualities to look for when hiring technical communicators.

4.3.3 Challenges for Technical Communicators

What past challenges helped you prepare for your current job?

The challenges regarding technical communication differ in scope, depending on whether the interviewee is an academic or a practitioner; yet, one group’s challenges inadvertently affect people in the other. In other cases, the problems overlap between the groups.

The purpose of this question is to identify any challenges that technical communicators face on the job that may contribute to widening the gap between academics and practitioners.

The Challenges of Academic-Industry Research

Andersen presents an academic challenge that affects her job but doesn’t yet have a solution. As an assistant professor, she struggles to have her unconventional work recognized and rewarded because it’s not “what people call high impact.” In order to overcome this challenge, she needs to “change the paradigm of how my work is perceived, but academia is so slow and behind, so it’s so hard to balance. I have to do the traditional peer-reviewed stuff and the other stuff that I want to do , and this [the unconventional work] sometimes doesn’t get recognized.” Andersen goes on to explain that most academics don’t see the incentive in partnering with industry because this form of research takes longer to complete, often goes unrecognized, and doesn’t fulfill the faculty research requirements because research based on industry needs do not align with the other work that gets published in academic-based settings. Batova expresses similar concerns regarding unconventional academic research and says that it is difficult to find the time and reason to conduct this kind of research when there is little to no incentive to do so. Nevertheless, Andersen continues with her unconventional work because wants her work to reach a broader audience and hopes to affect more people than the just the academic community.

Adjusting to New Systems and Cultures

Both academics and practitioners face the challenges that come with learning new technologies, programs, and genres. Sometimes, people even reach a point when they dismiss the option of replacing their familiar systems. Bailie and Palmer both attest to the difficulties of staying up-to-date on field knowledge and learning new programs.

Batova faced her most useful challenge as a technical translator and translation project manager. “This was about the time when content management systems came around, and having to work with components of text without any contextual clues, so figuring out and articulating the technological problems and strategies, was challenging. In other words, it was difficult finding solutions to overcome these challenges without much other background or contextual information on the topic.”

Carliner shares his experience overcoming the challenges of learning a new process during his first big industry project. He explains that this big project was horrible because everyone his team was still in the learning process of implementing the project, but they all pretended that they each knew everything. This became disastrous and the project took more iterations than expected. Through this experience, Carliner learned about writing in plain English, how to troubleshoot complex computer systems, understood how far to go before asking for help. Because this experience occurred at the beginning of his career, he benefited greatly from the hands on strategies for writing, dealing with people, and working with technology.

King is also aware of the challenge of maintaining relevance, especially as an older technical communicator in a quickly changing field. She says that “being older and out of college for a long time, it is hard keeping up with the latest trends in writing. Back then, there was no social media, so you write and print proposals. Nowadays, there are so many different ways of publishing, so my current challenge is keeping up with all the different ways of relating a message through writing.”

A challenge that King remembers as a young professional straight out of school was adopting to each of the different companies that she worked for. She says that “each company has different methods of doing things, and this is something that you can only learn on the job. You bring your own experiences to the job, but there are different tweaks in the process.” Her advice is to get out there and get started because the “challenge out of school is finding that first job, but my writing skills were what got me my jobs.”

Seeking New Opportunities

Bailie’s most helpful challenge started with getting laid off in 2001, which motivated her to “go into business for myself, and so what I was doing was a precursor to what I am doing now [content strategy]. The whole thing with content strategy is looking at a business’s problems and figuring out where they want to be and doing a gap analysis to help them reach their

goals,” which is a skill that very few people in the world know how to do effectively. She notes that “a lot of companies face challenges when it comes to communication, and I can look at and draw on my knowledge of technical communication principles to find solutions for them, but if you don’t know what is available, then you can’t recommend them,” so it is important to know and understand the tools that you are working with.

The answers to this question show that technical communicators face similar challenges for learning new systems, keeping up with industry trends, and finding niches to increase their value. The answers also indicate the importance of quickly learning and adapting to new work environments. Lastly, both practitioners and academics must fight to prove the worth of their work.

4.3.4 Technical Communication’s Recent History

How would you define TC based on your experiences/work during the past fifteen years?

All of the interviewees acknowledge that technical communication has shifted dramatically in the past fifteen years. There is a different focus and it involves more people than ever to produce a piece of writing. Batova states that the field is better defined than it was fifteen years ago, but at the same time, technical communication is still struggling to define and establish itself.

Current Discrepancies between the Academic and Industry fields of Technical Communication

When explaining technical communication’s recent history, Andersen notes that there is a

clearer idea of the differences among the different sectors under the umbrella of professional communication, but technical communication is different from the traditional “English” degree, and even professional writing, another subset of professional communication, because not all technical communicators are writers. They are content engineers who architect these incredible models of bodies of content. The field is going in an exciting direction, but in academia, we are still talking about writing and we’re still talking about product when the methods of managing, developing, and publishing content has shifted tremendously, from writing PDFs (full topic based paradigms) to pieces of writing.

For the most part, the academic field of technical communication is behind industry standards. The academic curriculum is focusing on topics that are no longer relevant to the

current field. This is problematic because an outdated academic degree does not equip students with the tools to adjust to the industry.

The Increasing Interdisciplinarity of Technical Communication

Batova notes that another changing aspect of technical communication is that “we are becoming more interdisciplinary, and technical communication is still struggling a little bit to establish itself. Marketing and technical communication is merging more and more,” as “companies are trying to save money on communication, so they are looking at technical text as marketing text and using product specs (information and manuals) to market their product.”

Palmer agrees that “as a profession, technical communication is connecting with other departments much more fluidly, like marketing and sales people, because we are no longer sitting in our little cubicles doing our job. All the changes in technology, etcetera, means that we need to communicate with other people. So my idea of technical communication goes back to the information processing model, as technical communicators now bridge disciplines and bring other types of information and thinking into their products.”

King also highlights the fusion between technical communication and marketing, and she refers to this field as market communication. “Mark-comm is exchanging ideas and information in order to convince customers to buy or try a new product.”

Globalization’s Effect on Technical Communication

Along with interdisciplinary comes globalization and the necessity of understanding global context. Carliner notes that globalization highlights the importance of translating from one language to another, but that is not the only form of translation that technical communicators need to worry about. “Translation is a field where you really need to know what is going on order to do, because it is not only language to language, but also specialized language to plain language, or simplifying complex ideas into plain language,” which was less of a concern fifteen years ago.

Bailie also explains the impact of globalization on technical communication. She explains that technical communicators are very aware and sensitive about the issues of translation and cultural awareness in Canada. Part of this is influenced by the fact that Canada has two official languages. This reality brings to the forefront, important concerns and challenges that globalization raises for technical communication.

The Importance of Subject-Matter Expertise

Another shift in the field that Batova comments on is that, “there is a lot of demand for technical communicators, but there’s always problems with subject matter expertise. In Germany, technical communicators are required to have a minor and study the topics they are interested in working with, which helps them better understand the subject matter.” The increased interdisciplinary and level of required subject matter expertise are changing the technical communication field.

4.4 Individuals’ Technical Communication Experiences

The following questions adhere to Seidman’s requirements for the “second interview” questions.

4.4.1 Top Priorities for Change in Tech Comm

Interview Question: Based on your experience, what do you think are the top priorities for changes that technical communication needs to go through? How will these changes improve the field?

This question intends to help identify topics that should be included in the TCBOOK, as the answers will provide insight into what academics and practitioners deem important in the field. Answers may also point to core competencies that technical communicators professionals, as well as students, should develop.

There are academic and industry-specific priorities, but there are also many overlaps. Most of the topics that were addressed during my interviews applied to both academia and industry.

Academic Research

Andersen claims that the “top priority to drive change is figuring out how to reward research in the field, and figuring out how the tenure process fits into this new scheme” She says, “the reason I think people aren’t brave to do this kind of research is because it takes a lot of time, and so they don’t have time to crank out articles, which is recognized and rewarded in academia.” Another aspect of the risk is that, “the industry [members] who are willing to fund this research doesn’t need the scholarly journal type of publication and research. What academia demands and what industry want is so different, so there needs to be new ways [for academics] to contribute to the field.” Andersen claims that, finding methods of collaboration where academics and practitioners can work together to create new, useful knowledge for both groups is critical to bridging the gap between academia and industry.

Batova agrees with Andersen's emphasis on collaboration. She says that "collaboration between academia and industry is not easy, but it's a good thing when it happens." Her explanation for the benefits of collaboration is that "academics have the resources to research and explore better ways of doing what industry is doing because industry is so product and goal driven that they can't spend the time to solve problems." Industry can provide academics with contemporary and relevant research problems to solve, but as Andersen mentions, not many academics are willing to pursue these industry-focused topics because they have other requirements to fulfill as faculty, and this type of research often doesn't currently have a place in the faculty's required list of accomplishments. Even without much reward, Batova says that this collaboration is important because in the end, it will "help establish skill-sets and strengthen the field."

Hart-Davidson also sees the value in a collaborative relationship. He has contributed to the effort of helping academics and practitioners overcome this obstacle for academics to pursue industry-driven research by collaborating with Rude, Hackos, and other CIDM researchers to find methods to facilitate "making more meaningful connections among people who manage information development groups people who manage technical writers, and people who run academic programs" and maintaining these relationships.

New Focus Points for the Academic Curriculum

Andersen, Palmer, and King all articulate the importance of changing the technical communication curriculum. Andersen says that many technical communication courses are "still teaching static genres, and we need to move away from that and teach topic-based writing, minimalism, structured authoring, DITA (Darwin Information Typing Architecture), and information typing and mapping. The introductory courses can stay the same, but the advanced courses need to help students transition from their degree program to entry-level positions. They need to know what's happening with the paradigm shift of creating documentation and the collaboration that it requires."

Andersen uses DITA as a prime example of the disconnect between students are learning and what they are expected to know in the workplace. According to Andersen, "there are three or four courses in the U.S. that teach DITA. There is such a high demand for it in industry, but the academic courses don't reflect meeting this need." She says that practitioners who attend industry-focused conferences frequently ask her why students do not know how to use the tools and languages that they need for the job. She also points out that practitioners such as "JoAnnn Hackos are very interested in helping out with training faculty to teach these courses," but academics are not taking full advantage of these opportunities.

Palmer says that "we, in academia, need to really look at what our courses are delivering and assessing to see if they are still relevant today." She notes that sometimes, course topics do not necessarily have to change, but they need to be re calibrated. For example, "editing courses are still relevant, but now, this class is no longer just about text. We need to think

about other modalities such as sound, videos, and pictures.” Another example is document design. “Even though this class is still important, learning to design brochures is not as relevant as learning to design other products, such as mobile design.” According to Palmer, current technical communication course objectives can remain the same, but the methods and forms of delivery must change with the industry standards.

Another aspect of the academic side of technical communication that may not meet industry standards is the emphasis on the importance of collaboration. King notes that “based on my experience, the number difference between technical communication in academia and industry is the collaborative environment.” King shares how “after college, I would get my feelings hurt, make mistakes, and sound like I didn’t know what I’m talking about” while collaborating with her coworkers. She explains that “it took a while to get used to harsh and positive feedback, but the method for getting better is building confidence. You also feel more comfortable with other people reading your writing and you get better at establishing common goals among team members with more collaborative experience.” King admits that she isn’t aware of the extent of collaboration in current academic programs but remembers the difficulty of adjusting to this work environment with the little experience that she had from school.

As important as it is for students to learn about all of these new programs and skills, Carliner points out that it is also important for academics to train students to write. He says that “we make assumptions about their writing abilities, and in some cases, they have the skills, but a lot of times, they really don’t. We need to focus on the basic quality of their writing.”

Professionalization

Professionalization is another popular topic among both academics and practitioners. Priorities that are related to professionalization include the importance of keeping up with business trends and changes within the field, the importance of awareness of happenings in technical communication-related fields, the significance of business acumen, and the beneficial role of certification.

Palmer emphasizes that academics are not the only ones who need to reassess their skills and program knowledge. “There are practitioners who are stuck in what they were doing 15 years ago who need to acknowledge that there are changes going on and that the boundaries of the profession are changing. There are other roles that are emerging other than document design.” Academics are not the only ones who are unaware of the field’s shifts.

Bailie and Carliner agree and emphasize the importance of extending beyond the field of technical communication. According to Bailie, “we need to have a bigger view of the world by looking at and understanding adjacent industries and the bigger strategic picture of delivering content.” Carliner contributes that “we must understand the industries in which we work, and all of the industries that we work closely with and those that affect us.” Bailie

explains that “there are lots of adjacent professions and their technologies that we have to be aware of so that we can understand how our content delivery relies on others. We must have these other groups on our radar so that we can take advantage of what they have to offer, which helps us provide solutions for our customers. We also need to keep up with the big changes in these adjacent fields in order to stay relevant. For example, we have to understand what a software developer does in order to understand how our content get delivered in multi-channel publishing.”

It is important to have a bigger view of the world in which we work because it can be difficult to predict what the new shifts and changes in the field. “New stuff is always coming in from outside the profession, and understanding these new things is helpful to understanding how to apply these things in technical communication.” For example, “when social media came about, many people initially ignored it. Now, it is a major communication outlet, so we have to understand the basics of social media in order to understand the best practices.”

Jack Molisani adds that it is “important to follow industry trends. If people want content strategists, specialize in content strategy. if people want to improve user experience, you get experience doing that. Don’t just sit there and do the same thing all the time.” One way of following these trends is by “looking at specific professional conferences and seeing what the presenters are teaching.”

Business knowledge is another topic that needs to be a top priority for technical communication, according to Carliner: “In technical communication, we, at best, only marginally understand business knowledge, and our lack of knowledge really hurts us. We need to know business management because we don’t even understand how to price ourselves or determine our salaries. This is a basic but important issue that not only affects how we operate but also how we are perceived.”

Certification complements the value of business knowledge because it standardizes technical communicators’ value. At the same time, Carliner points out that “it will be challenging to establish the right ones” because it is important to avoid “watering down” the standards to make it inclusive. “If people can’t make it, then we need to evaluate the field rather than lowering the standards.”

4.5 Suggestions for Improving the Field

The following two questions are academic and practitioner-specific, and ask the interviewees to identify methods of improving their side of the field. These two questions are meant to provide a path towards findings answers for bridging the gap as addressing these challenges may provide a situation that is more conducive to collaboration.

4.5.1 Changes for the Workplace

Interview Question for Academics: What professional development courses or tools would you like to learn to improve your teaching and research of technical communication?

Each academic had a different answer when I asked this question; some responses were very specific while others were broad.

Andersen expressed interest in learning HTML5 because, although she is trained in all of the previous versions, “5 is almost a new language, and it’s so integrated with social media, web 2.0, and even developing my own website. It is a bit scary because I have to retrain myself, but it is also the baseline for things regarding content management and topics because it is all becoming integrated.”

She also expresses her interest in a course in DITA because there is a high demand for it in industry. She says that “personally, I teach students to write in topics but don’t have the training in the technology for the fancy tools that do it for you. I want to understand the mechanics of how all of that works to better help students.” Lastly, she says that learning programming related to HTML and Java Script would also be useful.

Batova wishes that she has more access to content management tools “to make the best educated guess of what [tool] is better for which [situation], and to understand and create theories on what works well, best practices, and the advantages and disadvantages of specific tools.” Although she believes that technical communication courses “should not be on tools, and students don’t need to be experts on each of the tools, having exposure and experience using these tools gives students confidence and helps them make good decisions on the job.”

For Carliner, time is the most critical component since his job is to teach other people how to teach. He wants to “go back and learn the things that I didn’t learn the first time.” Keeping up with new software and technologies and having the time to learn them is also important to him.

Hart-Davidson is also like Carliner, in that he is “always trying to stay up to date” with new technologies and programs. He says that, “I’m a little odd because I try to go beyond just knowing the tools. Because I own a software company, I want to make the tools.” As an academic, Hart-Davidson builds programs that enhance teaching and learning.”

Palmer says that she has been taking professional development courses to stay up to date. She has completed a course on Google Analytics, is certified in HootSuite, a social media dashboard, and is completing the Google training on webmaster tools. She says that she “now wants to take a course on search engine marketing and search engine optimization because they are really important.” Looking ahead, she is looking forward to “hooking up with lots of companies that do user experience and usability testing fully online” and learning from these experiences.

Interview Question for Practitioners: What aspect(s) of your job would you change in order to increase efficiency?

Bailie addresses changes that would increase the efficiency of technical communication as a field, rather than her personal job. She admits that, “although I haven’t taught in years, I see a big disconnect in what is being taught in schools and what is actually happening in industry.” In order to “teach people how to get on in the real world, teachers need industry experience,” and “if they haven’t worked in industry in the past couple of years, they’re teaching old skills that are likely to be no longer relevant.” This is a reason why “technical communication needs teachers at the forefront of industry changes.” While this may be true, she says that she doesn’t “know the practicalities of how that would happen” because teaching “takes so much energy” that “it is difficult to be keeping up with all of the new developments and programs.” The challenge of doing both is part of the reason why she stopped teaching, because as a practitioner, she “didn’t have enough time and investment of putting together a program because it was so intense.”

Bailie also mentions the importance of a flexible curriculum, similar to Palmer’s concept of re-calibrating a curriculum. Bailie refers to the concept of a “phantom curriculum,” which meets the department’s requirements for the course but focuses on theories behind the deliverable. For example, rather than having a set curriculum that teaches good news and bad news *letters*, she says that it is better to focus on the theories behind delivering good and bad news. This allows professors to keep the course material flexible so that the students learn, say, the top five trends of delivering good news and bad news rather than the format of writing a good news or bad news letter, which is no longer relevant. That way, the curriculum is less likely to lose its relevance.

During her answer about the necessary curriculum change, Bailie mentions a change that is pertinent to her job as a content management and content strategy consultant. She says that “making sure that technical communicators are trained in the basics of writing for plain language and writing for translatability” would be a change that would increase the efficiency.

King, on the other hand, focuses solely on her personal experiences. She says that the ineffectiveness of teams, “when there are too many members,” is her biggest obstacle to efficiency. According to her, “the most effective teams are five to six people, one person from every group. Things get too messy when working in groups with 12 to 15 people. There are too many personalities, opinions, and crazy ideas.”

4.6 Technical communication and professionalization

4.6.1 Certification

Introduction to question: For many years, discussions in academia and industry have alluded to the benefits of a certification process in technical communication.

Interview Question: What is your general opinion on a certification process for technical communicators? What would be its main costs and benefits?

Certification is a hotly debated topic that divides technical communicators, but the divide doesn't necessarily follow the academic-practitioner fault line. This question seeks to address the issues surrounding the certification process.

Benefits

Hart-Davidson identifies two groups of people who would benefit from certification: "People in industry who are interested in coming back [to school] to increase their credentials but don't need to go through a degree program because they have years on the job, and people who are interested in graduate school as an option and need a good way to transition back into school."

Andersen says that certification would be especially helpful for people who come into the field through the back channels, for example, getting into technical communication as engineers, because it helps validate their experiences and skills without the degree."

Batova, Carliner, and Palmer all associate certification with developing and maintaining an identity for the field. The benefits that Batova focuses on are that certification would "bring consistency into the field and establish a baseline for what you need to know to be a technical communicator. It would also help establish a base income." Carliner agrees that, "certification, when done right, validates your competence that you can take from one employer to the next, but a lot of technical training is very company-specific." Palmer adds that "certification is great" when you "want people to see technical communication as a profession, but it is not necessary."

Costs Andersen points out two major flaws in the current certification system. First, the "certification categories look at technical communication as a document-based field." The other "brings forth questions for how a portfolio way is relevant" for determining individual certification "when everything is collaborative now, and everyone is contributing content to a database and no one owns any of that. You can say that you contributed to the work but can't say that I wrote this. Certification is a great idea in theory, but I'm not sure how to make it valid in practice to recognize someone's work and contribution. I don't know if the hiring managers in industry even use or recognize these certifications. How HR perceives

these certifications is something to look into.”

Batova points out that “certification is so expensive that it doesn’t make sense to get it if there is no return of investment. You have to consider what is going to be in the certification, how much does it cost, and what makes it worth getting” before you can justify the investment.

Carliner’s biggest concern with certification is that “it pigeonholes you. In technical communication, everyone is afraid to be pigeonholed and having a well-defined limits on what we can do, and so we don’t want to limit ourselves to just writing, but at the same time, not doing it [setting limitations] lets everyone in the field.”

Challenges

According to Batova, the challenge for certification is “figuring out exactly what the certification will be testing because it [the test] will have to be different between, for example, technical communication in the software industry versus the health care industry. There are similar skills [between the fields], but there are more different skills, so there need to be options based on the industry that a person works in.”

Bailie also points out that the certification process would need to determine what to test people on, which requires finding the fine balance between testing people for knowledge that is well-known among technical communicators but is still relevant to the field, and testing for newer knowledge that could solicit “a lot of push back because lots of people haven’t learned it. For example, if the certification was on writing formal letters, it would not go anywhere, but if it was on creating an app, there would be a lot of push back because many people haven’t learned to do that.”

She also wonders, “how do you test on such a wide range of topics.” A relevant example would be “testing psychologists, plastic surgeons, and nurses on the same basic skills because they all work in the medical field. In this scenario, these people could only be tested on basic skills because they have different jobs. In this scenario, even determining what the basic skills should be would be hotly debated, and these basic skills would change often enough that a certification would be outdated.” Instead, Bailie suggests doing what “project managers have to do, which is have X amount of credits to keep up.”

Carliner brings up the challenge that “certifications, when designed properly, should have re-certification process, and people in our field don’t keep up to date with their skills.”

Hart-Davidson presents a challenge from an academic’s perspective. He says, “as academics, when servicing working professionals, you have to make the courses accessible to the audience (online or evening courses) and need to offer it routinely enough so that they can get through [the program] in a year, but staffing can be difficult.”

Potential Test Topics

Identifying potential test topics is a significant challenge that a technical communication

certification board would have to overcome. Bailie provides a list of basic topics that she thinks technical communicators could be tested on in the case that it becomes a requirement for entry into the field.

Before providing the list, she explains that it is “difficult to even come up with a baseline” because the skills to test for are so heavily based on situation. Nevertheless, Bailie provided a list of topics that should, in some form, be included in certification based on the skills that she looks for when hiring content strategists, but this could also be relevant to general technical communicators:

- Instructional design skills— “how to” skills
- Plain language skills
- Accessibility skills— understanding the principles of accessibility (to accommodate for disabilities)
- Indexing and taxonomy skills
- Translating skills— how to create content that is compatible with translating tools (because we can’t hire someone who can translate in all different languages)
- Editing skills
- Visual design skills

This list is by no means comprehensive, and the methods of testing for these competencies will also change with new technologies, programs, and systems.

The Current Situation Regarding Certification

King says that she associates certificates with different fields, such as computer science, because the material is so technical. She admits that “what I do doesn’t warrant a certificate because you’re a writer or you’re not; you enjoy it or you don’t. You can learn how to do it [write], but if you don’t like it and are not passionate about it, you will never be great at writing. Writing is an art, so the techniques are teachable, but the passion, knack, and enjoyment can’t be portrayed in a certificate.”

King also shares that she used to have a certificate for proposal writing but “it never helped or hindered me in any way.” She also predicts that “you would need a lot of people to but into it in order to make it work.”

Molisani explains that certification is not a topic that technical communicators can push. He says that, as of now, “I don’t see any companies asking for certification; nor are we in a field where we are required to maintain certification in order to get jobs, so there is no need to be certified. It couldn’t hurt to have a certification process, but it’s not something

that we, as technical communicators, can drive. If the industries in which we work requires certification, we would respond in kind and create certification, but until the companies require certification, there is no need for us to do it.”

4.7 Core Competencies

What should the mandatory core competencies be for technical communicators?

I prefaced this question by explaining to my interviewees that “research shows that lack of consistency and quality control are major problems that diminish the professional identity of technical communicators,” before asking them, “what are some skills and attributes that technical communicators should be required to have before entering professional practice?”

Are Technical Communication Core Competencies Necessary?

Carliner explains that consistency in skill is not always necessary because “some technical communicators are hired for their writing ability, others are hired for their ability to communicate ideas about technology, so they come with different knowledge and skill bases and both are appropriate, assuming that the worker fills the gaps that he or she has.” Technical communicators are hired for different reasons, which makes it difficult to establish one set of expectations that applies to everyone in the field.

Carliner uses his expertise to clarify the difference between professional identity and reputation. He states, “I’m not sure that these [lack of consistency and quality control] diminish professional identity (which is the image that a person has of their role within an occupation) but, rather, our reputation.”

Carliner’s interpretation of consistency regards the consistency in an individual’s work rather than the consistency of skills within the field. He explains that “consistency is something learned through one to three good, intensive editing courses as well as a few on-the-job experiences in which the worker works closely with a qualified professional editor who marks up everything, then explains it to the worker.”

The Practicality of Technical Communication Core Competencies

On the one hand, it is important to establish a baseline for quality because technology allows for quick-paced publication, which may hinder the quality of published work. King observes that “quality of what is being produced is declining from what it was 20 years ago, because of the quickness of publication (instantaneous publication).” On the other hand, it is difficult and maybe even impractical to establish a field-wide quality controls because each company

or organization has its own publication standards. King adds, “speaking from my experience, quality comes from expectations of the company. The corporation sets the quality control of the technical communication, and the quality control comes from the clients, customers, and corporate.” Because quality expectations differ from company to company, “it is important to understand how to tailor all of your work to the company’s expectations.” At the same time, it is important to have a strong baseline that prepares technical communicators for any situation.

Establishing a universal set of core competencies may contribute to solving the problem of inconsistency among technical communicators but then, there is the challenge of demonstrating the required skills. Hart-Davidson notes that “you [technical communicators] must be able to look at the skill sets that they [employees] are asking for and assemble evidence that demonstrates your ability. What we really should be doing is preparing people to show evidence of their skills rather than requiring a certificate.” This would be a different method of quality assurance that allows more flexibility for accommodating the distinct needs of different industries that the certification process does not currently offer.

The Two Categories of Technical Competence

Bailie recognizes the constantly shifting environment of technical communication. She says that “requirements change all the time, but they are related to the two branches, technical competence and editorial competence.” These two branches encompass the different, and constantly-changing core competency topics that technical communicators would need to know.

Technical Competence

- Indexing, from a technical perspective, includes deciding which programs to use and how to use them, understanding what each program does, and knowing which programs are compatible, which programs you have to avoid, and why
- Learning the content management software that you put your work and content into
- Knowing what each software that you use has to offer, such as style sheets and the advanced features of a program
- Making the content work from a technical perspective

A current example of why it is important to know these competencies is that, “if you don’t know this stuff, your content won’t show up on Google, with their search engine optimization.”

Editorial Competence

- Indexing, from an editorial perspective, includes knowing when to use singular and plural words and how many indexes to include per page
- Understanding the editorial structures, the different social genres, and technical communication genres
- Knowing how to write in each genre editorially, such as knowing when to use headings and understanding the methods of organization

Carliner points out that there is a problem that “most companies have dropped professional editing and ask writers to provide a peer-review. To a manager, that fills the need, but in reality, it does not. Editors have a more precise way of working. Even with the best editing training, writers cannot edit or copyedit their own work. They miss things. So, the issue is only partly the skill of the writer; it’s also the skills made available to the writer on the job. If it’s any consolation, copyediting seems to be an ongoing problem with most professional publications, not just technical communication.”

Potential Core Competency Topics for Technical Communication

Rebekka Andersen published the article “Rhetorical Work of the Age of Content Management: Implications for the Field of Technical Communication” in the *Journal of Business and Technical Communication* in December of 2013, which also addresses this question. Her summary of the responses that she received from “three leaders in industry” include:

- *Topic-Based Writing* has become a baseline qualification for people in the hiring industry. They are now conducting tests with case scenarios to see if people can think in terms of topics. These tests aren’t asking for an understanding of technical knowledge but an understanding of content versus topic, and people write long narratives on these tests. Practitioners at conferences are flabbergasted that so few technical communication programs have topic-based courses.
- *Information design and architecture* is the ability to analyze, categorize, and model content; the ability to break down a large body of document and build it back up in a way that is chunked up and usable in databases.
- *Multimedia integration and production* requires technical communicators to be more than just writers. They must know how to integrate other media types— online videos, info graphics, instructional graphics, and social media— to produce and to be able to edit or offer concrete suggestions for improving different kinds of media.
- *Collaboration* is something that most organizations are struggling with. When people are sharing, reusing, and re-purposing content, it is not in local teams but distributed teams across the country or even different countries working on the same project. It is so different from classroom collaboration when it all takes place online.

- *Business analysis* is the ability to gather business needs and requirements— audience analysis, the rhetorical triangle, and narrow the focus, audience, and so on. When you're in a content management context, the rhetorical situation is much bigger and you have to think about different audience touch points- decision makers, business needs— it's not just about the audience's needs but now about business goals and what's feasible. This is a big challenge because you must understand the business of how things work.

The Importance of Collaboration Batova reiterates Andersen's findings on the importance of rhetorical awareness when she says that "the ability to work with audience analysis on different levels and implications with different levels of contextual information" is very important. So is "the ability to draw conclusions and decide the purpose of the quality of the text. Some genres require different levels of quality and writing skills than others." Batova also agrees with King's emphasis on collaboration and Carliner's prioritization of project management skills that they have discussed in previous questions. She says that "it is important to have collaboration and project management skills as a technical communicator because it is in the middle of marketing, subject matter expertise, IT, and other groups. When people disagree, they come to technical communicators for answers."

Hart-Davidson also values collaboration because the "team has to work together to address the problem. Professional development" is a part of "learning to work in a team." Hart-Davidson brings up a point that a person's ability to work collaboratively could provide stronger evidence of an individual's skill sets. "You want to talk to people who have worked with the person, the certification isn't enough because whether you're certified means nothing. You want stronger evidence," and this evidence can come in the form of references from team member and project managers.

4.7.1 Necessary Skills for Professional Practice

What courses/ skills should students in technical communication-related programs learn before entering the profession?

I created this question as an extension to the previous question regarding core competencies. The information collected from this question was to gain insight into how technical communicators should go about learning the skills that they need and to gather information on the types of skills that they should learn before entering practice.

Important Coursework

Palmer says that she loathes when she hears or reads people saying that "all you need is the book *Tech Comm for Dummies*, a course in Word, and a portfolio" to become a technical

communicator. She refers to her blog post *Do I need to take courses in technical writing?* in which she says that “there is no one uber-course that can prepare you to enter the field of technical communication. It’s a matter of assessing what you know, what you don’t know and then filling in the gaps with a course or courses that will make you marketable.”

Introductory Courses

Andersen, Batova, and Hart-Davidson all agree that students need introductory courses into the field. For Andersen, this entails “history and key theories that will help students think critically in order to solve problems, and research methods, such as basic interviews, questionnaires, surveys, qualitative and quantitative approaches to research, which will help them work with subject matter experts” on the job. Batova also agrees with Andersen in regards to the importance of teaching research methods.

Batova also finds a basic technical communication course that focuses on rhetorical and audience analysis, and the genres of technical communication to be critical for the introductory technical communication course. For Hart-Davidson, a basic technical communication course would include theory, because “it is difficult to make time to learn when you are working in a busy, deadline-driven work environment.” Carliner stresses the importance of teaching writing “both at the bachelor’s and master’s level. Most master’s programs make an assumption that the students can write. It’s a false assumption. They [technical communication programs] should conduct writing tests, and students who do not pass should be made to successfully complete a prerequisite course before admission to the program.”

Skill-Building and Other Courses

The skill-building courses that Andersen advocates include topic-based authoring, or information typing, document design and information design, which can be coupled or taught in that order, and collaboration, which could be a course or a key component of every technical communication course. Andersen notes that information design needs lead students to “apply the principles of good (static) design to a more dynamic place and teach them how to think smartly about design impacts.” For collaboration, she “envisions a collaboration between engineering and technical communication courses where everyone must contribute content” while working with people from different backgrounds “in new situations” in order to “help prepare students for project management fields.”

Like Andersen, visual communication is a part of Batova’s list of necessary skill-building courses, but she also includes technical translation issues, from language to language as well as from technical to plain language, and user experience and usability. She explains that UX and usability are important because it helps students “figure out information about their users and allow them to use this information to create helpful text for their user.”

Palmer emphasizes the importance for students to “learn about ideas of publishing” and related languages, such as XML. She also values “content strategy, which includes the rhetoric from the idea of business goals and objectives, strategies to create content for websites and other platforms, and methods of measuring business goals.”

Carliner focuses primarily on the management aspect of technical communication for his other courses. He would require “the business of technical communication, a course that explains how the communication industry works and how to operate within it, a project management course that includes a unit on performance management (how organizations convey expectations to workers and assess the extent to which those expectations have been met), an editing course that goes over both developmental and copy editing, and a conceptual course in publishing technology that explains the range of publishing technologies, from the most complex content management system to the most basic word processor, and how these affect the flow of work on both practical and conceptual levels.” This course, he explains, “should be primarily conceptual so that the students know what the class of technology is and how it works; it does not need to be hands-on.”

Non-management-related courses that Carliner mentions include “at least two or three courses in a technology that students might write about, such as something related to pharmaceuticals, software applications, or engineering. This domain knowledge is essential to success in technical communication and most students trained only in writing lack it.” Similar to Batova, Carliner discusses the importance of user experience design. The content we produce is often part of a broader user experience. At the least, we need to be aware of it. At the most, this knowledge base becomes the basis for career move-up five to ten years down the line.”

Hart-Davidson provides a meta-explanation of the important outcomes that students need to meet after completing a technical communication degree program. First, he explains that the learning goals for these classes must be “driven by knowledge, skills, and values.” Next, he explains that students must be able to provide evidence of what they spent their four years of college learning. The type of evidence that the students must provide include “knowledge, skills, and value”: “Knowledge is the understanding and appreciation of difference genres and their functions. Professional writers need to have a repertoire so that they can know when to move around genres and when to combine [them]. Skills are things you need to know to do. For example, you need to know how to manage a collaborative writing project from start to end, what can go wrong, and so on. Value is the performance-based evaluation of a text. A text is good when you can use it to do what you need it to do, such as helping someone accomplish a task, rather than what gets you an A. Performance orientation is something that you need to learn.”

Although each interviewee’s idea of necessary courses vary in degree and focus, there is overlap among the members of the group. The interviewees’ answers provide insight into their personal academic interests, and the variety of recommended courses provides an indicator of the diversity of technical communication as a field.

Practitioners

Other interviewees focused less on necessary courses and more on overall skills that students should possess before entering the profession. King emphasizes the importance of collaboration and teamwork throughout her whole interview, and she also addresses issues concerning this topic in this question. She explains that “in college, I didn’t do much work working in groups, but my industry experience has been very collaborative. I rarely put together text that is solely mine. College students need to learn to work in teams.”

King explains that collaboration is especially important for technical communicators because, “there are lots of diverse people, departments, and points of views in any given project, and it is my job to pull all of these views together into a cohesive document. Rarely, I will write a draft by myself, but then, a team reviews it, changes it, and provides me with lots of feedback. This process makes it important for you to develop a thick skin and not be offended when receiving critical feedback. It is the tech writer’s job to pull all of the information that the technical people offer and make a cohesive documents that is in the same voice.”

Molisani provides a list of skills that technical communicators should have, but also says, “I personally don’t see the value in a technical communication degree program. I see the value in having the degree in the field that you want to work in, and then, getting a certificate that teaches you how to do the basics of writing. I have taught technical communication, and really, the basics of technical communication, such as the mechanical skills that every technical writer needs to know, can be taught and covered in a certificate.” His examples of concepts that students should learn include knowing:

- What is the difference between conceptual text and procedural text?
- When do you use number and bullet lists?
- How much white space should there be?

According to Molisani, “the more important thing is having the academic background in the field that the person wants to work in, which isn’t going to be taught in a technical degree program.” He emphasizes the significance of subject matter expertise over the necessity of taking technical communication courses as a student.

4.8 Acknowledging Academic and Industry Contributions

4.8.1 Benefits of Internships

Interview Question for Academics: What can students learn from internships and interactions with practitioners that they cannot learn in the classroom?

I asked this question in an attempt to bridge the gap between academia and industry by asking the interviewees in academia to acknowledge the benefits of students having industry experience, specifically through internships.

All of the academics indicate the value and importance of internships. They provide numerous benefits that students cannot gain in the classroom. Carliner says that internships allow students to understand “how things really work. In the classroom, I can always tell someone who has job experience from someone who doesn’t. I wish I could state it in tangible terms, but the students who have job experience ‘know’.”

Carliner continues, “talking with a practitioner is good” if students do not have internship or job experience, but “it only serves to confirm whether the teacher was right or partially right. The primary benefit of guest speakers is helping students begin the process of networking that will be essential to getting and keeping jobs in the future.”

Hart-Davidson agrees with Carliner about the importance of “professional knowledge and professional relationships” as they are “two things that lead to success. Professional knowledge, which is what students learn in school and at work, and professional relationships, or how people interact on the job. This is something that can only be learned on the job,” which is why internships are important. Even though client projects emulate working in these settings, the experience gained from working with professionals during internships is something that students can’t get in school.

Batova understands the difference between internship experience and academic experience. She says that you can “try to imitate these [internship and job] situations in classroom instruction, direction, and feedback,” but you really can’t. “You have to figure out how to evaluate your work, which no one does for you in the workplace. We [academics] try to emulate this process through peer review, but the pressure is different. You have to learn to give and take constructive criticism because the ideas surrounding giving, receiving, and knowing evaluation is really important.” Batova’s explanation is similar to what King previously mentioned, which is the importance of learning to work in collaborative environments, which includes understanding how to give and receive constructive criticism in a productive way that helps people improve their work quality without being offended by the comments they receive.

Andersen contributes that students can “learn a lot from internships by being exposed to

actual projects, problems, and the messiness of how they work.” During this process, students exercise problems-solving skills as they learn “how to solve and contribute to solutions.” There is also “no way to say in the classroom what it’s going to be like [in industry,] so getting exposure to different environments and learning about the many different jobs that a technical communicator can do” is important. Internships provide “a reality check for what you want to do and what you are cut out to do, which is why the more experiences and the more internships [one has], the better.” I learned through an internship “that I didn’t want to do the editing day after day.”

Palmer points out that students learn about “time management” through internships. “You are expected to perform, and you need to think of well-informed solution in minutes! There is no time, and you are under pressure.” Another difference between internships and classes is that the situation is client based, rather than teacher based. “You have to perform and build connections with the client in order to work with them,” which often doesn’t translate in the classroom.

4.8.2 Benefits of an Academic Degree

Interview Question for Practitioners: What can students learn in the classroom that they cannot learn as practitioners?

Similarly, I created the following question for the industry practitioners in order to help bridge the gap by asking them to acknowledge the value and benefits that they saw in having a technical communication related degree.

Palmer mentions that students are “expected to perform” and Bailie agrees. She says that “in industry, you’re expected to hit the ground running, so you have to get the basics” in school. “Some places will look to you to know these things, and they will not know the things that they expect you to know. Industry doesn’t always know everything. There are pockets of really tech-savvy people, and then, there are people who don’t know anything or are very outdated. It is impossible to know everything; you’d have to spend all your time on professional development, so you have to have a good basics and a survey course of all of the possible broad areas that you could get into. Also, know what your strengths are so that you know you’re not relying on your workplace to provide you with opportunities to figure out what you want to do.” Bailie’s advice pairs well with Andersen’s emphasis on career exploration and experience. Students are expected to have a general sense of what they want to do before entering the workforce, and so they should utilize their time at school to figure out what they want to do, or at least what they don’t want to do, and understand the skills that they can contribute.

King’s recommendation parallels Carliner’s response to the question, “what skills should technical communication students have before entering the profession.” Like Carliner, King values understanding how to write. She says, “definitely know your style guides. Have an

overall idea of how to write, understand the rules for punctuation and capitalization, and know how to structure a sentence the right way. On the job, they're going to assume that you know all of this stuff. Most companies have their own style guides but know the standards because they are similar to what you are going to use; also, understand the methodology behind the rules. Lastly, know and understand the basics of editing, such as how to make and read edits."

Students' success as employees correlate with what they learn in school. There is consensus among academics and practitioners regarding what students need to learn and know, and what they should do to prepare for life after graduation.

4.9 Additional Comments

Interview Question: Do you have additional comments or suggestions for improving the relationship between industry and academia?

At the end of the interview, I asked each interviewee if he or she had any additional thoughts on bridging the academia-industry gap. This provided the interviewees with an opportunity to share the knowledge about topics that I did not address through my own interview questions. I separated the academics' responses from the practitioners', not as a way of deepening the gap but in an attempt to help my audience identify the points of disconnect that need to be addressed in order to bring the two groups closer together.

There is a range of perspectives that the interviewees have in terms of the status of the academic-practitioner gap and methods of bridging the fields closer together. Some believe that the gap can be overcome while others believe that its presence is beyond the technical communication community; one interviewee thinks that the field has made much progress in overcoming this problem. Palmer notes that "it's a great profession that has a lot of potential in academia and industry" and there is a consensus that the field is still growing.

Academics' Responses

Andersen and Batova have similar perspectives regarding the current effort and the effort that is needed to bridge this gap. Andersen says "more people need to be doing it" and Batova agrees that "we should try more and more to bridge the gap." Andersen believes that "we need to stop calling for stronger connections and actually start making these connections. We need more people who are going to follow through on these calls for stronger connections."

Carliner agrees that the effort has not been very fruitful. He reflects, "although we have had an ongoing conversation about this issue since I started in the field over 30 years ago, I have only seen marginal progress."

Andersen and Batova believe that a major component of addressing the gap is changing the academic system, not only the curricular portion but also the evaluation and value system of academic research. Batova explains that “it is difficult to find time and support for these types of research projects that require collaboration. It takes a lot of time to work together in academia and industry, and we should find more and better ways to encourage professors to do it because professors have so many other commitments already. Academia-industry projects take more time, so we need to figure out how to get over this difficult situation. Projects like this also require a lot of thinking so having different evaluation methods for these kinds of projects is also important.” Andersen agrees that a major contributing factor to the problem of not having enough academic-industry research projects is because of the current evaluation system for research, and part of addressing this issue is “revamping the rewards.”

Unlike Andersen and Batova, who present necessary changes, for improving this gap, Carliner believes that not much can be done within the technical communication field to fix it. “I think that’s because the real issues go well beyond technical communication and are rooted in the culture of the university and in the increasingly short-term focused corporations. Fixing systemic issues like these goes beyond the profession.”

At the other end of the spectrum is Hart-Davidson who says that “the divide isn’t as real as people think that it is. I maintain a positive relationship with systems who have gone through the program and have gone into industry.” He explained that many of his former students contact him if they have any issues or concerns and that there is an active partnership between him, an academic, and his former students, practitioners. His story indicates that there is hope for successfully establishing positive relationships between the two groups. This method of bridging the gap, which requires students to graduate from technical communication programs and to establish positive relationships with their professors during their time in school, may be a slow process for bridging the gap, but Hart-Davidson’s success story is an indication that other professors can also establish positive connections with alumni who become practitioners through these means.

Practitioners’ Responses

From the practitioner’s standpoint, academia isn’t reflective enough of the industry changes. Bailie acknowledged before that it is nearly impossible to fulfill academic duties while maintaining knowledge of the changes in the industry-side of the field. Nevertheless, she explains that “there are more opportunities for academics to understand what’s new and exciting in the world from industry professionals.” She also acknowledges that not all industry professionals are aware of the new changes in the field. She says that she stopped attending STC conferences because “the content is so basic that there’s nothing to attend.”

Molisani observes that “one of the disconnects that I see is that the stuff that academics teach is not always applicable to the work world. It’s not that the curriculum is outdated,

per se, but they often teach skills that not many students will be using once they enter the workforce. For example, I see academics teach how to write scientific/technical reports as part of the technical writing program. I would assert that probably 1% of technical writers in the world write technical reports, so why are they spending time in curricula teaching something that is not used in industry, whereas how to create procedural manuals, how to use content management systems, how to write for multi-channel publishing, how to create responsive content that can determine whether or not it's being read on a mobile device of PDF and format accordingly. This may be considered advanced stuff, but that's what people are using and that's what people are hiring people to figure out."

Molisani continues to explain that "technical writing covers many areas, so coming up with a curriculum that covers everything is impossible, and that is why you end up coming up with something so generic that it is useless. Professors also can't go and ask practitioners if their curriculum is relevant because each practitioner has different skills and attributes that are different from others." His answer explains why it is difficult to create a comprehensive definition, curriculum, job description, or a list of competencies for technical communication.

On a different note, King says, "I would love to teach a class on writing, but I don't know how to make this possible. I would have to look online and find professors to ask how to go about teaching a writing class at their school. I don't know the different technical communication professional societies, but I would imagine that a lot of people would be interested in teaching but don't know how to go about making it happen." For students, she says, "go out there, start a job, network, and if you are a hard worker, more jobs will come."

Conclusion

These interviews allowed me to investigate eight technical communicator's lives and their professional experiences. Through this process, I also learned of the current perspectives regarding the field, which include skills, competencies, professionalization, and necessary changes that need to occur from both a practitioner and academic point of view. Seeing the different attitudes that practitioners and academics had towards one another, along with all of the other information that I gathered through my interview process, has helped me understand why the gap still exists, and it also helped me formulate suggestions for improving the gap between the two parties.

It seems that both parties acknowledge the other's value and potential for contributing to the field. At the same time, it seems that both groups hold one other to high standards for staying up to date on the technologies and changes in the field.

The field is very diverse and contains many different components and subfields. It could be that the only way to bring the field closer together is to create more distinct categories among technical communicators so that each group can work together to create stronger sub-identities. For example, if academics and practitioners who are interested in medical writing

collaborate to create a unique identity for themselves, maybe both groups will have stronger identities and make greater strides towards conducting academic research that specifically benefits that sub-field.

There is much work to do for identifying methods for bridging the gap between academia and industry, but a promising starting point may be creating opportunities for the members of the two groups to generate conversation among each other. The important part is that the conversation needs to extend beyond the relatively few people who are already aware of this situation. Finding commonalities and, more importantly, differences will help the field address the current issues that are inhibiting its unity.

Chapter 5

Conclusions and Recommendations

I have learned and grown so much during the course of this project. Not only have I learned about formal, academic research methods that I did not know before, but this process has also helped me hone my research skills. Andersen mentioned that interviewing and other qualitative research skills are important as a professional, and I can see the vast difference in my quality, ability, and level of comfort and confidence between my first interview and my last. During this time, I also answered, to varying degrees, the research questions that I had before starting my interviews.

5.1 Answering my Research Questions

I started my research seeking to answer the following three core questions, and I am confident that at this point I can answer each one.

1. What does it mean to be a technical communicator?
2. What is the current status of the gap between technical communication practitioners and academics?
3. How has technical communication changed in the last fifteen years?

Technical communication is an academic and industry field that focuses on creating content that informs its readers by addressing the needs required for making sound decisions. While both groups have this same overall goal, the groups' differing priorities help account for the different methods for reaching the common goal. To further complicate the situation, the technology and programs that technical communicators use are also constantly changing, and members from both academia and industry struggle to stay up-to-date with the changes.

Different levels of knowledge and access to these resources contribute to the rise of even more differences between the two groups.

The academic and industry fields' asynchronous growth process explains the two groups' differing backgrounds. Another contributing factor is the reality that the industry side originated in STEM— science, technology, engineering, and mathematics— while the academic side rose from the humanities. This divergent history explains some of the seemingly fundamental differences between the groups. Regardless of these differences, the field needs to reconcile and build a stronger collaborative culture that advocates partnerships.

Internships have the potential to play an important role in bridging the gap. Students can act as liaisons between their professors and supervisors. Currently, there are not many formal channels for a nationwide flow of internships for technical communication students. Therefore, it is important for faculty to act as advocates for students and to work with industry professionals to establish professional opportunities for students. At the same time, it is unrealistic to expect faculty to build this relationship on their own, which makes it necessary for academics to teach students how to self-advocate and to also seek opportunities for themselves.

Topics such as certification and core competencies contribute to the gap because of the fundamental differences. They also provide great theoretical solutions, but it is easy to realize that these solutions do not translate well into reality because the field is too complicated and diverse to support a one-size-fits-all solution. Many academics harbor the same priorities and principles as one another, and a similar situation takes place in industry. This inadvertently reinforces the gap because there are distinct sides to each problem, and proponents and opponents of the various problems can often be grouped and categorized as “academics” or “practitioners.”

Needless to say, the gap still exists, but there are academics and practitioners actively working to reconcile the differences. Success stories have emerged on a case-by-case basis, but they field as a whole remains divided.

5.2 Meeting my Research Goals

Having personal goals that drove my research allowed me to stay focused, invested, and interested throughout this entire process as the feeling of nervousness, excitement, and curiosity never disappeared. The personal goals that I set for myself before beginning my thesis were:

- ***As an aspiring scholar:*** to find methods for diminishing the gap between the academic and industry sides of technical communication
- ***As a student:*** to define technical communication in a way that would help myself and fellow students understand the value of the skills that we gain while pursuing our

technical communication degrees

- ***As a future professional:*** to discover the sectors within the technical communication industry and understand skills and competencies that employers are seeking in order to highlight and market my assets as a technical communicator

5.3 Meeting my Scholarly Goals

The academia/industry gap is real and its impacts cannot be discounted. At the same time, there are pockets of academics and practitioners who are actively, and successfully, bridging the gap in their personal communities. Because is a long-standing problem, it will be difficult to address and fix these issues throughout the whole field. My interviews provided me with deeper insight into the disconnect and helped me understand the situation in a way that helped me asses the situation and develop a three-part recommendation.

- ***Awareness***
- ***Research***
- ***Partnership***

5.3.1 Awareness

My research helped me realize that, among my interviewees, the practitioners are less aware of, or more nonchalant about, the academia-industry gap. Not all of the practitioners know about the role of the academics in their field. This is problematic because this lack of knowledge makes it impossible for practitioners to find a place for the academics to fit in within industry's scheme of the field. Both groups need to be more aware of what the other group does because this lack of awareness presents major obstacles for creating a healthy and mutually beneficial relationship between the groups. Also, because technical communication is a relatively new academic field that didn't exist when some of the practitioners were in school, it can be easy for them to discount the degree.

Batova mentions earlier that industry is "so product and goal driven that they can't spend the time to solve problems." This is a likely reason why practitioners don't have time to research and learn about academic programs. Practitioners should develop a stronger awareness of the academic side, and in order to promote this, academics should campaign harder for a partnership by highlighting the benefits of collaboration. Because academics are busy fulfilling their faculty duties, they could even enlist their students to research and approach practitioners.

Academics should also establish a friendly and welcoming community for practitioners who are interested in learning about the academic side of technical community to find and reach out to. King expresses her excitement towards the idea of teaching but has no idea where to begin. People like her would be a wonderful asset to academics, as she can contribute to developing up-to-date and practical technical communication curricula. This hypothetical academic group would require a lot of PR in order to be recognized because practitioners who do not of its existence cannot reach out because they would not even know that they can research such group.

5.3.2 Research

Research is a major component for a growing field. Discovering new knowledge and updating best practices is critical for any field. There is so much research to do because technical communication is affected by technology, which is constantly updating. It is unfortunate that the academics who are willing and interested in conducting research with practitioners are inhibited from doing so because of faculty expectations that have not changed in a long time.

Andersen and Batova not only point out the unaccommodating academic environment that is not conducive to academic-practitioner partnerships, but Andersen adds that once a publication goes through the slow academic review process, the work loses its relevance. My interviewees did not have a solution to this problem, and nor do I, but collecting evidence that demonstrates the importance of academic-practitioner collaboration and shows the crippling effects of the current system that hinders this form of research may help enact change or the development of a faculty research paradigm that is more relevant to technical communication than the traditional standard that apply to the general English degree.

Technical communication academics should take advantage of this opportunity to participate in and coordinate presentations with practitioners at industry-focused conferences and other professionalization opportunities, which, according to Andersen, is rare among current academics. Hopefully, this partnership will help bolster the ethos of the academic's "relevance" and the practitioner's ethos as a researcher. During these events, the two parties can establish personal relationships that assist building the community of practice that Kline and Barker mention in their article. Practitioners could even submit proposal requests for the research they need, and interested academics could answer these requests, thus forming a partnership. This system could create a self-perpetuating research cycle.

5.3.3 Partnership

Going into the project, I understood that academic-industry research partnerships were important, although I didn't know why. Jennings' article "Technical Communication Practitioner-

Student Interaction: an Opportunity for Students to Learn from the Practitioners' World of Work" brought my attention to the potential important role that internships could play in bridging the gap between academia and industry (Jennings, 2012). This article inspired me to ask my interviewees about their thoughts on internships to gauge their attitude on this matter.

I received positive feedback, as academics expressed their enthusiastic support for internships, and they provided numerous benefits, many of which cannot be taught in the classroom, that students can gain for these quasi-professional experiences. The practitioners also acknowledged the benefits of formal education and their contribution to workplace success. This helped establish that internships are a necessary component to the technical communication curriculum. Even though we established the importance and benefits of internships during the interview, there was no word on how students could find them.

This lack of information reminded me of my personal undergraduate experience, when I attended countless career fairs such as the Engineering Expo and the Business Horizon, and even the general ones such as Fall Focus of Hokie Connections, without ever feeling that there was a place for me among the companies that were there. I remember receiving a lot of positive feedback, especially from engineers, about how much they needed writers and that writing was a skill that there is a shortage of, but they always expressed their regret for not knowing how to incorporate me into their pool of capable, prospective interns. I would always get the generic "if you visit on our company website, you can find all of the jobs listed there." Unfortunately, when I did visit those company websites, I only found internships in engineering, business, and other specialized categories; even full-time writing and communication positions were difficult to find.

What I didn't understand was why companies that knew they needed writers and valued the skill did not have internships for writers who they could expose to the subject matter knowledge of their field and teach the students, at a young age, the subject matter expertise that the students would need to contribute as professional, technical communicators. There is not much we can do as students, especially undergraduates, to convince companies that they should hire us or that they could benefit from hiring us. It would be wonderful if we had faculty advocates, within and outside of our department, who could convince current industry professionals in and out of our field, that they could benefit from investing in technical communication interns. We may not get university-sponsored career fairs like the engineers and business majors, but I think that with more effort, our department can build upon the currently existing professional weekend to incorporate a more job-oriented component to this helpful professionalization opportunity for its students.

5.4 Meeting my Student Goals

As a student conducting this research, my primary goal was to truly understand the value of my degree, and use my research findings to help other students do the same by creating a senior seminar course syllabus for the Professional Writing option within Virginia Tech's English department. This content of this syllabus intends to help students who are close to graduating navigate through the process of discovering technical communication in the way that I did through this project. It also includes information and projects that I wish that I had access to as an undergraduate going through this program.

This course will help students define and understand what it means to be a technical communicator, understand the history of the field, be introduced to a brief overview of the common problems among academics and practitioners, identify the common jobs and tasks of technical communicators, and then connect their current coursework to market demands and find ways of marketing themselves to prospective employers. If there is time in the semester, they would also research subsets and closely related fields to technical communication.

By going through the process that the students in this class would go through, I have developed a short and long answer that defines technical communication:

My short answer is: a technical communicator is someone whose writing helps ensure that its readers are well-informed before taking action (whether it's putting together furniture from a box or deciding which computer program to use to complete a project). Technical communication does not always require text and can be published in multiple domains.

For a longer answer, I would continue on to explain that nowadays, everyone is writing and creating content. It is up to the technical communicator to organize the information created by multiple people with different levels of writing skills and styles and reconstructing it in a way that promotes understanding for the audience. The skills that facilitate the technical communicator to make this possible not only consists of writing and editing skills (including heightened rhetorical awareness, which is required in our society because of the multiple range of users and purposes that information serves these days) but also include knowledge and expertise in visual and informational design, multimedia and textual editing, information structuring and indexing, translation facilitation (from technical to plain language, as Carliner mentions, as well as from a country's language to another, from Batova and Bailie), user experience, and research methods.

This process involves intense collaboration and management because technical communicators must work with subject matter experts, users, shareholders, and marketing, IT, and other groups and mediate the information that each group prioritizes and wants to include to produce one coherent product.

5.5 Meeting my Professional Goals

I hate to admit that although I tried hard to convince others of the value of my degree, I did not always buy into my own pitch because of my inability to find jobs that I qualified for. During the past year, I received weekly emails containing job postings from Indeed, Monster, and CareerBuilder for technical communication positions in Northern Virginia and Charlotte, North Carolina. At first, I was ecstatic to find that there were enough available jobs to receive new postings every week. It didn't take me very long to realize that I was either over-qualified for some of these positions (applicants only need a GED or a high school diploma to hold a "writer," and sometimes even a "technical writer," position!) or way under-qualified. I either did not have the required years of experience, the subject-matter expertise, or knowledge of certain programs or skills. There were so many barriers that I had to overcome in order to find a job, and I was pretty sure that I couldn't meet these qualifications before I graduate.

After my interviews, I can now confidently explain to anyone what my role is (or could be) as a technical communicator. I also understand how the undergraduate training extends beyond what I specifically learned in the courses. For example, I learned specific genres, writing styles, and content organization skills in Writing for the Web, and this knowledge transferred into to my Creating User Documentation course. The combination of these skills have taught me how to transform my writing into a product through topic-based writing, structured authoring, and information typing. Before the interview, I often found myself providing amateur descriptions of each of these skills, hoping that someone would recognize the importance of the skills. Now, after the interview, I have identified the professional terms that I can use to market myself. I also know important skills to pursue learning, such as search engine optimization and content repurposing, and through the interview process, I also found job positions, such as content strategist, that I aspire to hold some day.

I have greater ambitions and a clearer professional path that I want to pursue, thanks to all of the information that my interviewees have offered. I no longer am afraid of accepting an entry-level job that may sound basic, because I now know the value of growth, knowledge, and expertise that comes from experience. Bailie, Molisani, and King have helped me understand the importance of starting from the bottom and working up. Bailie says that it's not the number of years of experience that matters. "Some people catch on very quickly where as others never get it." She says that the opportunities that she had during the beginning of her career forced her to go beyond just learning to use the programs to understanding the logic behind these programs has allowed her to become an amazing, and highly-demanded consultant and content strategist.

In order to manage other technical communicators, I have to have a solid understanding of what each job entails, the client and users' needs, available tools and technologies for accomplishing various tasks, as well as how to use these tools and what they are good for and when they should be avoided. This is not something that I can learn overnight. As King mentioned before, getting experience with different company cultures and expectations will

allow me to see the different perspectives, priorities, goals, and limitations of the different invested parties, which will allow me to contribute more than just my writing skills as a technical communicator.

Thanks to Hart-Davidson, I understand that my degree isn't the only one where students don't have a clear-cut path towards a profession. I also know that I have a plethora of skills and competencies that can help me adjust and contribute to a range of industries. Now, if I'm asked, "what is a technical communicator?" I have short and long answers that I have prepared to share!

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Appendix A

Course Syllabus

Course Syllabus for Senior Seminar: Discovering Technical Communication as a Profession

A.1 Course Overview

The purpose of this course is to help students understand the value of a technical communication degree through the process of linking their academic courses and accomplishments with the industry expectations for technical communicators. This will in turn help them with the process of finding, applying for, and obtaining technical communication jobs, as well as helping them grow as academics and future industry professionals.

A.2 Course Objectives

This course will help students define and understand what it means to be a technical communicator, understand the history of the field, be introduced to a brief overview of the common problems among academics and practitioners, identify the common jobs and tasks of technical communicators, and then connect their current coursework to market demands and find ways of marketing themselves to prospective employers.

A.3 Required Text

A.3.1 Course Readings and Class Discussion Topics

The readings directly correlate with the class discussions and assignments in this course. You will receive 20% of your grade based on your class participation and contribution; this also includes any individual and group presentations that are assigned throughout the semester. The readings will also provide you with the information that you need in order to complete your assignments.

Topic: Tracing the History

Connors, Robert J. "Landmark Essay: The Rise of Technical Writing Instruction in America." *Three Keys to the Past The History of Technical Communication*. Vol. 7. Stamford: Ablex Corporation, 1999. 173-95. Print. *ATTW Contemporary Studies in Technical Communication*. (Chapter 9 of *Three Keys to the Past*)

Topic: Recent History

Andersen, Rebekka. "Toward a more integrated view of technical communication." *Communication Design Quarterly Review* 2.2 (2014): 10-16.

Topic: Understanding Potential Professional Obstacles

Bloch, J. "Glorified Grammarian or Versatile Value Adder? What Internship Reports Reveal About the Professionalization of Technical Communication." *Technical Communication* Washington. 58.4 (2011): 307-327. Web.

Topic: Core Competencies

Andersen, Rebekka. "Rhetorical Work in the Age of Content Management: Implications for the Field of Technical Communication." *Journal of Business and Technical Communication* (2013): 1050651913513904.

Carliner, S. "The Three Approaches to Professionalization in Technical Communication." *Technical Communication*. 59.1 (2012): 49-65. Web.

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A.4 Course Assignments

A.4.1 Major Assignment

Defining Technical Communication through Professional Networking

Pt. 1 Search for technical communicators on LinkedIn, compile, and organize the job titles and skills associated with this position.

Pt. 2 In groups, compile the lists of titles, skills, and terms that are common among technical communicators and compile a technical communicator's glossary using structured authoring methods.

Marketing Your Transferable Technical Skills

Research, identify, and categorize common programs and mark-up languages that industry professionals use in technical communication. Describe each category of program or skill. Find academic counterparts (if any) and any comparable programs that you used during your education so that you can offer alternatives to any required program skills on job descriptions (for example, they require MS Publisher but you know how to use InDesign).

Identifying and Demonstrating Core Competencies

Reflect on your growth as a technical communications student. Look back on all of the programs and skills that you have acquired while earning your degree (examples include multimedia editing, rhetorical analysis, web content development, topic-based writing, structured authoring, etc.). Use the core competencies that you have identified in your readings to connect these skills with your personal academic and professional experiences. Next, synthesize this information in a way that helps readers understand how your degree directly prepares you to be a technical communicator. Provide evidence of the knowledge.

Professional Portfolio

Search for two technical communicator or technical communication-related jobs that you are interested in and qualify for. Tailor your resume to meet the requirements of the job. Draft cover letters that showcase your experiences and competence as technical communicators.

A.4.2 Industry Tests

Students will prepare for entering the job market and increasing their competitive edge by taking industry tests that currently used to distinguish qualified job candidates from the ones who are not. These industry tests cover topics including grammar, copy-editing, topic-based writing, information design, and collaboration.

A.4.3 Homework and Reflections

Any additional homework that is assigned in this class, along with in-class reflections and blog posts, will fall under this category.

A.5 Course Policies

A.5.1 Attendance

Students receive points for coming to and participating in class, which means that you will not receive participation points for the days that you are absent. At the same time, I understand that personal emergencies may occur. Three absences will be excused during the semester; late work from these absences will receive half credit. Further absences without formal documentation excusing you from class (a note from Schiffert or the Dean's office) will be unexcused. Keep in mind that in-class work may not be completed for credit outside of class.

If you are going to be absent, you are responsible for notifying me ahead of time and following up with me to receive missed assignments. You will also be held responsible for all of the material that was covered in the class that you missed. Your absence, excused or not, is not a legitimate excuse for not being fully prepared for the next class. You are responsible for earning your grade, and missing class will present obstacles to succeeding in this course.

A.5.2 Grading Criteria

Course Grade Breakdown

Grading Scale

Course Readings and Class Discussion Topics	20%
Major Assignments	60% (15% each)
Industry Tests	10%
Homework and Reflections	5%
Attendance	5%

A	100-94	A-	93-90		
B+	89-87	B	68-84	B-	83-80
C+	79-77	C	76-74	C-	73-70
D+	69-67	D	66-63	D-	62-60
		F	59-0		

A.5.3 Professional Classroom Behavior

Class Disruptions

Professionalism is an important aspect of this class, so class disruptions will not be tolerated. Disruptive behaviors include, but are not limited to, using unauthorized technology in class, being late, and not respecting others in the class. If you know that you will be running late to class or need to leave early, let me know in advance.

Technology Policy

Courtesy and professionalism are expected in the classroom. Unless otherwise instructed, the use of electronics is prohibited during class; it is distracting to you and your peers. This means that laptops, cell phones, iPods, iPads, and other electronic devices must be put away.

Late Work

Late work will be accepted for half credit, except in the case of documented emergencies (Note from the dean of your college). This is also a part of professionalism, as you cannot submit projects, reports, or other assignments in a real work setting without facing consequences. If a legitimate emergency arises (one that the Dean will excuse) and you cannot make it to class, email me your assignment prior to the due date. Being sick is not an acceptable excuse so don't wait until the last minute to work on your assignments. Time management is key to success in college.

A.5.4 Special Accommodations

If you have a disability (learning disability, physical disability, mental health issue, etc.) that may in some way affect the way you learn, perform, participate, and/or are assessed in this class, I am happy to make adjustments or accommodations to ensure that you are treated fairly and can get everything you need out of this course. Please let me know within the first week of class if you have an issue or concern. In order to qualify for accommodations, you need to get documented with the Services for Students with Disabilities (SSD) office, located at 150 Henderson Hall you can also contact them at 231-3788 or spangle@vt.edu.

A.5.5 Academic Dishonesty

The honor code will be strictly enforced in this course. All assignments will be considered graded work unless otherwise noted. All aspects of your coursework are covered in the Honor System. Any suspected violations of the Honor Code will be promptly reported to the Honor System.

Honor Code

The Virginia Tech Honor System Constitution sets forth the vital principle that “every student has the right to live in an academic environment that is free from the injustice caused by any form of intellectual dishonesty.” Therefore, the Virginia Tech Honor Code will be upheld in this course for all work submitted. The Undergraduate Student Handbook discusses plagiarism fully, and all students are responsible for reading and abiding by the concepts, policies, and guidelines in these pages, as well as those in the Honor System at www.honorsystem.vt.edu.