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# Subverting the subject position : toward a new discourse about students as writers and engineering students as technical communicators

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### SUBVERTING THE SUBJECT POSITION:

# TOWARD A NEW DISCOURSE ABOUT STUDENTS AS WRITERS AND ENGINEERING STUDENTS AS TECHNICAL COMMUNICATORS

By

## ROXANE GAY

### A DISSERTATION

Submitted in partial fulfillment of the requirements

for the degree of

## DOCTOR OF PHILOSOPHY

(Rhetoric and Technical Communication)

MICHIGAN TECHNOLOGICAL UNIVERSITY

2010

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This dissertation, "Subverting the Subject Position: Toward a New Discourse About Students as Writers and Engineering Students as Technical Communicators" is hereby approved in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY in the field of Rhetoric and Technical Communication.

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#### Abstract

There is ample evidence of a longstanding and pervasive discourse positioning students, and engineering students in particular, as "bad writers." This is a discourse perpetuated within the academy, the workplace, and society at large. But what are the effects of this discourse? Are students aware faculty harbor the belief students can't write? Is student writing or confidence in their writing influenced by the negative tone of the discourse? This dissertation attempts to demonstrate that a discourse disparaging student writing exists among faculty, across disciplines, but particularly within the engineering disciplines, as well as to identify the reach of that discourse through the deployment of two attitudinal surveys-one for students, across disciplines, at Michigan Technological University and one for faculty, across disciplines at universities and colleges both within the United States and internationally. This project seeks to contribute to a more accurate and productive discourse about engineering students, and more broadly, all students, as writers—one that focuses on competencies rather than incompetence, one that encourages faculty to find new ways to characterize students as writers, and encourages faculty to recognize the limits of the utility of practitioner lore.

### Introduction

Writing instruction within the disciplines and across the curriculum is an ongoing and pressing concern in higher education. This dissertation attempts to identify and address a longstanding, dominant and pervasive discourse that positions students as bad writers and undermines the ambitions of writing instruction programs and poorly serves students' best interests—a discourse promoted through the discursive statements of practitioner lore.

In Chapter 1, "What We Mean (and Imply) When We Say Students Can't Write: Identifying the Subject Position" I outline the history of positioning students as bad writers with a specific focus on engineers as bad writers. I define the purpose of this dissertation's research project, two quantitative surveys, one deployed to students at Michigan Technological University and one deployed to faculty both within the United States and internationally and how those surveys are designed to help me determine the influence of this discourse on student writing and writing confidence, as well as the extent to which faculty are complicit in the perpetuation of that discourse. I examine the history of how engineers have been positioned as bad writers or otherwise ineffective communicators, attempt to define good writing and introduce the concept of practitioner lore as the primary means by which a negative discourse about student writers is propagated. This chapter ends with an overview of some of the concerns we face in writing instruction at the university level to provide a clearer understanding of the climate within which a negative discourse about students as writers can flourish.

Chapter 2, entitled, "A Theoretical Framework for Subverting the Subject Position in the Discourse About Students as Writers" establishes a theoretical framework informing this research project. This framework offers a lens through which we can begin to consider both the reach and influence of the discourse (created by the lore about students as writers). I draw from the work of Michel Foucault, which informs this dissertation in three ways—his theories on power, discourse and the subject position and how this work tells us that discourses always function to position subjects, they are productive, and they are hierarchical. I also look to literacy studies, which, in conjunction with Foucault's work, demonstrate that discourse is ideological, and agenda driven. Etienne Wenger's work on communities of practice also informs this dissertation with his scholarship on how communities of practice function, positions members within that community, and work to distribute power. In thinking about a university as a community of practice, and an engineering school as a community of practice, Wenger offers valuable insights into how we think about students as writers and how we participate in and are implicated within the discourse about students as writers. Finally, I analyze both early and modern engineering communication texts to demonstrate how the discourse surrounding students, and more specifically engineering students as writers, manifests itself in these texts. More specifically, I assert that these texts advance my argument by revealing the ways, sometimes subtle and sometimes overt, in which the discourse influences the pedagogical approaches in these texts.

Chapter 3 of this dissertation, "The Methodology and Methods for Measuring the Influence of the Discourse About Students as Writers" details my research methodology and methods. I introduce the primary research questions guiding this project and a model of my research hypothesis. I provide a rationale for using a survey-based approach informed by principles of feminist research. I justify my choices for research site selection and sample populations, explain the survey designs I employed in the two attitudinal surveys used in this project—one deployed to students at Michigan Technological University and one deployed to faculty, across disciplines, at universities both within the United States and abroad, and provide a detailed, demographic overview of the survey respondents, 83 students and 247 faculty.

The fourth and fifth chapters, "Investigating the "Brutal Discourse of Ridicule and Control": How the Student/Faculty Survey Results Speak to the Practitioner Lore about Students as Writers" is where I analyze a selection of the data collected from the two surveys deployed in this project within the context of six statements culled from practitioner lore about students generally and engineering students specifically as technical communicators.

In Chapter 6, I continue to analyze the significance of the survey results and whether or not the results support my hypothesis that the negative discourse about students as "bad" writers creates a self-fulfilling prophecy where students internalize the discourse, begin to believe they are bad writers, and perform to expectations. I also attempt to answer the questions that have guided this project. I assert that we need to contribute to and encourage a more positive, productive discourse about the nature of student writing. We need to start fostering more realistic expectations, both within the academy and the workplace, about what kind of writing skills to expect from recent graduates and what can be realistically accomplished in four or five years. How do we

conversations that can lead to more innovative pedagogical approaches in the teaching and evaluation of student writing? Finally, I offer directions for future research building on this project by also incorporating the perspectives of employers.

This project seeks to contribute to a new, more accurate and productive discourse about engineering students, and more broadly, all students, as writers—one that focuses on competencies rather than incompetence and one that offers students a new set of expectations, ones that are more realistic and designed to encourage active engagement and participation in the academic community of practice instead of isolation. Students can't write.

This is a statement many if not most faculty have heard at one time or another over the course of their career. This is a broad, troubling statement and yet it is pervasive and frequently repeated. There is ample evidence students can indeed write, particularly given that thousands of students matriculate from universities each year. Saying college students can't write has become more of an instinctive reflex than an accurate assessment of college student writing. This dissertation begins with a question: Given substantial research into composing and increasingly sophisticated classroom practices that prepare students to write in and across the disciplines, why do so many university faculty members and employers claim students are not using rhetorical principles effectively or demonstrating an understanding of how to write in a range of contexts? In simpler terms, why is it, in higher education we so often tell the story that students, across the disciplines, cannot write? Narrowing the scope of that question, why is it that so often we tell the story that engineering students cannot write?

When I first began pursuing my doctoral degree at Michigan Technological University, the incoming Graduate Teaching Instructors (GTIs) in my program participated in a two-week pedagogy seminar to begin preparing us to teach Revisions, a sophomore-level, multimodal composition course. We learned about developing our syllabi, engaging students with experiential activities, assessing student performance and the many principles and practices required of a good teacher. Throughout the seminar, I

began to take notice of an interesting undercurrent. Many of the seminar instructors, both faculty and seasoned GTIs, framed the writing skills of their students in very troubling ways. The disposition of the Michigan Tech student toward writing was characterized as quite negative and several criticisms were leveled against the quality of student writing. By the end of the seminar I was, frankly, quite worried, wondering if I was adequately prepared to teach what were, in essence, very bad writers.

Once the semester began, I kept waiting for that other shoe to fall but by the midpoint of that first semester I realized the students I had heard about were certainly not the students in my classroom. While I encountered the kinds of issues typically found in student writing in introductory composition classes, I also found that the student writing was generally quite competent, well-reasoned and compelling. Students demonstrated a real capacity for imagination and critical thinking and were eager to embrace the rhetorical principles and New Media elements of the course. There was, for me, a serious disconnect between the anecdotal characterization of Michigan Tech students as writers and my actual experience with their writing.

This experience and the marked difference between the discourse and my own encounters with student writing had a profound impact on me. Every research project has a point of origin. This story about my introduction to the teaching of writing is that point of origin for this dissertation. It was an experience that compelled me to want to learn more, to dig a little deeper, to see if the attitudes I encountered in one pedagogy seminar were an isolated phenomenon or if they were indicative of how the wider academic community perceives student writing. As an instructor at a technological university with

a student body predominantly majoring in the engineering disciplines, I was particularly interested in how engineers and engineering students are framed as technical communicators.

As my teaching career has progressed, I continue to find that faculty and instructors across disciplines are often quite critical of student writing, sometimes fairly but often unfairly, particularly given that critiques of student writing tend to be generalized and insulting rather than focused in service of actual writing assessment. The criticism of engineering student writing is particularly pronounced. It seems we no longer evaluate student writing solely on its merits. Instead, we evaluate student writing based upon our expectations and disciplinary influences which have largely been shaped through anecdote and prior experience rather than current realities. We have surrendered to the pervasive lore that dictates that students cannot write. To test this hypothesis I try to identify the existence or lack thereof of a discourse that positions students as writers in negative ways as well as the influence and reach of such a discourse by deploying two attitudinal surveys, one for students at Michigan Technological University and one for faculty from universities both within the United States and internationally. Is it that students can't write or merely that university faculty say students can't write?

### **Does What Happens Here Happen Everywhere?**

Michigan Tech is, of course, but one university with a very unique student population. There are hundreds of thousands of students at universities across the country who have to write and otherwise communicate in First Year Writing programs, within their disciplines, and across the curriculum. Given this context, is this disconnect between how students write and how the character of that writing is constructed by faculty a phenomenon unique to Michigan Tech or is there evidence that there is a disconnect between the discourse and reality at universities across the country?

Two recent developments speak to the ongoing and pervasive nature of the discourse about students as writers, indicate that this phenomenon is global rather than local and reinforces the timeliness of and need for this research. Andrea Lunsford recently released the initial findings of the Stanford Study of Writing—a five year longitudinal project where she collected nearly 15,000 student writing samples everything from in-class assignments, formal essays, and journal entries to emails, blog posts, and chat sessions. Based on what she saw in that writing, Lunsford believes we are in the middle of a significant literacy revolution because young people are writing far more than any other generation. Oftentimes, we hear that young people are writing less because we live in a digital age where communication, in its many forms, has become abbreviated, and at times, even unnecessary. Not only are young people writing less, they're not writing as effectively and have become addled by the constraints of text messaging and electronic communication. "If there is a consensus among teachers of writers, it is that each new generation of writers is less capable than the last, with fingers pointing at the deficiencies of public education and the mentally numbing effect of video games and electronic communication, among other factors" (Connatser 130). Our assumptions about student writing are often reduced to the lowest common denominator. We assume that students' literacy skills are devolving rather than evolving.

The results of the Stanford Study of Writing contradict these pessimistic attitudes. Not only did Lunsford find that students were writing more, she also found that students were writing rhetorically—they were assessing their audience and adapting their tone and technique to best get their point across. Lunsford's study noted that while the students she studied began their college experience as confident writers, by the end of their first year, their confidence had slipped considerably. Any number of factors could contribute to this drop in student confidence but it is interesting to observe that students did not feel more empowered as writers after a year of college writing instruction. It is also interesting to note that students are writing more, not less and are doing so quite competently despite the seeming weariness and absolute impatience faculty demonstrate when it comes to student writing.

Lunsford's study, while valuable, is only a starting point. Her research focuses on student writing practices and writing development within the context of a single university. The research questions guiding the study are solely focused on the scope of student writing, the manner(s) in which students write and how the character of their writing develops over the course of a college career.<sup>1</sup> What the Stanford Study of Writing does not do is focus on university faculty as an area of inquiry. It is invaluable to learn about how students are writing but I believe it is equally valuable and provides a more comprehensive picture if we study the role faculty play in the development of student

<sup>&</sup>lt;sup>1</sup> The research questions for the Stanford Study of Writing include: How can we define the scope, nature, and function of writing today, especially when "writing" now includes oral, visual, multimedia, and technology-enriched or even technology-driven components? What can students articulate about their own development as writers, and how is this development related to success in and perhaps beyond college? How do students' extracurricular writing practices inform their academic writing practices, and development? What kinds of writing instruction and support for that instruction can best enable the development of writing abilities in college? (Stanford Study of Writing)

writing and if we study not only formal assessment but the informal assessment of student writing that takes place by way of practitioner lore. This dissertation project seeks to build upon research like the Stanford Study of Writing by introducing the added dimension of exploring faculty attitudes toward student writing, how faculty incorporate writing instruction into their classes, across the curriculum and within disciplines, as well as how faculty conduct formal and informal assessment practices and what motivates those assessments. <sup>2</sup>

Another interesting moment in this ongoing and far-reaching discourse about students as writers comes in the form of a May 19, 2010 article in the *Boston Globe* by Kara Miller, who teaches English at Babson College. She writes, "When you teach English to college students, you quickly realize two things. First, many seem to have received little writing instruction in high school." Later, she adds, "Many of the students whose work I correct are smart, motivated, and quick to incorporate suggestions. But they have either forgotten the rules of writing, or they never learned them in the first place." Throughout the article, Miller derides student writing as careless and mechanically incompetent. She equates "good writing" with grammatically sound writing, with no meaningful discussion of other factors that might contribute to good writing, such as rhetorical awareness, effective organization, or the demonstration of critical and creative thinking. Even more disheartening than Miller's opinions are the opinions expressed in the Comments section of the article where many individuals lament an increasingly

<sup>&</sup>lt;sup>2</sup> By formal assessment practices I am referring to grading, providing written feedback, having students perform peer review, and conducting conferences or similar such face to face meetings with students to discuss writing in a formal and professional setting. By informal assessment practices I refer to the assessment of student writing that takes place between faculty outside of the classroom and/or in social settings.

illiterate culture, an overreliance on technology and digital modes of communication and "lazy" or "indifferent" students who only care about receiving a grade and are incapable of writing effectively.

The intensity of the attitudes in this Comments section speaks volumes about the pervasive and unyielding nature about the discourse about students as bad writers, a discourse which clearly extends beyond the academy and is also perpetuated by the general public. The script is familiar—attack the high school educational system, reduce "good writing" to mechanically flawless prose, characterize students as lazy, incompetent and shiftless, and finally, pander to an audience all too willing to believe that the higher education system in this country is failing. This type of rhetoric has been expressed before and will be again. The only thing that really changes is the architect of that rhetoric. We are consistently left with the impression that a student who writes well is an exception, not the rule. We are left with the impression we should concede defeat and accept that expecting students to write well is futile.

### **Engineers Are Writers Too?**

As a technological university, the majority of students at Michigan Tech major in the engineering disciplines<sup>3</sup>. The unique makeup of the Michigan Tech student body provided me with an invaluable opportunity to focus my inquiry primarily on students within the engineering disciplines. There is a well-established discourse, one that may or may not be justified, concerning the problematic communication skills of engineers both

<sup>&</sup>lt;sup>3</sup> As of the Fall 2009 semester, 4,013 or 56.3% of the 7,132 students enrolled at Michigan Tech are enrolled in the College of Engineering. Four hundred and twenty one students are enrolled in the School of Technology (Michigan Technological University).

in the academy and the workplace. In fact, the history of technical communication and concern for the communication skills of engineers has long been intertwined. The rise of technical communication can be traced to the need for engineers to better communicate as society became increasingly technologically oriented. This rise can also be attributed to the desire for the engineering profession to elevate its status, particularly between 1850 and 1900 when, "engineering English' was developed in part not to help vocationalize engineering but to help humanize it" (Kynell 266).

Where once it had been enough for engineers to be technically adept, it quickly became necessary for engineers to also develop a more liberal arts skill set. Finding effective ways of incorporating technical and liberal arts skill sets, however, has proven challenging. "Since the mid-nineteenth century, as engineering training shifted from apprenticeship experiences on the shop floor and construction site to formal academic programs in the lecture hall and laboratory, the pedagogy and place of writing in the curriculum have been topics of debate, frustration and experimentation" (Youra 1). That is, scholars both within engineering and the humanities recognize that communication skills are integral to the engineer's work but answers to the questions of how to bridge the two fields and how to help engineers become better communicators remain elusive.

Part of this elusiveness stems from what is, on the surface, a difference in what engineers prioritize and what those in the humanities, or writing scholars prioritize. "Engineering defines itself as a field concerned with the production of useful objects. In keeping with this concern, engineers tend not only to see their own knowledge as coming directly from physical reality without textual mediation, but also to devalue the texts engineers themselves produce, seeing them as write-ups of information found elsewhere"

(Winsor, "Engineering Writing" 58). Part of this dissertation project, then, is also to identify, within the discourse, whether or not Winsor's statement still holds true or if engineers now value textual mediation as a productive and useful object.

Scholars have grappled with finding the most effective ways to improve the communication skills of engineers and to incorporate the teaching of communication into the engineering curriculum for nearly 100 years. Most anyone who has worked with engineers has heard someone state that *engineers can't write* but rarely does that assessment go any further, or detail specific ways in which the writing of engineers is problematic or inadequate. In 1927, William Wickenden stated that, "The engineering student has all the rudimentary defects of the pseudo-educated public: bad spelling, meager vocabulary, vague comprehension, confusion of shades of meaning where there should be discrimination, indifference to grammar, liking for vulgarisms and barbarisms, amorphous structure" (447). Wickenden's disdain for the engineer's writing skills are palpable. However, he also stated, "A new day for engineering will dawn when it is recognized that it is not enough for the engineer to be highly proficient in his special functions, but that he must have the humanistic backgrounds and the arts of expression which will cause him to be sought after as an associate and team worker by other groups of men" (Wickenden 449). While Wickenden had little positive to say about the communication skills of engineers, even in 1927, before the rise of technical communication, he demonstrated an understanding that engineers need to be wellrounded to achieve genuine success as an engineer.

In 1951, Herbert Sawyer wrote, "The engineer knows how to solve simple problems and make judgments almost automatically on the basis of purely numerical or

materialistic data. He needs more facility in recognizing and evaluating the intangibles. He needs this facility to better meet the complex problems of living, involving right and wrong, religion and the spirit, marriage and family relationships, and mental health and happiness" (471). Again, a scholar is acknowledging the importance of intellectual breadth. Historically, it has been clear that engineers need more than technical brilliance to be well-rounded professionals and that a facility with communication, both written and oral, is a critical component in becoming a well-rounded engineer. However, beyond the grandiose statements about the ways in which engineers were ineffective or inept communicators, early scholarship on the communication skills of engineers offered little in the way of guiding how engineers might develop the necessary intellectual breadth to succeed.

Several other texts from the early 20<sup>th</sup> century also reference the deficiencies of the engineer as a communicator as well as the need for the engineer to better develop their communication skills so as to become better engineers (see Harbarger, Rider, Petroski, Sawyer). What remains largely unknown, however, is how engineers internalize this discourse and whether or not the discourse influences how they perceive themselves as writers but there is evidence that the discourse does have a negative effect. In her ethnographic study of how engineers communicate in the workplace, *Writing Power*, Dorothy Winsor noted, "They joke that I might be learning about how not to write at work" (2). She often observed that engineers were very self-deprecating about their writing and communication skills, even when there was ample evidence they possessed excellent communication skills. In some form or fashion, the engineers Winsor studied internalized the negative discourse claiming engineers cannot write.

In a self-evaluation of their writing skills, in a study conducted by Roland Yeo, a professor at Temasek Polytechnic University, a significant number of students felt that their written communication skills were average or poor in several areas including vocabulary, spelling, grammar, sentence structure, paragraphing and organization (Yeo 98). Yeo noted that even though engineering students possessed this negative selfperception, that image was not necessarily reflected in their writing. In another study, conducted by John Davies and Glynis Cousin of Coventry University, "To the question 'what do you feel are your academic strengths' none of the engineering students offered examples that could be linked to reading or writing" (Davies & Cousin 4). The students in the Davies & Cousin study consistently indicated they felt spoken communication was important, and that they felt a certain confidence when using oral communication skills. Similar self-confidence was not evident when the students in this study considered their reading or writing skills. In fact, the researchers noted that the key to increasing students' confidence in their writing skills was for faculty to be more supportive about engineering student writing. They stated, "The research pointed to the emotional investments students have in reading and writing, suggesting that supporting students in developing their skills is very much about building their confidence in their abilities" (Davies & Cousin 6).

In "I'm Just No Good at Writing: Epistemological Style and Attitudes Toward Writing" Davida Charney et. al. explored how students' epistemological strategies affect how they perceive their writing skills. In their research, if students believed in absolutism, and that, for example, good writing is an inherent quality that you either possess or do not—something that cannot necessarily be learned, they demonstrated a tendency to view themselves as bad writers. Students who believed good writing is

learnable, that knowledge is either relativistic or evaluativistic, tended to view themselves as good writers. One of the important questions the researchers ask—a question with which I am also concerned is, "Do students in different disciplines have systematically different attitudes toward writing?" (305). Do engineers, who tend to have absolute attitudes about knowledge, tend to view themselves as bad writers within this context? We have no way, as of yet, of gauging how these self-perceptions relate to actual writing skills, but through the survey deployed to students as part of this dissertation project, I hope to fill in some of those gaps between what we *think* we know and what is true.

Moving beyond how engineers are perceived as communicators, it is also important to identify the kinds of texts engineers compose and their motivations for creating those texts. Engineers communicate in a range of different ways including research proposals, research reports, organizational policies and procedures, feasibility, evaluation or recommendation reports, technical specifications, white papers, memos, emails, and business plans. In attempting to characterize the writing of engineers, Dorothy Winsor states, "Texts function not only to record and share what is already known but, perhaps more importantly, to help writers and readers generate and agree on what is to count as knowledge" ("Writing Power" 5). Writing is not only a medium for communicating technical subjects. Engineering texts also generate knowledge and serve as resources for other engineers as well as communicate ideas to the general public. Regardless of the purpose of a given text, engineering writing is generally embedded with a clearly identified purpose and there is often a great deal at stake with engineering texts.

What does the nature of engineering texts mean for writing pedagogical approaches within the engineering disciplines and across the curriculum? Many scholars

believe unique approaches are required to effectively teach engineers how to communicate as... engineers, and how to create texts that appropriately generate and disseminate knowledge. Some examples of these approaches include context-based instruction, integrated engineering curricula where clear connections are made between subject areas (Froyd & Ohland), pairing engineering students with writing tutors and assigning a weekly writing project (Saliba & Krisher), and the development of curriculum-based writing assessment (Flateby & Fehr). "Ideally, then, engineers should have real-world opportunities to write, where the problems that motivate writing are significant and the social-contextual constraints on writing are immediate, as well as school-based opportunities to write, where some of the tacit elements in real-world situations can be identified and critiqued, and alternative textual approaches can be assessed" (Patton 313). That is, students need context-based opportunities to understand how writing functions in the engineering workplace. They need opportunities to track the consequences of the writing as engineers. They need opportunities to move beyond the often artificial, simulated constraints of the classroom. This could likely be said for students from any discipline. It is one thing to teach students how to write and another thing entirely to teach and prepare students to write effectively within a given community of practice.

Although their purpose for writing is goal-oriented, and the craft of writing is, at times, underappreciated by engineers, writing comprises an integral element of an engineer's professional life and that writing is often embedded with significant responsibility. "A recent unpublished survey of nearly 1,500 Cornell University engineering graduates reveals that engineers spend about 25-30% of their time in the

activity of writing" (Garland et al. 7). The sheer amount of writing engineers do in the workplace as well as the importance of the writing is also noted by Tenopir and King in *Communication Patterns of Engineers*. They state, "It has been well documented over several decades that engineers spend much of their time communicating. This is often done to enhance their professional performance, as there is ample evidence of a correlation between engineers' communication and their work performance" (3). Writing is not simply a means to an end for engineers. Writing is often the end itself and a considerable component of an engineer's work.

I am primarily interested in how engineering students view the intersection between knowledge and writing skills because engineers, as they are often characterized, have absolutist views of knowledge and a modernist outlook on the material world. That characterization, however, like much of the lore about students as writers, is based on assumption rather than fact. Charney et. al.'s study revealed that students in science and engineering did enjoy writing significantly less, but that their lack of enjoyment didn't necessarily affect their academic performance in writing courses (316). Results also reflected that final course grades of engineering students in a technical writing course were slightly higher than the grades of students in other majors while their SAT Verbal scores were on par with humanities students and higher than students majoring in business or the social sciences. This study provided convincing evidence that there is no correlation between engineering and the ability to perform effectively as a technical communicator.

Majoring in an engineering discipline didn't mean those students didn't do as well in writing classes, however, "These associations suggest that beliefs about the learnability

of writing might also influence students' performance" (Charney et al. 300). If students are intimidated by writing or if they doubt their ability to learn how to write and do so well, Charney suggests, they are not as likely to perform well in writing courses. Results also reflected that across all majors, most students were less absolutist in their view of knowledge in their upper-level years than their views when they were freshmen. Finally, the results of this study reflected that, "attitudes and beliefs affect what students consider important to do when they read and write and that these priorities affect their achievement" (Charney at al. 324). In the study conducted for this dissertation project, I ask students to indicate how they view themselves as writers and how they feel their instructors view them as writers to determine if the sample respondents' attitudes reinforce or contradict what we know about engineering student attitudes toward writing and their confidence in their writing ability.

Evidence, in fact, shows that engineering students are reluctant communicators not because of ability, but because of attitude. Engineering students often believe writing instruction courses are not as valuable as their engineering courses. "Engineering students typically regard writing, especially composition classes, as less important to their careers than their engineering or science classes, (Rhoads et al. 974). At Virginia Tech, for example, "there is a higher fraction of technical students in honors English classes than from other divisions of the University, and entering engineering students have higher verbal SAT scores than entering students in the rest of the University" (Hendricks & Pappas 343). Again, we have evidence that engineering students are indeed very competent communicators. At that same university, however, faculty members have noted that engineering and technical students have struggled with mastering

communication skills. The researchers note, "We believe that the problem arises because of a lack of adequate training, practice, and emphasis" (Hendricks & Pappas 343). The issue, it seems, where engineering students as communicators are concerned, is not about whether or not engineering students are capable of communicating effectively but rather that they do not receive enough exposure to communication instruction so they can best develop effective communication skills. This struggle to improve engineering students' attitudes toward communication as well as their mastery of communication skills is not unique to Virginia Tech. Engineering faculty from universities across the country often tell a story about the lack of effective communication skills they see in their students' writing. (see: Dannels et al., Felder). Engineering employers have a story of their own, bemoaning the writing skills of professional engineers new to the workplace. (See: Brennan, Burke, Sageev & Romanowski). There is little indication that anyone has confidence in engineers as communicators.

In a 1993 article about challenges entry-level engineers face when transitioning into the workplace, Susan M. Katz notes that employers complain about serious problems with both written communication, oral communication. She quotes one employer as stating, "Engineers are probably the worst writers we've seen" (172). Recent evidence indicates that not only do these concerns still pervade the engineering workplace, they influence how professional engineers perceive themselves as writers. In the 2006 text *Professional Communication in Engineering*, H.E. Sales conducted a six-year study of engineers across engineering disciplines and found that "Rather large numbers of engineers say they find writing stressful, not being confident in their writing abilities, and being concerned about grammar and vocabulary. Some are self-critical, denigrating their

spoken and written expression by describing themselves as lacking in conciseness, being mediocre, and not having the 'right' words' (19). There are several perspectives contributing to the discourse on students, and more specifically engineering students, as writers but it is difficult to know which perspectives are valid and accurate and which perspectives are merely responses to a discourse that has persisted for more than 100 years.

#### The Exigency of the Matter

This discourse, which labels engineers as bad writers—a discourse often perpetuated without critical reflection—needs to be addressed primarily because it is shortsighted and inaccurate to make such sweeping judgments about the writing skills of an entire profession. When we say engineers can't write, we aren't saying anything substantive. We aren't offering any solutions to the problem we're discussing. The exigency, however, extends beyond simply not wanting to make inaccurate and generalizing judgments. There are more material consequences to the negative discourse about students as bad writers because if, as I hypothesize in this dissertation's research project, that the negative discourse creates a self-fulfilling prophecy and a population of engineering students decreasingly motivated to and interested in writing as well as a population whose writing skills begin to meet our low expectations, we begin to create a population of engineering students who are even less prepared to communicate effectively beyond the university than the discourse already implies. The threat of poorly prepared engineering communicators is of particular concern because engineering schools and colleges must incorporate communication skills into their curricula to

maintain their accreditation. The Accreditation Board for Engineering and Technology (ABET) has specifically mandated that engineering programs must demonstrate that their graduates have an ability to communicate effectively (ABET 2000). What they mean by effective communication, however, is left unsaid. This mandate is intentionally vague, leaving it up to individual engineering programs to determine how best to incorporate communication skills into their curricula. However, the vagueness of the mandate implies that even these arbiters of what makes a "good engineer" are unclear as to which communication skills are necessary for engineers to successfully navigate their professional lives. Although the ABET criteria have been in place for nearly a decade, "Today as in 1999, engineering faculty continue to search for strategies to effectively integrate communication and engineering in school in ways that mirror their integration in practice" (Paretti & McNair 238). Engineering faculty are seeking ways to effectively bridge pedagogy and practice while taking into account the constraints inherent to such a project.

Programs at universities around the country have employed several strategies to meet the ABET 2000 criteria. These strategies include the implementation of more mandatory composition and technical communication classes, the integration of communication skills within engineering classes, and the adoption of service learningoriented work where students are able to apply context to the communication skills they are learning. Cornell University, for example, has an Engineering Communication Program where engineering students develop communication skills in a context-based environment. Students also have opportunities to take Writing-Intensive courses as well as to participate in Writing-Intensive Co-ops. The University of Washington offers an

award winning, comprehensive writing program for engineering students, which includes an Engineering Writing Center, and writing courses at both the undergraduate and graduate levels. At Georgia Tech, engineering communication programs are even offered within specific engineering disciplines, such as the Engineering Communications Program in the School of Civil & Environmental Engineering. These approaches, however, are localized, and a broader solution with a wider application, eludes educators. "We know a great deal about how to assess communication skills, for example, but judging from the common complaints that most engineering graduates cannot write a coherent report or give a comprehensible talk, we clearly have not yet worked out how to raise those skills to satisfactory levels" (Felder & Brent 13). These aforementioned programs represent a handful of engineering communication initiatives among hundreds of engineering programs within the United States who must continue to find effective ways to satisfy the ABET criteria. There is more work to be done.

Whether or not this characterization of the engineer as a *bad writer* holds any accuracy, it does establish a certain precedent to characterize an entire profession's writers negatively, a precedent that perpetuates a divide, or a rupture, between those of us who teach engineers how to communicate or rely upon the communicative products of engineers (and are most often situated within the humanities), and engineers themselves. In *The Archaeology of Knowledge*, Foucault asserts that to understand a subject, we need to look not only at the continuous history of the discourse, but also at the discontinuities, disruptions and ruptures. In looking at how we talk about engineers as writers, several ruptures present themselves. There is a rupture between what we know engineering students are capable of and how those capabilities manifest themselves. There is a rupture

between what teachers of writing, teachers of engineering and employers say and think about engineers as writers and how engineers actually write. More broadly, there is a rupture between the engineering disciplines and the humanities.

In *The Two Cultures*, C.P. Snow discussing the divide between science and the humanities, states, "Closing the gap between our cultures is a necessity in the most abstract intellectual sense, as well as in the most practical. When those two senses have grown apart, then no society is going to be able to think with wisdom." At the core of his work, Snow was deeply concerned with the rift between science and the humanities because he felt that if that divide was not bridged, the pursuit of knowledge would be greatly diminished.

Stefan Collini suggests, "we need to encourage the growth of the intellectual equivalent of bilingualism, a capacity not only to exercise the language of our respective specialisms, but also to attend to, learn from, and eventually contribute to, wider cultural conversations" (lvii). Achieving this *bilingualism*, however, is not easy because as Dorothy Winsor tells us, "When people from different fields interact, they often operate from different assumptions about the importance of knowledge or action" (Winsor, "Writing Power" 22). Our task then becomes finding ways to address the ruptures or discontinuities manifested by this discourse so as to better prepare engineers, and more broadly, all college students for writing within their respective disciplines without blindly contributing to a discourse whose primary defining characteristic is the notion that <insert discipline> students cannot write. That is a dangerous, self-defeating approach.

### What is Good Writing, Anyway?

As we try to understand this discourse about students as bad writers, and more specifically, engineers as bad writers, it is useful to try and identify those characteristics that might best describe "good writing." Perhaps one of the clearest and longest standing definitions of "good writing" comes from Benjamin Franklin who, in 1733, stated:

Good writing should proceed regularly from things known to things unknown, distinctly and clearly without confusion. The words used should be the most expressive that the language affords, provided that they are the most generally understood. Nothing should be expressed in two words that can be as well expressed in one; that is, no synonyms should be as short as possible, consistent with clearness; the words should be so placed as to be agreeable to the ear in reading; summarily it should be smooth, clear, and short, for the contrary qualities are displeasing (Andrews & Blickle 34).

Franklin's definition of good writing encourages clarity, brevity, logical structure and creative expression. While his definition is often referenced, there remains little consensus, more than 200 years later, when it comes to answering the question, "What does it mean to write well?" Standards defining good writing are mutable, dynamic, contextual, and contingent. "As socially contingent preferences, standards for good writing necessarily vary according to the rhetorical particulars of audience, occasion, and purpose" (Schick 4). For some scholars, writing well involves producing mechanically sound prose and adhering strictly to the rules of grammar. For many years, in fact, writing instruction focused primarily on grammar and the evaluation of said writing was based on a deficit-based approach—looking for what students were doing wrong instead of what students were doing right. "Copious red ink taught many of us, even if

subconsciously or against our will, to equate good writing with a checklist of "do nots" that teachers scrupulously enforced and students sheepishly obeyed" (Schick 2).

By other definitions, to write well extends to well-organized writing, rhetorically informed writing that takes into account context, purpose and audience, the use of invention and creativity, and the appropriate use of style. That said, when it comes to defining good writing, there are no easy or universal answers. As Strunk & White note, "There is no satisfactory explanation of style, no infallible guide to good writing, no assurance that a person who thinks clearly will be able to write clearly, no key that unlocks the door, no inflexible rule by which writers may shape their course" (97). In The Fundamentals of Good Writing, Cleanth Brooks states, "Straight thinking is the basis of all good writing" (1) which implies that to write well, all one needs to do is possess the clarity of thought and that will instantly translate into a well-written document. A good writing process can also be the foundation for identifying good writing. "Ultimately, if the process is good, the end will be good. You will get good writing" (Goldberg 16). Of course, this statement offers no indication of what a good process looks like so we are left with a fairly ambiguous understanding of the nature of good writing. I argue that good writing encompasses and moves beyond all of these definitions. It is dynamic rather than fixed, and good writing is always situated, contextual and responsive. As an instructor of writing, I often tell my students that good writing is that writing that is deeply rhetorical and reflective of creative and critical thinking.

Good writing in the classroom is not necessarily the same as good writing beyond the classroom. What it means to write well in the workplace can be vastly different than

what it means to write well in a university setting. In "Becoming a Rhetor: Developing Writing Ability in a Mature, Writing-Intensive Organization" Jamie MacKinnon asserts that writing in the workplace is indeed quite different than writing at the college level because students are no longer constrained by the need to prove their writing mastery. As a writing instructor at a large bank, MacKinnon noted that a crucial component of good writing was "how they [new bank employees] learned to use and manipulate a social/organizational process—document cycling and complex feedback—in order to help them produce satisfactory documents" (46). Good writing in that workplace was not only mechanical mastery but also understanding context and how to respond to context, being able to write collaboratively, incorporate and respond to feedback rapidly, and remaining fully conscious of audience. To write well within that organization, employees needed to understand writing, "as more dialogic than instrumental, seeing writing as epistemic, and seeing writing as serving the needs of audience(s) and not just expressing what the writers knew on a given topic" (MacKinnon 49). And of course, what it means to write well at the bank where MacKinnon is employed will not be the same as what it means to write well in an accounting firm or a manufacturing plant or a hedge fund. A text on medical writing, for example, states that, "If there is a maxim for good medical writing, it is that almost always the better word is shorter and the better construction has fewer words" (Goodman et al. 4).

Defining good writing is also complicated by the reality that students often receive conflicting advice about what it means to write well. As Summer Smith suggests, "Lore among technical writing instructors and students suggests that instructors from technical disciplines, such as engineering, use different standards to evaluate students' writing than writing instructors use" (Smith ""What is 'Good' Technical

Communication" 7). In her study comparing how engineering instructors and writing instructors evaluated student writing, Smith found that while there were many similarities between how writing and engineering instructors evaluated student writing, engineering instructors prioritized word choice, mechanics and more stringently assessed the validity of a given text while writing instructors prioritized coherence, organization, design and strategy. "Both groups of instructors stated more evaluations of content than form, and both evaluated sufficiency of information substantially more than any other aspect of the papers. The engineering instructors did tend to place more emphasis on standards of accuracy and precision, while the writing instructors seemed to place slightly more emphasis on more global issues, (Smith ""What is 'Good' Technical Communication" 22).

The digital era has also influenced and complicated our understanding of good writing because what it means to write well in print may not be the same as what it means to write well using new media. "If the criteria for good writing are grounded in fixed, print-based notions, then any mediation process will favor that position and will continue to promote both reactionary discourse and oversimplified understandings of what computers can do for student writing and evaluation" (Penrod xvii). In the introduction to this chapter, I discussed how the digital age is often identified as the primary cause for the modern student's bad writing skills, a clear indication that the current means of assessing "good writing" is grounded in traditional print-based notions rather than in emerging media. In *Composition in Convergence: The Impact of New Media Writing Assessment*, Diane Penrod begins to offer a new set of criteria for identifying good

writing in digital contexts. She states, "In interactive writing contexts, for instance, good writing tends to mean layering the e-text with multiple sensory and support experiences" (Penrod 56).

Given these varied definitions and outlooks on the character of good writing, an additional complication to the discourse about students as writers is that perhaps students are not only writing to the expectation they are bad writers, perhaps they are also writing within an environment where they receive evolving and conflicting messages about how they should be writing. With mutable and wildly varied standards for good writing it is no wonder that, at times, faculty lament that students don't meet their expectations.

# Defining Lore and the Role It Plays in the Discourse About Students as Writers

The discourse about students as bad writers is primarily propelled by teachers who share their "war stories" about the kinds of writing they encounter in classrooms across disciplines. I myself have engaged in such discussions and there's a certain camaraderie borne of shared experiences; there is comfort in the knowledge that everyone who teaches at the university level has, at some point, encountered problematic or frustrating student writing. There is, however, a point when these stories become more than opportunities for commiseration and camaraderie—when the stories grow powerful enough to become singular and synonymous with truth. In these stories, students are always framed as deficient, incapable, and they become a source not only of faculty disappoint, but in certain instances, ridicule. In Marguerite Helmers's 1994 work *Writing*  *Students*, she explored how students are represented by faculty through written lore, which she refers to as testimonials. In these testimonials, Helmers asserts that, "Within the testimonial is the stock figure of the *student*, a character whose inability to perform well in school is his defining feature" (4). According to Helmers, the term *student*, has, in many testimonials or representations, become synonymous with incompetence. In tracing the history of how students as writers have been represented, Helmers adds that, "The writing comes to represent a person, a set of traits ascribed to an individual. The students are what they write, and moreover they mark themselves by their unstable writing as something Other than the professionals whose texts are revered in academe" (9). Since the advent of writing instruction within the university, we have increasingly been unable to separate how we see and in turn represent students from the quality of their writing. If they are ineffective writers they are *bad* students.

The notion that instructors can influence other instructors (either positively or negatively) through sharing stories about classroom and other instructional experiences has been an area of scholarly inquiry that has gained a great deal of traction over the last thirty years. Stephen North coined these stories as "practitioner lore" or "knowledge and study largely based on 'informed intuition and trial and error', (North 45). Babin and Harrison explain that for North, lore is comprised of "the beliefs and practices of composition practitioners, especially those beliefs that are not solidly grounded in theory or proved by experimental research, (198). North seeks to imbue lore with the same legitimacy we imbue traditional scholarly work. While traditional scholarly work is disseminated through the academic publishing system where scholars publish their work in journals, "Lore is usually passed on by word of mouth" (Babin & Harrison 198) which

is how I first encountered lore during that early pedagogy seminar where I learned and believed that Michigan Tech students were, in fact, bad writers. While North seeks to validate lore and its scholarly relevance other scholars consider lore to be "an insubstantial body of knowledge with no scientific or theoretical backing" (Babin & Harrison 198) and attribute student problems to the use of lore because it "often represents contradictory theories used simultaneously, which can lead to confusion and frustration" (Babin & Harrison 198). The implication here, and which my own experience has borne out, is that at times, lore lacks a certain intellectual integrity.

William Schubert also forwards a definition of lore. He states,

Teacher lore refers to knowledge, ideas, insights, feelings, and understandings of teachers as they reveal their guiding beliefs, share approaches, relate consequences of their teaching, offer aspects of their philosophy of teaching, and provide recommendations for educational policy makers. Teacher lore can be presented through teachers' own words, and through the interpretations provided by experienced teacher/ researchers who interview and observe teachers (9).

The definition of lore is broad but practitioner lore encompasses a range of informal practices not traditionally recognized as scholarly or rigorous. Lore draws from and legitimizes the use of experience as a pedagogical tool. This chapter begins with a story that reflects the influence and reach of lore. My perspective on my students as writers was colored by the many negative things I had heard about student writing before I had seen a single example of student writing to judge for myself. I took the stories shared by more experienced instructors very seriously because I trusted their experience. It is not difficult to imagine a scenario where the lore I received in the GTI pedagogy seminar

might influence the manner in which I assess student writing. Teachers making judgments about students is, of course, nothing new or unique to a given institution or time. "Judgmental and unflattering representations of students are relatively common, whether such characterizations delineate the traits that bright students exhibit ("hardworking" "interested" "motivated") or the traits of students who seem neither hardworking nor motivated ("dull" "bored" "aimless")" (Helmers "Constructing Students" 32). We are human, and as such, it is inevitable that we will hold opinions and make judgments about students. This dissertation is concerned with what happens when we give those judgments the power to unduly influence our classroom practices. This dissertation builds on the work of Helmers who focused on written testimonials by composition scholars and how students were represented in those testimonials. I advance her groundbreaking work by focusing on how engineering students are represented primarily by technical communicators through spoken lore by surveying faculty and students to determine if this lore exists, the extent of that lore, and how students are affected, if at all, by that lore.

#### **Stories: The Powerful Soldiers of Lore**

As a culture, we are heavily invested in the idea of stories. In many ways, stories shape the ways in which we perceive reality. Regardless of the reasons for the stories we tell, one thing remains undisputable: there is power in stories and in turn the broader discourse to which those stories contribute. Discourse, according to Michel Foucault, is the medium through which power is expressed, and knowledge is disciplined. Furthermore, "The stories we read, watch, hear, create, and enact are powerful, interpretive acts. They provide security and continuity. They create resistance, opposition, and conflict. They provide a cultural record of who we are, where we have been, and what we hope to achieve" (Faber 21). The more we perpetuate and in many ways, fetishize the story of college students as bad writers, the more powerful and pervasive it becomes. The more powerful that story becomes, the less inclined we are to direct our pedagogical efforts to preparing students to communicate effectively because we've already determined that there is nothing they can learn from us nor is there anything we can learn from them. We begin to see these stories as universal and immutable and assume our experience is the same as every instructor's experience. Helmers states, "The assumed universality of experience with students is reinforced in the practitioner article by the teacher's stance as a pedagogical Everyman, whose experiences are presumed to be shared by most writing instructors" ("Writing Students" 29). We start to believe we are all teaching bad writers the more we are exposed to the practitioner stories that tell us of their experiences with "bad" student writing and "bad" student writers.

In <u>Text, Lies and Videotape: Stories About Life, Literacy and Learning</u>, Patrick Shannon explains that:

"For this reason, stories are political. Whose stories get told? What can those stories mean? Who benefits from their telling? These are political questions because they address the ways in which people's identities -- their beliefs, attitudes, and values -- are created and maintained. These identities determine how we live together in and out of schools as much as school rules or governmental laws (xi).

Anyone who has taught in higher education has either contributed to or listened to a discourse lamenting students' inadequate writing skills and this is not a new phenomenon. An 1892 article in the New York Times observed that samples of student writing were grotesque. Today, reading websites like RateYourStudents.com, an online water cooler for university faculty and instructors, gives one the impression there is no such thing as a student who can write coherently—the good student writer has become like the mythical unicorn—a thing of legend.

This discourse is so pervasive, it is equally prevalent in the workplace where employers lament the writing skills of new employees (see Hendricks & Pappas, Rider, Youra). The discourse claims students aren't meeting our expectations for demonstrating critical thinking; they aren't making effective use of rhetorical principles; and they aren't reflecting a complex understanding of genre and how to write within their disciplines.

If we're only telling one story and constructing one dominant discourse about students as writers, it is important to consider the implications. What kinds of information about students as writers is being left out of the discourse? Who benefits from perpetuating the story that students can't write? What does this discourse reflect about what we value in student writing? How does this discourse influence the identities of students as writers and those who teach college writing? What are the ruptures and discontinuities that present themselves in the discourse about students as writers? What can we learn from these ruptures and discontinuities? How, if it all, are students affected by the negative discourse about the nature of their writing? What steps can we take to change the discourse about student writing? This dissertation also attempts to answer these questions.

#### The Scope of Concerns Inherent to Teaching College Writing

Teaching writing at the college level is challenging. It is not surprising that there is a negative discourse about students as writers given what often may seem like an impossible task. Academics have grappled with the most productive ways to teach writing within and across disciplines since the dawn of the modern university. In thinking through approaches to writing at the college level, we are dealing with logistical constraints, the challenge of negotiating disciplinary boundaries and the indefinable peculiarities of working with college students who are balancing academic responsibilities with the vagaries of youth, extracurricular activities and social lives because, "the human mind is embodied, situated, and social. That is, human knowledge is embedded in social, cultural and material contexts" (New London Group 30). We are not simply dealing with the issue of writing and how best to teach it. We must also address the multiple contexts within which that writing instruction takes place.

In *College Writing and Beyond*, Anne Beaufort details many of the concerns facing composition and literacy studies at the college level. There is, at times, a certain sense of futility in her words as she explains the difficulty not only of teaching writing in any sort of meaningful way, but also the difficulty of assessing said writing or defining the nature of writing expertise or competence. The first challenge we face when addressing the issue of student writing is that, "writing papers is perceived by students as an activity to earn a grade rather than to communicate to an audience of readers in a given discourse community and papers are commodified into grades, grades into grade reports, grade reports into transcripts, etc" (Beaufort 10). Beaufort is correct in her

assessment, but for better or worse, the very nature of higher education commodifies all the work students accomplish in all their classes, not merely the writing classes. We cannot ignore that fact. To assert, as Beaufort does, that composition classes generally lack an institutional grounding, which leads students to treat written work as nothing more than a task that needs to be accomplished, is rather shortsighted. Faculty members are always negotiating the reality of a commodity-based educational system while trying to impart the importance of social context and discourse communities in writing.

Beaufort stresses that our challenge is not only to teach students to write but also to teach students to write within the discourse communities in which they participate or will participate. She states, "Writing standards are largely cultural and socially specific. And yet, novice writers usually get little instruction in how to study and acquire the writing practices of different discourse communities" (11). She adds, ""They [students] are ill-prepared to examine, question, or understand the literacy standards of discourse communities they are encountering in other disciplines, in the work world, or in other social spheres they participate in" (11). Her concerns are indeed valid. In many composition and other introductory writing courses, we are concerned with teaching students critical thinking and rhetorical approaches to writing using broadly construed pedagogical approaches. We have similar goals, but employ wildly different approaches and theoretical influences and often times, these different approaches contribute to an academic culture where different pedagogical approaches are pitted against each other, "to argue for a version of reality, and the best way of knowing and communicating it" (Berlin 256). What we do not include in our approaches, particularly at the First Year Writing level, is instruction on how to communicate in very specific, disciplinarily-

informed realities. Of course, we also have to ask if we should even attempt to incorporate that kind of instruction into a First Year Writing curriculum.

Given the wide range of pedagogical approaches in the composition classroom, and the many arguments for what Beaufort coins, "distinct versions of reality" how is it possible to take discourse community into account in a first-year writing program, when students do not yet know which discourse communities they belong to? There are very real logistical constraints, to preparing students to communicate in discourse communities not the least of which is that First Year students are rarely yet part of a discourse community. Furthermore, there is no guarantee that the discourse communities a student is associated with in college will be the discourse communities they participate in as they enter the workforce. In looking at my own undergraduate experience, I began as a pre-med student majoring in Biology. Then I switched my major to Architecture. I finally settled on majoring in English. Learning how to communicate as a biologist or architect would have held little value for me in my current career. As such, should a new framework for writing instruction be solely concerned with discourse community? Beaufort has designed a conceptual model of writing expertise where she asserts that expert writers draw on five knowledge domains—writing process knowledge, subject matter knowledge, rhetorical knowledge, genre knowledge and discourse community knowledge. What remains unaddressed, however, is how to instill within students this writing expertise both in the composition classroom and beyond. The problem has been identified but we are left without an adequate solution.

Whereas Beaufort focuses primarily on students, much like the Stanford Study of Writing, Lee Ann Carroll begins to explicitly address the role faculty can play with

regard to how we characterize students as writers. In *Rehearsing New Roles: How College Students Develop as Writers*, Carroll offers many ideas as to how educators can first, discard the notion that college students should arrive in their classrooms as perfectly evolved writers and second, help students broaden their complex literacy skills over the course of the four or five year student experience rather than solely in a first-year composition course. She directly addresses the oft-repeated lament about student writing in her study which, "seeks to fill the gaps between the perception that students can't write and the reality that thousands of students who earn undergraduate degrees each year are apparently able to write well enough to satisfy the requirements of their various academic programs" (Carroll 26).

While students take the majority of their courses in their major, most universities and colleges have some kind of requirement system mandating that students take a range of courses in a range of disciplines so that they matriculate as well-rounded individuals who are better prepared for the working world or a graduate education. It is this exposure to a variety of disciplines, and the writing conventions inherent to those disciplines that exposes students to a broader writing experience and understanding of writing than faculty members. Students also have to negotiate a range of expectations because they study under several different faculty members whereas faculty teach a specific range of courses in their discipline, and as such have a less diverse outlook on the writing that comes to them. I believe faculty members judge student writing against arbitrary standards rather than against what a student is and could be capable of.

As with Beaufort, Carroll is also concerned with discourse communities and genre-based writing instruction. She notes that some faculty members across disciplines seem to resent having to provide students with writing assistance, deeming it "unnecessary handholding" because of the "fantasy" Carroll often refers to, of students coming to college as perfectly evolved writers who only need to grasp a subject matter, not how to effectively and appropriately communicate that subject matter. While first year-composition can provide students with the certain writing skills and a foundation for understanding the rhetorical aspects of communication, that instruction does not necessarily prepare students for writing, for example, a lab report or a business prospectus. That sort of explicitly genre-based writing instruction might best come from the teacher assigning said lab report or business prospectus who is well-versed in the expectations that discourse community holds for the proper execution of those genres. As Carroll states, "first year composition cannot succeed as a course that will teach students how to write for contexts they have not yet encountered" (28). Faculty, in a very general sense, seem to expect students to have a magical writing ability as well as a grasp of genre without realizing that unless faculty spend some time conveying the conventions of a given genre to their students, those students will not learn how to negotiate genre conventions and discourse communities.

In *Writing and Identity: The Discoursal Construction of Identity in Academic Writing*, Roz Ivanic asserts that the writer's identity, that is the life experiences and circumstances that have shaped writers and informed their writing, has long been ignored in academic research. In the past decade since this book was published, a great deal of scholarship has been produced focusing explicitly on identity and writing but many of Ivanic's claims remain relevant. She identifies four key aspects of writer identity: the identity of a writer writing a particular text, the autobiographical self, the discoursal self,

and the self as author. Ivanic offers an interesting framework to use as we think about college writing and discourse communities, particularly in that this framework speaks to the multiplicity of the self—that we are always functioning in a multiplicity of ways and that our writing will always be influenced by this multiplicity. Ivanic states, "The notion of discourse communities is particularly relevant to the study of writer identity, because each individual takes on an identity in relation to the communities they come into contact with" (83). Students are always working either with or against the discourse communities with which they come into contact.

As students progress through their college careers, they also learn, either implicitly or explicitly, different means of writing with or against discourse communities. The ways in which students participate in or resist discourse communities can offer interesting insights into how students are influenced by the ways in which they are characterized as writers because, "Through the discoursal construction of self in writing, students can assert or negate particular versions of self (in addition to asserting or negating particular representations of the world), thereby contributing to the reproduction or contestation of patterns of privileging among subject-positions within the academic community" (Ivanic 332). If students as writers are determined by the discourse, this dissertation is also concerned with examining the implications and effects of that subject positioning.

Beaufort, Carroll, and Ivanic all demonstrate that university writing instruction is complex not only in terms of trying to determine best practices for teaching within and across disciplines but also in terms of reaching students where they are at, working with students who come to college with a broad range of literacy experiences and abilities, and

diverse socio-economic backgrounds. We are also faced with the challenge of teaching students how to write effectively not only in college but also beyond the classroom while facing logistical constraints like students changing majors, universities with minimal explicit writing course requirements and faculty who have wildly different expectations and philosophies about how students should be able to write, how they do write, and how students should be taught writing. The discourse about students as writers and engineers as writers does not exist in a vacuum. It is set against a very complex climate with many different stakeholders who have vested interests in their positions within that discourse.

In Chapter 2, I outline a theoretical framework drawing from Michel Foucault, literacy studies, and Etienne Wenger. This theoretical framework offers us new ways of examining how the discourse about engineering students as writers functions and is sustained over time and across and I put this framework into practice by examining how that discourse functions within both historical and modern engineering communication texts.

### **Chapter 2: A Theoretical Framework for Subverting the Subject Position in the Discourse About Students as Writers**

In Chapter 1, I introduced my argument that the perception and assessment of students as writers is increasingly informed by lore passed between teachers, within and across disciplines and institutions, rather than by actual student writing itself. This lore is transmitted through stories, stories that are both pervasive and powerful and which, I assert, create self-fulfilling prophecies where students write to teacher expectations rather than to the best of their abilities. In attempting to bring this rather broad issue into focus, I center this discussion primarily on how engineers are framed as writers.

In this second chapter, I establish a theoretical framework for this research project. This framework offers a lens through which we can begin to consider both the reach and influence of the discourse created by the lore about students as writers. I draw from the work of Michel Foucault, which informs this dissertation in three ways—his theories on power, discourse and the subject position. I also look to literacy studies and Etienne Wenger's work on communities of practice, which provide valuable insights into how we think about students as writers and how we participate in and are implicated within the discourse about students as writers. Finally, I apply this dissertation's theoretical framework, analyzing both early and modern engineering communication texts to demonstrate how the discourse about students, and more specifically engineers as writers, manifests itself in these texts. More specifically, I assert these texts advance my argument by revealing the ways, sometimes subtle and sometimes overt, in which the discourse influences the pedagogical approaches in these texts. Discussions about the teaching of writing are often fraught and complex because the teaching of writing is not only about the teaching of college writing. It is a subject deeply embedded with social, economic, and political contexts. Many of the factors influencing the teaching of writing originate beyond the classroom. According to Susan Miller, in *Textual Carnivals: The Politics of Composition*, "\$100 million is spent each year in America on something we might think of as teaching students to write at the college level, (5). She also adds that there is a real tension in the propagation of the English language and in writing instruction as a means of that propagation, which serves as an "institutionalized masculine locus of nationalistic power" so issues of gender and how power is negotiated within institutions also come in to play. There is, clearly, a great deal at stake—we are not simply discussing writing and how best to teach it; we also must think about who is doing that teaching, why, and how those teachers are positioned within the university.

To further complicate the discussion, writing teachers themselves often question whether or not they are qualified to teach certain types of students how to write. For example, in an article about the role expertise plays in how faculty within engineering and within the humanities evaluate student writing, Summer Smith writes, "Technical writing teachers traditionally believe that their lack of technical expertise puts them at some disadvantage compared to people who are 'good in math,' such as engineering teachers and the student writers themselves, ("The Role of Technical Expertise" 38). Additionally, the teaching of writing reinforces and challenges disciplinary boundaries. Faculty members within disciplines often believe they are best equipped to teach their students what it means to communicate as a professional in that field. Writing instruction

demands negotiating the knowledge(s) privileged first in Writing Across the Curriculum and First Year Writing programs and Writing in the Disciplines. Ultimately, "We must allow that language *learning* is the crucial locus for power, or for disenfranchisement, in any culture" (Miller 7). We must therefore ask ourselves: who holds the power within the discourse about students as writers and who is disenfranchised?

If the university is, among other things, an institution of social control, the challenges of implementing effective writing instruction within and across disciplines is far more complex than simply developing a curriculum and implementing it. The embedded social, political and economic practices must also be accounted for or at least acknowledged. Furthermore, the teaching of writing is a multifaceted, contested space. As Susan Miller asserts, "...attention to actual writing practices or to their educational settings highlights the 'low,' the ad hoc qualities of the carnivalesque. Such attention suggests fissures, hesitations, conflicting purposes, and the multiple origins of ideas, a against a mythologically cool, organized space of univocal 'statement'" (27). Given this context, my primary goal in Chapter 2 is to provide a theoretical framework that gives us the means to navigate the contested space(s) of the instruction of writing at the college level and how those contested space(s) contribute to the discourse about students as writers. I begin by fleshing out a more comprehensive definition of discourse as I use the term throughout this dissertation—an ideological stance and a locus of power relations that positions subjects in complex and often problematic ways.

#### What is discourse?

I have used the term discourse several times and it would be useful, at this point, to begin to unpack what I mean when I reference the discourse surrounding students as writers. When I use the term discourse, I am referring to a range of practices by people who are in positions to assess, either formally or informally, the writing practices of students, generally, and engineering students specifically. These practices include the assessment of student writing, the attitudes toward student writing and students as writers held by university instructors, and the ways in which university instructors express those attitudes and frame students as writers both formally, in the classroom or other professional settings and informally, by way of casual discussion gossip with colleagues or friends.

Stuart Hall states, "A discourse is similar to what sociologists call an ideology: a set of statements or beliefs which produce knowledge that serves the interests of a particular group or class" (292). The word "*interests*" is particularly important because the discourse in question often claims "students are bad writers" or that "engineers can't write." Such a discourse certainly serves someone's interests. If faculty believe students are bad writers, that outlook has the dangerous potential to become an ideology with which teaching is informed. The consequences of such an ideology influencing writing instruction could easily be far reaching. How effectively can faculty teach writing if they don't believe students are teachable? In Chapter 5, I will take up the issue of whose interests are served by this discourse about students as writers more explicitly but there are several constituents who are invested in the teaching of writing—composition and technical communication teachers, universities who benefit from the valuable income

derived from writing courses, and faculty who are invested in protecting their disciplinary boundaries and dictating the nature of knowledge within their disciplines and how that knowledge is communicated and controlled. The *Oxford English Dictionary* defines an ideology as "a system of ideas an ideals, especially one that forms the basis of economic or political policy" or "the ideas and manner of thinking of a group, social class, or individual." When we frame students as bad writers, we are, in many ways, espousing an ideology, in the truest sense of the word, about what it means to write well and it is an ideology that reinforces the political nature of the university and the role students are supposed to play within that system.

James Paul Gee also asserts discourse is ideological; discourses wield a great deal of power; and discourses are always deeply socially and culturally embedded and enmeshed. Gee states that, "A Discourse, then, is composed of ways of talking, listening, (often, too, reading and writing), acting, interacting, believing, valuing, and using tools and objects, in particular settings at specific times, so as to display and recognize a particular social identity" (Gee 128). When we talk about students as writers, the ways in which we assess students or discuss student writing anecdotally are all aimed toward assigning students the identity of "bad writer" and perpetuating the discourse, and the fervently held ideology that when it comes to writing, we know right and students are wrong. Certain instructors are almost gleeful in this characterization of students as bad writers because if there is a consensus among teachers of writers, it is, as technical communicator Bradford Connatser points out, that "each new generation of writers is less capable than the last, with fingers pointing at the deficiencies of public education and the mentally numbing effect of video games and electronic communication, among other factors" (129).

Gee also notes that discourse provide opportunities for people to be identified in specific ways and discourse situates—that is, discourse can serve as a way of mapping individuals ideologically. When looking at the often-negative discourse(s) involving students as writers, this mapping is an opportunity for students to be identified as "good" or "bad" writers and situated as problems that need to be solved with the solutions we develop. This tactic is particularly problematic because we are often unable or unwilling to challenge ourselves in how we characterize and approach students. We become overly attached to the ideological stance that we are right, students are wrong and that is that. Furthermore, the discourse assumes the ideological stance that there is a right way to write and a wrong way to write and if students don't meet our expectations, if they don't write the ways we want them to write, there often seems to be an unwillingness among faculty to understand why students aren't writing to our expectations or wield more flexibility in how we assess "good" writing. This atmosphere provides an opportunity to reinforce, within the academy, that, "what is important is language *plus* being the 'right' who doing the 'right' what. What is important is not language, and surely not grammar, but saying(writing)-doing-being-valuing-believing combinations, (Gee 127). Within this context, discourse is purely ideological. This is not to say that we must adopt the attitude that all student writing is good writing but at the heart of this project is the hope that we can begin to broaden our ideas about what it means to write well.

In *The Ideology of Power and the Power of Ideology*, Goran Therborn states, "To understand how ideologies operate in a given society requires first of all that we see them not as possessions but as ongoing social processes" (77). This idea that ideology is an ongoing social process, something that is sustained and supported is amply reinforced by the longevity and pervasiveness of the discourse claiming students are bad writers. The social nature of ideology and in turn the discourse in question, is also evidenced by the very nature of lore, the communal knowledge instructors share, and how attitudes about student writing can be greatly influenced by the negative attitudes toward student writing some instructors embody. Therborn goes on to state, "there are two components of the organization of ideological domination. One is the construction and maintenance of a particular order of discourse. The other involves the deployment of non-discursive affirmations and sanctions" (82). Within the academy, then, we maintain and reinforce the negative discourse about students as writers by creating systems where we are always able to control the discourse and how students are able to respond.

In his treatise on ideology and how ideology is sustained, Therborn discusses the use of ritual as part of the ongoing social process that is ideology. As we start to think in more complex ways about the discourse involving students as writers, and the way that discourse functions ideologically, we can start to examine the rituals we use to remain ideologically dominant, to maintain the discourse—the ways in which we provide students feedback, for example, focusing only on the deficiencies in their work or the ways in which we discuss writing anecdotally and make claims, for example, as to just how poorly our students write. I would also assert that this negative feedback and the lore we pass on between instructors also functions as means of sanctioning students and

reinforcing the hierarchy of teacher versus student and the power of teacher over student because "Power is an intrinsic part of ideology, defined and reinforced by it, determining, once again, who can act and what can be accomplished" (Berlin 479). Therefore, if discourse is ideological, power is also an intrinsic part of discourse and the longer we remain enamored with the belief that students are bad writers, the longer we remain enamored with the power of our positions and what we are able to do with those positions to the detriment of our students.

Gee further complicates our understanding of discourse by using the term in a different way. He identifies both primary and secondary discourses where, "A person's primary Discourse serves as a 'framework' or 'base' for their acquisition and learning of other Discourses later in life. It also shapes, in part, the form this acquisition and learning will take and the final result" (Gee 141). He adds that, "Discourses beyond the primary Discourse are developed in association with and by having access to and practice with (apprenticeships in) these secondary institutions" where secondary institutions are those places where individuals must communicate with "non-intimates" or people beyond their families. Gee's notion of secondary discourses—those we acquire through socialization—is particularly relevant in this discussion because it is this secondary discourses and how they see themselves as writers, particularly because as Gee states, "Discourses are mastered through acquisition, not through learning" (Gee 139).

It is also useful to apply Gee's notion of primary and secondary discourses to thinking about students as writers and writers within the disciplines. Gee states, "I define literacy as *mastery of a secondary Discourse*" (Gee 143). Perhaps the discourse students

are mastering is not what they learn in the classroom, but rather, what they learn about what their instructors think about student writing. At first glance it appears that the secondary discourse we try to instill within students when we teach writing is based on rhetorically informed communication skills, as well as teaching students to communicate within their disciplines and what it means to participate in a discourse community. If that were all we were teaching students, we would be on the right path. I believe, however, that the secondary discourse students acquire while in college is far more complex, and far more embedded with a faculty ideology that characterizes students as bad writers. Students are becoming literate not only in how to communicate but also how to communicate within an oppressive hierarchy where they are consistently at a disadvantage. It is my hope that the two surveys deployed as part of this research project will reveal the extent to which this statement holds true.

Michel Foucault is another scholar who has taken up the idea of discourse and how it functions. According to Foucault, discourse is "a group of statements which provide a language for talking about a particular topic at a particular historical moment." Discourse, he argues, constructs the topic. It provides the means with which we will understand a given topic. Discourse sets an agenda, creates parameters. It defines and produces the objects of our knowledge. Discourse governs the way that a topic can be meaningfully talked and reasoned about. "The rules of formation are the conditions which make possible in the first place the objects and concepts of a discourse. The rules of transformation are the limits of its capacities to modify itself, the 'threshold' from which it can bring new rules 'into play'. The rules of correlation are the 'ensemble of relations,' which a discourse has with other discourses at a given time and with the

'nondiscursive context' in which it finds itself'' (McHoul & Grace 45). Within such a framework, it becomes clear that in talking about students as writers and in working with students as writers, we have come to rely upon the negativity and negation (ie. what students are not doing as writers) driving the discourse forward. Students are the subjects who personify this discourse and the more we perpetuate the discourse, the more authority we assign to the notion that students are bad writers, have always been bad writers, will always be bad writers. Not only are students constructed as bad writers within the dominant discourse, they are also subjected *to* that discourse which creates an incredibly untenable position.

Foucault is also interested in the history of a discourse, how a discourse has evolved, and the discontinuities and ruptures that can be found within the histories of that discourse. He traces those histories through tracing the genealogy of a discourse—his inquiry has, notably focused on the histories of sexuality, medicine, and institutions such as the prison—but the ideas behind Foucault's examinations of sexuality, medicine, and prisons can also be applied to how we understand how the discourse involving students as bad writers functions within the university presently and how that discourse has functioned within the university historically. As I discuss in Chapter 1, the discourse which identifies students as bad writers has a well established genealogy which has existed for nearly 200 years. What I find particularly interesting about this genealogy is that with few exceptions, there have been no significant discontinuities or ruptures. Instead, whether the year is 1892 or 2002, the discourse remains the same—students cannot write. It is discouraging but also rather revealing that so little has changed.

Foucault describes subjectivity as a discursive production. For Foucault, discourse is a regulated way of speaking and acting within a system that offers, "subject positions to speaking persons. By assuming a subject position (which is both a personal and social feat) a person takes a place in the social order, making sense of the world from this vantage point while also being subjected to discourses common to it (e.g., expectations, normative performances). Foucault's definition of subject position emphasizes the productive nature of disciplinary power—"how it names and categorizes people into hierarchies (of normalcy, health, morality, etc.)" (Anton & Peterson 406). Throughout this dissertation, I assert that identifying students consistently and unwaveringly as bad writers forces students into a vantage point where the only way they can make sense of writing is as something they cannot do well and will never do well. In such a system, there is little incentive for students to even try to become better writers or to meet or exceed faculty expectations.

At the end of this chapter, I will examine how engineers as writers have been constructed through one form of the discourse, engineering communication texts from the 20<sup>th</sup> and early 21<sup>st</sup> century, treating these texts as discursive statements about engineers as writers. Foucault states, "The question posed by language analysis of some discursive fact or other is always: according to what rules has a particular statement been made, and consequently according to what rules could other similar statements be made?" (Foucault "Archaeology of Knowledge" 27). Through my analysis, I hope to reveal some of the rules regulating the discourse about students as writers and how those rules have shaped the body of knowledge about engineers as writers.

Given these theoretical conceptions of discourse, when I use the term, discourse is an ideological set of statements that are socially constructed, sustained and perpetuated which provide a means for discussing a given topic at a given time, within a given context. Furthermore, discourse is a means through which power is reinforced. With this understanding of discourse in mind, I now extend the discussion, briefly, to literacy studies and how the work of several literacy scholars contributes to the theoretical framework of this dissertation.

#### **Insights from Literacy Studies**

Power is interesting topic of inquiry because it is productive. Power shapes and controls knowledge and it can produce and control new discourses. As instructors, we certainly hold a great deal of power where our students are concerned. When knowledge is linked to power, that knowledge assumes the authority of truth (and not an absolute truth, but a regime of truth) and it then has the power to become true. We perpetuate the notion that students are bad writers and we expect students to be bad writers. I posit that students do their best to meet our expectations. As we continue to think about students as writers, literacy studies also offers valuable insights into the implications and potential reach of this complex, longstanding discourse.

As another inroads into a discussion of power, discourse and the subject position, the discipline of literacy studies offers useful insights into how we think about writing within and across disciplines and the role power plays in how certain kinds of literacy are privileged. If, as Deborah Brandt asserts, we live in a knowledge economy where wealth is created by how we use knowledge, it stands to reason that those who will succeed and

accumulate wealth are not only those who are literate, but those who have the specific literacies necessary to succeed in an increasingly documentary world. There are very specific skills required of engineers to communicate effectively and as a great deal of the literature demonstrates, engineers who are able to implement these skills appropriately are more likely to succeed in the engineering workplace. [See: Petroski, Wickenden, Selzer, et al.] Brandt notes, "People who write for a living find their work defined by the deepening role of codified knowledge in economic productivity and the deepening role of texts in economic exchange and competition" (Brandt 180). While writing is not the only responsibility of the professional engineer, it is a significant component of the engineer's responsibilities and increasingly, to be a good engineer involves not only demonstrating sound technical knowledge, it also includes writing and otherwise communicating effectively to multiple audiences and understanding how knowledge works and reinforces hierarchies in the engineering workplace. In framing engineers as bad writers and creating the untenable situation where they write to low expectations, we must therefore consider the possibility that this negative discourse also compromises the engineer's ability to participate in the knowledge economy.

The nature of the power members of the knowledge economy wield and are subject to is complex and measured. In some ways, they have the ability control and define knowledge and which kinds of knowledge will be privileged over others but at the same time, they are functioning under the direction of an employer's will. "Through intense mediation, founded on processes of reading and writing, they bring coherence and shape (in the form of texts) to the disparate processes, interests, histories, goals, and needs of an organization" (Brandt 179). Through regulation, the people for whom

documents are written also wield a great deal of power because they control the kinds of knowledge that are disseminated and how that knowledge is disseminated. This regulation, of course, begins in the classroom. "Much, then, of what goes with schooled literacy turns out to be the product of western assumptions about schooling, power and knowledge rather than being necessarily intrinsic to literacy itself" (Street 110). Literacy then is contained and tightly controlled and very embedded. It is hierarchical, and within the educational system, there are clearly delineated *right* and *wrong* ways of approaching literacy.

This use of literacy as a commodity and the exchange of power through the dissemination of knowledge has been discussed at length in Dorothy Winsor's Writing Power: Communication in an Engineering Center, where she notes, "Texts function not only to record and share what is already known but, perhaps more importantly, to help writers and readers generate and agree on what is to count on knowledge" (5). She also argues that, "the generation of power through discourse should be examined, that its existence (and rightness) should not be assumed, and that texts play a role in the way in which power is created and deployed" (Winsor 11). In her seminal study, she observed five engineers and their communication practices with the engineering division of a large manufacturing firm, focusing on the genres the engineers used, how their use of those genres reinforced hierarchies within the workplace and how those genres mediated both the nature of engineering knowledge as well as the power often embedded within that knowledge. She also found that engineering texts often allow for the negotiation of knowledge because, "texts have to be mutually acceptable to a number of people, their creation also serves as an occasion upon which commonly accepted knowledge can be

negotiated" (Winsor 148). Upon the conclusion of her study, Winsor found that "Texts function as immutable mobiles to allow the accumulation and appropriation of various kinds of capital in centralized hands" (Winsor 150) and that "power is always relational and is always achieved within preexisting social structures in which we learn to use various means to achieve desirable positions" (Winsor 155). It was not so much what the engineers were writing but rather, what was at stake and who was a stakeholder in how various genres were approached and disseminated throughout the engineering workplace.

We're not only discussing how to teach writing within and across disciplines, we're also discussing how knowledge is transmitted as well as the nature of knowledge which is as complex and contested a matter as any. The discourse involving students as writers, and more specifically, engineering students as writers is part of this contested knowledge, We are also discussing how we prepare students to negotiate the knowledge economy and understand how genres function to reinforce power hierarchies within a given organization. In the work of Foucault discourse(s) works as bodies of knowledge. McHoul and Grace state, "For Foucault, 'knowledge' is much more a matter of the social, historical and political conditions under which, for example, statements come to count as true or false" (29). If we perpetuate a discourse that characterizes students as bad writers we are also stating that our assessment is knowledge rather than a subjective, and not necessarily accurate or appropriate characterization. We allow the lengthy genealogy of this discourse to legitimize this stance.

We have to look not only at the discourse about students as writers within disciplines but across disciplines and we must recognize that literacy and knowledge are contextual and, "that what matters is not literacy as some decontextualized ability to write

or read, but the social practices in which people are apprenticed as part of a social group, whether as students in school, letter writers in the local community, or members of a religious group" (Gee 57). We have to ask ourselves what social practices we are modeling and reinforcing for our students when we openly demonstrate a lack of faith in their writing ability by perpetuating a negative discourse. Brian Street also alludes to the contextual nature of literacy, stating, "No one material feature serves to define literacy itself. It is a social process, in which particular socially constructed technologies are used within particular institutional frameworks for specific social purposes" (Street 97). I believe the negative discourse about students as writers, as lacking in the necessary literacy skills, functions within the institutional framework of a university for the specific purpose of enabling a defensive and beleaguered faculty to justify the importance and necessity of their positions within the academy. If students are bad writers, we will always have jobs. As such, we are invested in positioning literacy as something students are ill-equipped to achieve.

#### The Dynamics of Power and the Subject Position

In her essay, "Constructing Students in the Rhetoric of Practice" Marguerite Helmers asks, "who has the power to represent, and who is powerless and represented?" (Helmers 33). As instructors, we hold a great deal of power when it comes to the representation of students and throughout this dissertation, I assert we primarily wield that power through the pervasive, negative discourse about students as bad writers. Within this discourse, students are consistently positioned as bad writers even when there may be ample evidence to the contrary. This discourse influences how we view students,

engage with them, and assess their work because we approach them from a deficit perspective or subjugated position.

Gee states, "When we handle words to make meaning we enter into coalitions (and get in sync) with other people, things in the world, technologies, and various systems of representation" (Gee 183). How we negotiate those coalitions is, ultimately, my primary area of interest, particularly the unspoken coalitions I see between faculty who, as the results of this study demonstrate, hold the opinion, across disciplines, that students cannot write well. In trying to better understand the nature of the discourse about students (and engineers) as writers, the way these subjects are positioned within that discourse, and how faculty wield power when they position students negatively; and in thinking about the complexities of knowledge and its role within this discourse, Foucault enables us to have a richer understanding of power and its function(s) when he states, "Power would be a fragile thing if its only function were to repress, if it worked only through the mode of censorship, exclusion, blockage, or repression.... If, on the contrary, power is strong this is because, as we are beginning to realize, it produces effects at the level of desire, and also at the level of knowledge. Far from preventing knowledge, power produces it" (Foucault "Knowledge/Power" 59). Within the context of this dissertation, Foucault's statement is particularly relevant because the power of the discourse about students, and more specifically engineers as bad writers, is especially pernicious in that it produces what we consider knowledge and truth-students can't write; engineers can't write.

The research study I conducted for this dissertation seeks to understand how knowledge is produced within the discourse and also attempts to analyze the various

elements of the discourse and the role they play in understanding how power functions within the discourse. "Rather than analyzing power from the point of view of its internal rationality, it consists of analyzing power relations through the antagonism of strategies" (Foucault "Power" 329). To that end, to understand the discourse involving students as writers, I suggest investigating not the students, but rather their teachers; we should examine not merely student writing, but faculty assessment practices and attitudes, how those practices and attitudes were formed and if they can evolve.

This dissertation identifies students as subjects positioned negatively within the discourse(s) about students (and engineers) as writers. Foucault offers clarity on how we should understand the subject. "There are two meanings of the word 'subject': subject to someone else by control and dependence, and tied to his own identity by a conscience or self-knowledge. Both meanings suggest a form of power that subjugates and makes subject to" (Foucault "Power" 331). Students are subject to faculty control and they are dependent upon those faculty to not only instruct them appropriately but also to assess their performance. They are dependent upon faculty to grant them the grades they will need to advance through the curriculum. In the second definition, we must also consider that students are tied to how they see themselves as writers, an identity that is often influenced by the discourse framing them as bad writers. They are subject not only to the higher education system but also the subjective assessment that they are incompetent communicators. This is another untenable position because "...while the human subject is placed in relations of production and of signification, he is equally placed in power relations that are very complex" (Foucault "Power" 327), and as students, as subjects

within a complex series of relations, they are often ill-equipped to assert themselves or create opportunities to overcome how they are framed.

As we begin to analyze the discourse about students as writers and the pervasive notion that students are incompetent writers, we can consider that "Power relations are exercised, to an exceedingly important extent, through the production and exchange of signs; and they are scarcely separable from goal-directed activities that permit the exercise of a power (such as training techniques, processes of domination, the means by which obedience is obtained), processes of domination, the means by which obedience is obtained), processes of domination, the means by which obedience is obtained), or that, to enable them to operate, call on relations of power (the division of labor and the hierarchy of tasks" (Foucault "Power" 338). In looking at the classroom as a site where the exercise of faculty power takes place, we can begin to examine our pedagogical and assessment practices that don't allow students to move beyond the confines of their subject position as those processes of domination where we reinforce our classroom authority. We produce and exchange signs, for example, in how we assess student work, how we interact with students in the classroom, and how we discuss student writing.

When we say students are bad writers, we have arrived at a place where we believe that assessment is not merely an opinion; that assessment becomes knowledge or fact, immutable, truth. That assessment tries to claim the legitimacy that can be attributed, in more productive circumstances, to "practitioner lore." The more we perpetuate this negative discourse about students as bad writers, the more we begin to elevate the discourse as epistemological. Corey Anton and Valerie V. Peterson refer to the phenomenon of epistemic privilege, where "a particular position offers a vantage

point from which to see an issue more or most accurately, usefully, or truthfully" (Anton & Peterson 410). As faculty, we naturally hold a position of epistemic privilege and in wielding that privilege we are, perhaps, increasingly unable to see student writing "accurately, usefully or truthfully" when the negative discourse about students as writers is in play. Anton and Peterson also state that, "People using a structural subject position for epistemic qualification assert or work to gain legitimacy for their perspective and claim that the way the world looks from that vantage point is viable and should be acknowledged as such. To do this, they may try to bolster their own perspective, and/or bring down the proposed superiority of the perspectives of others" (Anton & Peterson 410). The more the negative discourse is perpetuated, the more we use our roles as instructors to reinforce our ideas about what it means to write well and to determine how well students are meeting our expectations. We use this discourse to reinforce the belief that we are right and our students are wrong because, "on an interpersonal level, claims to *epistemic privilege* from different perspectives may lead arguments into more explicit appeals to subject position and its significance (each person claiming to be exclusively and uniquely "right" about things)" (Anton & Peterson 411). The pervasiveness and longevity of the negative discourse about students as writers bears this statement out. As we will see in Chapters 4 and 5, there is ample evidence that faculty believe they are uniquely right about the nature of student writing. In the next section, I discuss Etienne Wenger's scholarship on communities of practice and how they make it possible for faculty to maintain their "uniquely right" attitudes.

## Communities of Practice as a Means of Better Understanding Engineers as Communicators

In Chapter 1, I discuss that my interest in how students are framed as writers is particularly problematic within the engineering disciplines. A plethora of the scholarly literature about engineers as communicators focuses on deficiencies in engineering communication and a reluctance on the part of engineers to fully embrace the importance of effective communication to the engineering profession. Etienne Wenger's scholarship on communities of practice is a useful starting point for understanding how knowledge works within given communication is taught, understood and regarded within the engineering community as well as how non-engineers view communication practices.

In *Communities of Practice*, Wenger works to identify how communities of practice function and sustain themselves. He alludes to the social nature of knowledge when he states, "Common sense is only commonsensical because it is sense held in common" (47). Just as the negative discourse about students as writers has been elevated to knowledge, this statement demonstrates how it is possible for that knowledge to become common knowledge and in turn common sense, a belief that makes rational sense and goes unquestioned, perhaps even in the face of evidence to the contrary.

Wenger is clear to differentiate communities of practice from groups, teams or networks because membership is more than a group of individuals who share a similar identity, for example. Communities of practice are deliberate and intentional. A community of practice is both a whole and a series of parts where "each participant in a

community of practice finds a unique place and gains a unique identity, which is both further integrated and further defined in the course of engagement in practice" (Wenger 76). As Wenger defines and complicates his notion of a community of practice, it is clear he doesn't want our understanding of communities of practice to be reduced to simple, neat definitions. He also asserts that communities of practice are inextricably linked with history and context. They cannot exist in a bubble. They are also not perfect entities because they are comprised of people, they are flawed.

Wenger makes interesting statements about power and meaning in communities of practice. He states, "Because the negotiation of meaning is the convergence of participation and reification, controlling both participation and reification affords control over the kinds of meaning that can be created in a certain context and the kinds of person that participants can become" (Wenger 93). When we say students can't write, particularly within a given community of practice, we are ultimately controlling what we believe students can achieve as writers. Students are, perhaps, not meeting our expectations because we do not allow them to. We control, too rigidly what they can become because we don't allow them any room to evolve. We force them to maintain their subject position.

In the Epilogue of *Communities of Practice*, Wenger states, "Designing for learning, therefore, cannot be based on a division of labor between learners and nonlearners, between those who organize learning and those who realize it, or between those who create meaning and those who execute" (234). Often times, however, that is exactly how a university works. Wenger also discusses involving communities of practice in design. "Whenever a process, course, or system is being designed, it is thus

essential to involve the affected communities of practice" (Wenger 234). A lack of involving members of, in the context of this dissertation, the engineering community, in the designing of writing instruction, may be a significant reason why so often we hear the statement that "engineers can't write." The same could be said for teaching students across disciplines. When we don't involve them, when we don't take a user-oriented approach, perhaps the result is that we end up with a circumstance of us versus them, a circumstance where we insist students can't write, because we haven't entertained the possibility of including students in the design of writing instruction. And yet, Wenger also understands that no community of practice can sustain itself wholly without drawing upon the expertise of others. "No community can fully design its own learning" (234). I do not suggest that we throw ourselves at the mercy of students, but rather that we open ourselves to the possibility that they might have insights to contribute to how we approach writing instruction and assess student writing.

Engineering is a broad field comprised of several unique disciplines with differing ideals and interests but in thinking about engineers as members of a community of practice it is easy to see why there is often tension in how we approach the instruction of writing and communication both within the engineering disciplines and across the curriculum.

In the next section, I look at a series of historical and modern engineering texts to see how the principles of this theoretical framework are reinforced or challenged.

# The Discourse About Students as Writers in a Historical Context: Early 20<sup>th</sup> Century Engineering Communication Texts

Michel Foucault states that, "statements different in form, and dispersed in time, form a group if they refer to one and the same object" (Foucault "Archaeology of Knowledge" 32). Texts about engineering communication provide an interesting site of inquiry and serve as a unique group in how they refer to the same object, in this instance, engineers as communicators or engineering communication. In the early 20<sup>th</sup> century, there was a proliferation of texts addressing Engineering English and these texts were, largely, the first technical communication textbooks. These texts arose out of was, for many, a real crisis because engineers were technically savvy but quite deficient in the more humane skills such as writing and otherwise communicating. The tenor of these early engineering texts is very similar. In many of these texts, the instruction of writing is very literal and focused on the execution of mechanically sound prose but they also encourage the professional man (what with gender equality not yet fashionable) to be well-rounded and broad in the pursuit of his intellectual interests, to develop soft skills to complement the "hard" skills required of a good engineer.

In analyzing these texts I am looking for evidence of:

- Writing instruction as politically contested space
- A discourse positioning engineers as bad writers that is ideological; culturally embedded; ongoing; and socially constructed, sustained and maintained

• Epistemic privilege where certain kinds of knowledge, that reinforce the discourse about engineers as writers, are expressed

The 1911 book Good Engineering Literature by Harwood Frost, aims to make the strongest case possible for the importance of both reading and writing in the personal and professional lives of the modern engineer. The text often expresses admiration for the engineer as an "educated man" while chastising engineers for a lack of strong communication skills. Frost states, "There are some men, it is true, of recognized technical ability, who cannot, or do not, use ordinarily good grammar; who use the language of an uneducated laborer, and whose penmanship, spelling, and punctuation would hardly pass an elementary examination..." (5). There is no indication that Frost's statements should be interrogated. He offers them as truth, with an almost ideological fervor. He acknowledges the importance of communication in an engineer's professional life, stating, "Every engineer is, sooner or later, called upon in the course of his professional duties, to do some form of literary work, when he finds that the ability to speak and write clearly and forcibly, to express his thoughts and understanding and to describe his works so that others will understand them, will prove one of the most valuable items in his mental equipment" (vi).

Frost goes on to state that the importance of communication to the engineer is "too little appreciated by the average student, or by the engineer during the earlier years of his work and as a result, we see many engineers painfully groping their way and struggling with the difficulties of composition under conditions where success depends on their powers of persuasion or making themselves clearly understood" (vi). There is

little flexibility or ambiguity in Frost's statements. Throughout the book, the message is clear—communication is important and engineers need to embrace that fact. The tone is equally clear. On the one hand, Frost praises engineers for their technical mastery and societal contributions while consistently wagging his finger as he reminds engineers of their communication inadequacies and how they need to adopt the mindset he espouses throughout the text. There is no room for an alternative point of view. The epistemic privilege Frost asserts throughout the text is absolute.

The opening section of the book continues to assert the importance of literary expression, working hard to make it clear that clear and effective communication is a cornerstone of effective engineering. "The literature of his profession is the most valuable instrument at the command of the engineer, but in the present-day tendency towards specialization and the strong individualizing of the separate departments of the profession, there is always danger of a misuse of this instrument" (Frost 3). Frost also makes the consequences of ineffective communication clear, stating, "Provoking and expensive errors often arise from the misunderstanding of badly expressed orders, rules and regulations" (11). Like many of the engineering English texts from this period, the tone is often prescriptive, that is, providing clear and absolute guidelines for how to communicate appropriately, as evidenced, for example, by the section "What Correct Literary Expression Involves" which notes, among other things that correct literary expression includes, "selection and arrangement of ideas in accordance with the principles of unity, coherence and emphasis; grammar, spelling, penmanship, and punctuation; words, sentences, paragraphs, and chapters; clearness, simplicity, variety, and interest" (13). What Foucault states is quite evident where, "Power relations are

exercised, to an exceedingly important extent, through the production and exchange of signs; and they are scarcely separable from goal-directed activities that permit the exercise of a power (such as training techniques, processes of domination, the means by which obedience is obtained)" (Foucault "Power" 338).

*Good Engineering Literature* values rhetoric and grammar, and throughout the rest of the book, Frost fleshes out his ideas on correct literary expression, even offering advice on understanding copyright and libel. The most interesting aspect of this text is how little, as we will soon see, it differs from modern texts directed as engineers as writers and how consistently the engineer subject is positioned as inadequate and as a subject who can only elevate his status by following the "processes of domination" or rules of writing Frost sets forward.

The 1913 text *Handbook of English for Engineers* begins quite differently. Instead of valorizing the engineer as the highest form of professional man, this book begins by addressing the problems most often found in engineering writing while also making the case for the importance of communication to the engineer and exposing the cost of bad communication by quoting John Lyle Harrington who stated that, "An engineer, of all men, requires such knowledge of the technique of language that he can use it with accuracy and facility at all times. The bad construction of a sentence, even the erroneous use of a word or the misapplication of a comma, may result in costly litigation and heavy loss; therefore the language merits far more study than the best technical courses provide, (Sypherd 12). In the *Handbook of English for Engineers*, Sypherd identifies four primary modes of writing for the engineer—exposition, argumentation, narration and description (13). He also identifies those ways in which engineering writing is different from the

writing of the "literary man"—a lack of ornamentation, the use of jargon, special devices for clear expression such as abbreviations and short sentences and paragraphs and finally, the use of special structural methods, such as schemes of arrangement that frontload the most relevant information in a given document. "Whatever the form his writing takes, the primary aim of the engineer is the extremely practical one of making his thoughts clear and convincing to his readers" (Sypherd 15). This book was written in 1913. We can forgive Sypherd for espousing the windowpane theory of communication where all a subject must do is convey meaning clearly and all will be right with the world. Nonetheless, this text demonstrates an equally inflexible approach to writing—that there are rules, and those rules must be followed. This text also shows us that the myth I discussed in Chapter 1, that students will graduate from college as perfect writers, is not a new myth. As Sypherd writes, "Criticism of the weakness in English of many of our technical graduates is widespread; and the feeling prevails generally among college teachers and professional men that the college must in some way send these young men out better equipped to do the technical writing that will be required of them" (3).

Although Sypherd does not invoke rhetoric specifically, he does call upon rhetorical principles as the cornerstone of effective writing, advising engineers to read and investigate, to have a thorough knowledge of the subject at hand and a clear understanding of the audience whom he is addressing, and to plan the arrangement of his writing. As Sypherd continues to identify the predominant problems with engineering writing, nothing escapes his critique. He notes that many "technical men" consider sentence length a subjective matter, either writing sentences overly compounded or too brief to be useful. At no point does Sypherd indicate that engineering writing, as it stands,

has any merit. The notion that the engineer is a bad writer is framed, throughout the text as a universal and intractable truth.

After a brief section on the mechanics of engineering writing, the rest of the text focuses on the forms the engineer will use most often—business letters, reports and articles for technical journals. How to write within these genres is explained but there is little instruction offered as to why. The engineer, student, writer is offered commands which they must obey, without question or negotiation. The subject is not empowered so much as they are subjected to someone else's power. As with *Good Engineering* Literature, this text reveals that little has changed in how effective communication for engineers is taught. In explaining the essentials of a well-written business letter, Sypherd writes, "The essentials of a well written business letter are accuracy, clearness, brevity and courtesy" (98). The ideas clearly draw heavily on the windowpane theory of language—the notion that language should serve to clarify meaning and a notion, which Carolyn Miller deftly dismantles in her canonical article, "A Humanistic Rationale for Technical Writing" where, in reference to this idea of "clear communication" she states, "The most uncomfortable aspect of this non-rhetorical view of science is that it is a form of intellectual coercion: it invites us to prostrate ourselves at the windowpane of language and accept what Science has demonstrated" (3). Just as the windowpane theory of communication asks us to prostrate ourselves, the approach to communication instruction in this textbook demands that same prostration to the rules of communication as defined by the text.

Frank Aydelotte's edited collection *English and Engineering*, begins in a most troubling manner by addressing the teaching of writing to engineers as a "problem" when

he writes, in the very first sentence of the book, "The problem of teaching the engineering student to express himself well in writing and speaking is more than the problem of instructing him, by means of books or lectures or corrections on themes, in words and the uses of words" (xi). This approach automatically creates a narrative framework within which engineers, as writers, are always a problem waiting to be solved. Engineers are wrong, but the authors of this collection are right Aydelotte identifies the project of his book as "to train students to express themselves in writing and speaking, not merely grammatically but with order, force, sincerity, and such charm as their natures will allow; in the second to furnish something of the liberal, humanizing, and broadening element which is more and more felt to be a necessary part of an engineering education" (xii). The concern for helping engineers become more well-rounded is clearly an ongoing project across these early engineering communication texts but the tone remains problematic, rigid, and consistently reinforces a hierarchy where engineers are inadequate and must rely upon the advice of the text to address those inadequacies.

As with other texts from the early 20<sup>th</sup> century. *English and Engineering* draws heavily on the idea that if we communicate correctly, if we solve the problem of bad engineering communication properly, all communication will be clear and effective and all will be right with the world. In his article, "The Value of English, John Lyle Harrington states, "But the technical man, that is, the engineer, the architect, and the applied scientist of every kind, finds a sound, accurate knowledge of the language essential to him in every part of his work" (47). Another theme that begins to emerge as we look across a range of texts is the constant need to remind engineers of the importance of communication as if they are forgetful children who are unable to retain even the

simplest pieces of information. Like others discussing engineers as communicators, Harrington is quick to note just how problematic engineers as communicators are because, "Technical men are peculiarly prone to offend in the use of their mother-tongue, because they have not, as a rule, read deeply in classical literature nor been instructed thoroughly in the construction of the language" (48). He's not done though. He also goes on to say that young engineers, "consider such errors or no material consequence, because they are not technical errors" (50) and, "Grossly bad grammar is also very common" (50). Not only are engineers grammatically incompetent, they are sorely lacking in rhetorical awareness. "It is deplorably rare to find young technical men in possession of an intimate knowledge of rhetoric" (52). At no time does Harrington offer a positive assessment of engineers as communicators. His article in *Engineering English* serves not so much as an instructional document as it does a thorough and relentless assessment of how poorly engineers communicate. This negative characterization of the engineer as a poor communicator is framed as truth and as absolute.

Sada Harbarger's *English for Engineers*, first published in 1923, is the only early engineering English text written by a woman. In Teresa Kynell's article "Sada A. Harbarger's Contribution to Technical Communication in the 1920s" she examines the role of women in the history of technical communication. Sada Harbarger taught English to engineers during the early 20<sup>th</sup> century, and was an innovator for stressing the importance of English in engineering education. In addition to setting the tone for engineering English, Harbarger was nationally prominent, publishing her work in technical journals, and holding national positions in the Society for the Promotion of Engineering Education. In the brief history Kynell provides it is clear that the tension

surrounding the incorporation of communication skills into the engineering curriculum is not new. Kynell states, "By the end of the 19<sup>th</sup> century, however, the students themselves were beginning to rebel against extra coursework in an already crowded curriculum; they could find little purpose in either composition or literature since both seemed far removed from both the engineer's purpose and the generally practical nature of the engineering curriculum" (92).

Within a climate framed as hostile not only in Kynell's text but others, Harbarger sought to make English practical and relevant to engineers, and the entirety of the text is preoccupied with practicality. What is interesting is that Kynell demonstrates that one of the reasons engineers looked down on English is because composition was perceived as feminine—writing instruction the purview of women. This begs the question, is sexism partly to attribute for the reluctance of engineers to embrace English in the engineering curriculum? To impart the importance of English Harbarger saw the role of the engineering English teacher as threefold: "to reinforce engineering principles through English instruction, to connect English to the future professional life of the engineer, and to view English as the link to professional and social success" (Kynell 97).

*English for Engineers* opens with what can only be termed an ode to engineers—a different approach from the other texts discussed thus far. Instead of denigrating engineers as communicators, Harbarger focuses on what engineers do well, their technical mastery, and their contributions to society. She writes, "The engineer writes because he is an active part of a world of fact. He is not a writer by profession; he is a master technician in a vast world of motors, furnaces, formulas, raw materials, and power" (3). Given the resistance Kynell discusses in her article, Harbarger makes an

interesting and smart rhetorical move by addressing the importance of the engineer before addressing the engineer's shortcomings as a communicator but to what end? Harbarger acknowledges the importance of communication for the engineer and clearly illustrates the many ways in which engineers must rely upon communication to be successful but beyond that, the overall tone of the text is quite similar to Sypherd, Aydelotte, and Frost. A set of rules is given that engineers must follow. The same epistemic privilege the other texts demonstrate is well represented in *English for Engineers* as well.

A Handbook of English in Engineering Usage was originally released in 1930 with a second edition published in 1940. In the first chapter, author A.C. Howell notes that every discipline has a unique discourse and that, "To write good engineering English, the engineer must know more than the principles of English grammar and composition. He must be able to handle the technical forms with ease, to use language that will be intelligible to his readers, and to be simple, direct and forceful as well" (1). In modern terms, we might say that the engineer must be clear and rhetorical but A.C. Howell insists throughout this text that the engineer must use English as a tool, as something he can control to make his meaning and intentions known-ornamentation should always be secondary to the engineer's primary purpose of conveying information accurately and plainly. Like many of the other texts, Howell offers some peculiar characterizations about engineers by nothing that, "The engineer is a busy man. He has time for little reading and therefore it is essential that he understand quickly and accurately what is presented to him" (3). To that end, the engineer should value clearness, conciseness, completeness and accuracy.

In a clear evolution from previous texts, Howell begins to address style more explicitly in his handbook though he makes it clear that engineering style should, under no circumstances, be confused for literary style which he refers to with an almost disdain. The majority of the text focuses on establishing grammatical rules engineers should follow to write effectively, but toward the end takes up the dominant forms of engineering discourse—reports, letters, summaries and articles for publication. Overall, the tone of the book is very objective and prescriptive and offers little flexibility in terms of what it means to write like an engineer. Howell is another early engineering communicator enamored by windowpanes and how engineers must prostrate themselves to the principles of good, clear writing.

All of these texts offer a clear indication of the longevity and pervasiveness of the discourse positioning engineers as incompetent, hapless communicators and each text, in different ways, demonstrates a rigid attitude about how engineers should communicate and fall in line and submit to the discourse that is constructed both within and across these texts. The question becomes, given that discourse is an ongoing social process, one that is maintained and provides us with a language for addressing a given topic, do modern engineering texts adopt a similar stance?

## The Discourse About Students as Writers in a Modern Context: Today's Engineering Communication Texts

There are more similarities than differences between modern and early texts on engineering communication. Engineers are generally lauded across the texts for their excellent technical skills. The same intense focus on detailing the importance of communication to the engineering profession is prevalent in many modern engineering communication texts, where engineers have to be reminded about what's best for them, about how they should function within their community of practice. They are consistently reminded of their proper place. There is also a similar focus on prescribing a set of inflexible rules about communication. The texts I examined make it clear that there are right and wrong ways to communicate.

Bill Scott's *Communication for Professional Engineers*, published in 1984, is interesting in that before it addresses writing, it addresses the engineer as a public speaker. As with the early texts, Scott begins by lauding the engineer for that which he has mastered, stating, "Engineers are erudite, intelligent, experienced. They have a big vocabulary and are good at chatting informally with one another. They have knowledge and experience of fascinating projects" (5). It would seem to be a common rhetorical move for the authors of such texts to remind engineers of their value and all-around greatness before addressing their professional deficiencies or how they might improve their communication skills. That this text begins with a focus on oral communication, however, demonstrates a shift in the understanding that a great deal of engineering communication takes place orally. As Dorothy Winsor notes in *Writing Power*, in discussing how engineers communicate, "They prefer to communicate their conclusions orally in meetings, but to their dismay, must periodically lay aside the ongoing work in which they are currently interested to prepare written reports for their managers" (14).

As with the early engineering communication texts, *Communication for Professional Engineers* is largely prescriptive and directive, where engineers only need to

follow the textbook's orders and they will become effective communicators. Rhetorical principles of communication are alluded to but rarely named explicitly. In another reflection of the evolution of the modern workplace, this text also begins to focus more on how communication works to maintain workplace hierarchies, demonstrating an understanding that engineering communication is not merely about genre and mechanically sound communication, its also about how to communicate within a hierarchy, and how texts work to maintain power relations. This modern text, and others to soon be discussed demonstrates what Carolyn Miller offers about genre when she states, "genres can serve both as an index to cultural patterns and as tools for exploring the achievements of particular speakers and writers; for the student, genres serve as keys to understanding how to participate in the actions of a community" (Miller, "Genre as Socal Action" 165).

The popular text, *A Guide to Writing As an Engineer* by David Beer and David McMurrey, opens by creating context for the instructional information to follow with a chapter on engineers and writing, covering the kinds of writing engineers encounter, the importance of strong writing skills in an engineer's success as well as making it clear that engineers *can* learn to write well. That the authors feel the need to include this section makes it clear that they are responding to a discourse that implies that engineering executive lamenting that the instruction of communication skills are often ignored in engineering schools and the very first sentence of the chapter reads, "Many engineers and engineering students dislike writing" (1). The authors go on to add that, "If you feel you haven't mastered writing skills in college, the fault probably is not entirely yours. Few

engineering colleges offer adequate (if any) courses in technical writing, and many students find what writing skills they did possess are badly rusted from lack of use by the time they graduate with an engineering degree" (1).

A Guide to Writing As an Engineer markets itself as a text written by engineers for engineers, establishing the ethos that the information within the text because that much more relevant. As the book begins to dispense writing advice, the text relies heavily on terms that fall in line with the idea of who an engineer is that has been constructed in the first chapter where engineers are technically-oriented, logically-minded ("As an engineer you have been trained to think logically" (Beer & McMurrey 6)) and interested in the straightforward transmission of knowledge. In Chapter 2, entitled "Some Guidelines for Good Engineering Writing" the subject headings all continue to contribute to this construction of the engineer.<sup>4</sup> The rest of the book acquits itself much like other texts previously discussed with sections on grammar, various engineering genres and the like. As a sign of evolving communication practices, this is the first book to include a section on writing with computers and the use of graphics applications.

Susan Stevenson and Steve Whitmore's *Strategies for Engineering Communication* is a text that explicitly uses a rhetorical theoretical framework for discussing engineering communication. Like the Beer & McMurrey text, *Strategies for Engineering Communication* incorporates information about writing with computers but the overall approach is far more process oriented and less discipline specific. While the previously discussed texts all take up the specific nature of the engineer and the engineer

<sup>&</sup>lt;sup>4</sup> These headings include, "Focus on Why You Are Writing" "Focus on Your Readers" "Satisfy Document Specifications" "Get to the Point" "Provide Accurate Information" "Present Your Material Logically" "Express Yourself Clearly" "Use Efficient Wording" "Make Your Ideas Accessible" "Use Lists For Some Information" "Format Your Pages Carefully" and "Manage Your Time Efficiently."

as a communicator, this text does so far less explicitly, instead referring to how to write *technical documents*. The primary thrust of the text is to equip (engineering) communicators with effective strategies in eight areas: 1) planning and invention; 2) rafting and revising; 3) rhetorical approaches; 4) teamwork and workplace communication; 5) oral presentations; 6) style; 7) format; and 8) genres.

There are a few nods to the disciplinary specificity of engineering communication but as with the Beer and McMurrey texts, these references work within the rather narrow construction of the engineer as logical, efficient and technically minded. Section 1.2.2, "Efficiency and the Writing Process" begins, "When working as an engineer or as an engineering student, efficiency in writing matters" (Stevenson & Whitmore 6). At other points throughout this chapter and indeed the entire book, the text is written in such a manner as to reinforce the idea that the engineering workplace is one that must remain efficient at all times and in that the communication strategies set forth in this book mirror that understanding of the engineering workplace. Overall, this text gives the impression that if engineers simply implement the strategies as outlined in the text, they will produce effective communication.

*Professional Communication in Engineering* returns to the engineering communication text tradition of focusing intensely on engineers and their curious inner workings. The text is organized like a technical text with numbered chapter sections and tables and figures to reinforce the data included in the book. The book opens with a unique approach, however, in that it marries engineering to creativity and altruism.<sup>5</sup> "Like aspiring novelists, musicians and poets, who can see or hear the physical fruits of

<sup>&</sup>lt;sup>5</sup> The heading for the first section is, in fact, "Engineering is essentially a creative profession."

their compositions, engineers believe their contributions have some kind of measurable, physical 'presence' that contributes toward helping others in their endeavours'' (Sales 1). This text is also unique in that the book is largely the result of a six-year study of engineers in several different industries. Rather than designed to serve as an instructional text, the book works to provide quantifiable insight into how engineers communicate within their profession and why they make the communication choices they do. The primary concern in this text is the many broad generalizations about engineering communication Sales makes based upon a relative small data sample taken from 25 recorded interviews and 59 e-mail interviews.

As with nearly every text I've looked at, *Professional Communication in Engineering* establishes that engineers indeed communicate a great deal and always have. After presenting data indicating the significant amount of communication engineers undertake, Sales notes that, "The picture emerging here contradicts the stereotypical image of engineers engrossed in tinkering with machines and making things" (8). Unfortunately, the author does not strive to do much more than that.

It is disappointing but not surprising that there are more similarities than differences between early and modern engineering communication texts—that the approach to writing instruction is always one where the subject position is clearly defined, where engineers are not invited to participate in the design of their instruction, where a discourse that characterizes engineers as bad writers is perpetuated either implicitly or explicitly. Does this discourse function beyond texts? Does it influence student writing and how students perceive themselves as writers? The research study I undertook for this dissertation project attempts to answer those questions.

In Chapter 3, I outline the methods and methodology that guided this research project, two attitudinal surveys—one deployed to students at Michigan Technological University and one deployed to faculty at universities and colleges both within the United States and internationally, designed to help me find evidence of a negative discourse about engineering students as technical communicators and how, if at all, that negative discourse influences how engineering students perceive themselves as communicators and feel about writing.

## Chapter 3: The Methodology and Methods for a Survey-based Examination of the Influence of the Discourse About Students as Writers

In Chapter 1, I introduced the argument that the perception and assessment of students as writers is increasingly becoming more informed by lore passed between teachers, within and across disciplines and institutions, than by actual student writing itself. Advancing the scholarship of Marguerite Helmers whose study focused on the testimonials of composition scholars and how students were represented by those testimonials, I focus on how engineering students are framed as technical communicators. While there are a great many challenges we face when trying to teach writing at the college level, I assert that the sum of those challenges does not justify the negative tenor of the discourse about engineering students as technical communicators. In the second chapter, I establish a theoretical framework with which we can begin to consider both the reach and influence of the discourse (created by the lore about students as writers). I draw from the work of Michel Foucault, which informs this dissertation in three ways—his theories on power, discourse and the subject position—and how this work tells us that discourses always function to position subjects, they are productive, and they are hierarchical. I also look to literacy studies, which, in conjunction with Foucault's work, demonstrate that discourse is ideological, and agenda driven. Etienne Wenger's work on communities of practice also informs this dissertation with his scholarship on how communities of practice function, positions members within that community, and work to distribute power. Finally, I analyze both early and modern engineering communication texts to demonstrate how the discourse surrounding students, and more specifically

engineering students as writers, manifests itself in these texts. More specifically, I assert that these texts advance my argument by revealing the ways, sometimes subtle and sometimes explicitly, in which the discourse influences the pedagogical approaches in these texts.

This third chapter examines how the aforementioned theories function in practice. I discusses the methodology and methods I used for this dissertation project and the dissemination of two attitudinal surveys—one for faculty at higher education institutions across the United States and one for students across disciplines at Michigan Technological University. The purpose of these surveys was to determine whether or not faculty, across disciplines, believe there is a discourse about students as writers, how faculty contribute to that discourse, and how that discourse influences how students perceive themselves writers, and more specifically, how engineering students perceive themselves as technical communicators. The survey was deployed both to engineering students and students from other disciplines as well as engineering faculty, technical communication faculty, and faculty from other disciplines so I could compare and contrast results among these different groups to see what patterns, if any, emerge that might offer us better insights into how we can move beyond framing students and student writing negatively and toward more effective ways of teaching writing within and across disciplines.

### **Research Questions Guiding This Project**

Several questions inform and guide this research project.

- 1. Do faculty, across disciplines, believe students are "bad writers"?
- 2. Do faculty, across disciplines, contribute to a discourse about students as "bad writers" either formally (via assessment) or informally (via anecdotal lore)?
- 3. Do faculty, across disciplines, believe writing instruction is their responsibility?
- 4. Does the discourse about students as writers influence how students view themselves as writers?

## **Purpose of the Study**

The purpose of this survey-based study is to determine if there is a relationship between the stories college and university faculty, across disciplines, tell about students as writers, how we both teach and assess writing within and across disciplines and how students perceive writing and themselves as writers. I deployed two attitudinal surveys one to faculty across disciplines at universities across the country asking them about writing instruction and assessment practices as well as how they construct and discuss students as writers, both in and beyond the classroom; and another to students across disciplines at Michigan Technological University asking about their writing practices, perceptions of themselves as writers and perceptions of how university faculty see them as writers.

This research project was also informed by and designed with a belief in the importance of participatory knowledge in a manner influenced by Robert Johnson's scholarship on user-centered technology such that a concern for students and how they are represented is always at the center of this discussion. In his book User-centered Technology: a Rhetorical Theory for Computers and Other Mundane Artifacts, Johnson advances the argument that users have been displaced, coddled, ignored, or condescended to in technological design. The antidote to this problematic positioning of the user is a user-centered approach to technology. Johnson states, "In a user-centered approach to technology, users are active participants in the design, development, implementation, and maintenance of the technology. This is not to meant to imply that users are the sole or dominant forces in technology development. Rather, they are allowed to take part in a negotiated process of technology design, development, and use that has only rarely been practiced" (Johnson 32). I appropriate these ideas for this research study because of my primary interest in keeping students as the central focus of my work. In a user-centered approach to this research, I am ultimately suggesting we place students and their best interests at the center of writing instruction. I suggest that we think more critically about how we position students as writers and that we include students and their curricular needs in our thinking about best pedagogical and assessment practices. This is not to suggest students become the sole consideration or to suggest that students have never been the primary focus of instructors but rather to suggest that they become a significant consideration, that we hold ourselves to the higher standard where we place their best interests first. As such, a first step toward this inclusion is to direct my inquiry both toward faculty and students so as to develop a more comprehensive assessment of the

nature, reach, and influence of the discourse about students, and engineering students more specifically, as writers.

I have chosen this approach, one I believe is feminist in nature, because my work is focused on bringing about change, addressing relationships of power, and is emancipatory in how it calls for a change in how students are positioned by the discourse involving students as writers and because the research is collaborative. Finally, my research is influenced by pragmatism and the notion that research into pedagogical practices is as valuable as theoretical research because pedagogical and research practices are reciprocal—one enriches and complicates the other.

#### Significance of the Study

This study seeks to provide a quantitative understanding of how students are influenced by the ways in which they are represented and constructed by university faculty across disciplines, building on work by scholars such as Marguerite Helmers and her 1994 book *Writing Students: Composition Testimonials and Representations of Students*, which took a qualitative approach to examining this issue. This study offers a new perspective by examining not just the formal assessment of student writing but also the informal assessment of student writing that takes place between colleagues.

Should my hypotheses bear out, this study will provide evidence to encourage university faculty to take more considerate approaches to the formal and informal assessment of student writing across and within disciplines which will, in turn, encourage students to have more confidence about their writing and improve their writing skills.

## Using a Feminist-Informed Research Methodology in Survey-based Research

From the outset, my primary concern has been to determine whether or not the discourse about students as bad writers has a quantifiable affect on students. To position students as the focus of my inquiry, using a feminist-informed research methodology has been invaluable even though the primary thrust of my research project is quantitative and does not involve gender. Feminism is an especially appropriate perspective because there is a unique value taking into account the interests of students who, within the academic infrastructure hold little power in the classroom. As Donna Haraway states in the article, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," "Many currents in feminism attempt to theorize grounds for trusting especially the vantage points of the subjugated; there is good reason to believe vision is better from below the brilliant space platforms of the powerful" (Haraway 583).

Feminist research has a rich history of providing a framework for scholars to critically examine issues pertaining to gender and other forms of difference. "By documenting women's lives, experiences, and concerns, illuminating gender-based stereotypes and biases, and unearthing women's subjugated knowledge, feminist research challenges the basic structures and ideologies that oppress women" (Hesse-Biber & Leavy 4). Feminist research addresses a complex scholarly history where women's knowledge and scholarship was often invisible or dismissed; it privileges and foregrounds that knowledge within a feminist context. Furthermore, "Within feminism, the term 'feminist methodology' is also sometimes used to describe an ideal approach to

doing research—one which is respectful of respondents and acknowledges the subjective involvement of the researcher (Letherby 5). Given the potentially sensitive nature of this project's inquiry, wherein I ask faculty and students to critically interrogate their writing, writing confidence or pedagogical practices and the ways in which student writing is framed, a feminist research methodology enables me to incorporate a necessary sensitivity into my research methodology.

This history of feminist research methodologies as a means of critiquing positivism is an ideal way to interrogate the subjective assessment practices that have contributed to the discourse about students as bad writers. There are several characteristics that define feminist research and provide researchers with the means to interrogate, as aforementioned, problematic practices. A feminist research project is guided by feminist theory and principles, works across disciplines, embraces diversity, accounts for the personality of the researcher and encourages critique. These ideals are nurtured within feminist research because they consistently prioritize and value the subject's experience and the researcher not as a detached observer but rather as a participant within the research project. As a technical communication instructor, I draw heavily on my own experiences and locate myself as such within this project. Feminist research employs a range of traditional and experimental methods. As such, there is no one way in which researchers can engage in feminist research—there are a multiplicity of valid approaches. Many feminist research projects are qualitative in nature and use methods such as case studies, oral histories, interviews, observation and other ethnographic approaches that allow researchers to work collaboratively with subjects and empower subjects to speak to their experiences in their own words. Feminist research

also encompasses mixed methods research and even quantitative research. This study uses attitudinal surveys as the primary data collection method for my research project because it is an effective way of reaching a broad range of research participants as well as providing me with access to the currency of respondents revealing their attitudes in the here and now. In addition to bringing forth subjugated knowledge, feminist research also critiques positivism, or the notion of an objective reality as one that is indeed not at all objective and originates within a "privileged location within a historical, material, and social set of patriarchal power relations" (Hesse-Biber & Leavy 7). This research project seeks to move beyond the "objective reality" that students are bad writers and closer to a reality where we can gain a more accurate understanding and a more equitable representation of engineering students as technical communicators.

While feminist research has often taken the form of qualitative or mixed methods approaches, I am using a survey-based approach with quantitative measures (a 5-point Likert scale) in this research because it is the most effective means of gathering responses from a large number of faculty and student respondents. Logistically, it would have been far more challenging to conduct interviews and/or oral histories or similar qualitative approaches from the more than 350 respondents who provided data for this research. The survey-based approach also allowed me to focus my inquiry in very specific ways that would be most useful for determining if there is a negative discourse about engineering students as technical communicators. In feminist research it is not necessarily the methods that characterize the feminist nature of the research, but rather the ideology shaping those methods because, "qualitative methods are no more essentially feminist than quantitative techniques are essentially masculinist" (Lawson 450). There is nothing

inherently masculinist or anti-feminist about using quantitative methods or survey-based research. As Davida Charney argues in "Empiricism Is Not a Four-Letter Word," "critics of science often conflate methods and ideologies in simplistic ways that have been challenged by others sharing their political commitments. It seems absurd to assume that anyone conducting a qualitative analysis or ethnography must be compassionate selfreflecting, creative and committed to social justice and liberation. Or that anyone who conducts an experiment is rigid and unfeeling and automatically opposes liberatory, feminist, or postmodernist values" (283). In the first chapter, I discuss C.P. Snow's The *Two Cultures*, and the historical divide between the humanities and the sciences. This dualistic outlook is also prevalent when discussing qualitative versus quantitative research methods as if those approaches are diametrically opposed approaches because "many discussions of feminist methodology have reproduced [binary oppositions and accompanying value hierarchies in Western patriarchal thought], albeit reversing the value hierarchy" (Kelly et al. 149). In using quantitative methods in this project, my ultimate purpose is to achieve a methodological bilingualism similar to the intellectual bilingualism suggested by Stefan Collini. I aim to avoid the potential oversight Davida Charney cautions against when she states, "If teachers and scholars persisted too long in treating scientific and technical discourse as the bare transmission of determinate facts, it is because we failed to recognize its rhetorical character" ("Empiricism Is Not a Four Letter Word" 291).

This research project will be informed by a feminist research framework to examine how power functions within the discourse about students as writers, to examine how faculty hold a privileged location, and to critique the notion that faculty represent an objective reality where student writing is concerned within the academy.

#### **Identifying The Problem at Hand: The Hypothesis**

Faculty, across disciplines, often contribute to a negative discourse about students as "bad writers." This discourse is comprised of practitioner lore about students as writers, and this discourse's potential reach and effects are a primary concern of this dissertation. There is ample anecdotal and scholarly evidence that there is indeed a discourse that says students are bad writers. This study seeks to determine whether or not such is the case and if the lore that creates this negative discourse can be substantiated. A model of this hypothesis is represented by Figure 3.1.

## **Other Instruments Measuring Attitudes Toward Writing**

Another instrument I might have used, and one focused on engineering students much in the same way this study focuses on engineering students, is the Views about Writing Survey (VAWS) developed Rhoads, Duerden and Garland, which they administered to 50 freshmen engineering students to measure the beliefs about and attitudes toward writing held by those students both before and after taking a composition course. While more appropriate for my purposes, the VAWS was also unsuitable for my project. The survey was too narrow in scope and too locally situated to benefit this research project. It was also solely focused upon freshman engineering students over a very short period of time and as such, the survey was too constrained for the ambitions of this dissertation project given that I wanted to survey students across disciplines and years in school as well as faculty. That said, this survey was of particular interest because of its specific focus on engineering students and their attitudes toward writing. The VAWS "attempts to measure the students' attitudes to writing in general and how they see writing in the larger context of the university and their careers (Rhoads et al. 973). The researchers were, as I am, interested in this very specific group of students because, "Engineering students typically regard writing, especially composition classes, as less important to their careers than their engineering or science classes." (Rhoads et al. 974). As discussed in Chapter 1, the negative attitude engineers and engineering students hold toward writing and communication has long been documented. That attitude is certainly changing, but surveys such as the VAWS are useful in determining not only the currency of the notion that engineers don't care for writing, but also the extent of their negative attitudes toward writing. The VAWS developed questions that complemented the goals of English 101, the freshman composition course required of all students at Arizona State University. Those goals include: valuing rhetorical situations; understanding relationships between writing and other subjects; recognizing the importance of organizational strategies; understanding the value of self-assessment; and understanding the importance and learnability of collaborative writing, (Rhoads et al. 974). As with the Daly Miller instrument, the VAWS offered valuable insight but lacked the depth and scope required.

## **Hypothesis**

Faculty, across disciplines, tell negative stories about students as writers contributing to a pervasive, longstanding discourse framing students as "bad writers.".

The discourse creates a self-fulfilling prophecy. Students internalize the discourse and write poorly, performing to expectation rather than ability. Students are subjected to the discourse both formally (through faculty assessment practices) and informally.

Figure 3.1: Hypothesis Model

## The Surveys and How Their Design Was Informed by Feminist

## **Research Principles**

In Chapter 1, I introduced the concept of practitioner lore drawing from the work of Stephen North who focused a great deal of his scholarly work on how lore influences composition teachers and how lore can have scholarly merit. I also discussed the scholarship of Marguerite Helmers who also studied lore in the form of testimonials and how students are rigidly and negatively represented within that lore. Lore is just as prevalent in the technical communication classroom and is even more prevalent when engineers are the students in question because not only are we, as technical communication instructors, sharing and legitimizing lore about how we teach technical communication, we are sharing and legitimizing lore about how this specific group of students communicates and creating a challenge atmosphere for productive learning to take place. It is a lore that has a powerful hold not only among technical communicators but also among engineering employers and in that, there is a legitimate concern about how that lore might affect (engineering) students as communicators. There are, undoubtedly, consequences when we say "Engineers can't write," or when we assume there is an exceptional level of resistance among engineers to learning about and improving technical communication skills. What are those consequences? How can we begin to answer that question?

Where their writing is concerned, students haven't been listened to or heard as much as they could, and perhaps, should be. In designing this survey, I tried to bring the student perspective to the forefront while also doing the same for faculty participants giving them equal, rather than imbalanced consideration. In thinking about the most effective way to understand how practitioner lore functions among faculty across disciplines and how that lore influences (or doesn't) how students write and perceive themselves as writers, surveys felt like the most appropriate means of starting a conversation, for the first time, albeit indirectly, between students and faculty by examining both student and faculty perspectives. By drawing from both perspectives, the

data would not be considered in isolation where we have only student perspectives or only faculty perspectives and therefore, only a partial understanding of the situation. To execute this multivocal approach, I designed two surveys because "quantitative survey research can provide a vehicle for feminists to introduce sexism, racism, classism, heterosexism, and other social justice issues into mainstream discussions" (Miner-Rubino and Jayratne 302). For the purposes of this research project, the two attitudinal surveys I deployed were ideal for looking at issues pertaining to the problematic and, perhaps, unfair and unjust characterizations of students as bad writers as well as to examine how faculty perceive, assess, and discuss student writing and students as writers.

Feminist research is marked by: a willingness on the part of the researcher to listen to, acknowledge and respect multiple voices and perspectives; a reclamation of knowledge; a focus on the subject and how they experience a given system (in this case the university system) more than how the system itself is functioning. I kept these principles in mind as I designed the survey and formulated the questions for students and faculty.

The student survey was divided into six sections. In the first section, "About this Project" I included information about the research project, the estimated length of time for students to complete the survey, and other required IRB information to assure respondents that their responses were voluntary, securely received and stored, and handled with confidentiality. In the second section of the student survey, I queried students about the kinds of communication practices in which they regularly engage, primarily to gain a stronger sense of the kinds of writing practices students engage in. The genre options I chose were drawn from the kinds of documents students might create

both in technical communication courses and within their disciplines as well as the communication practices they engage in beyond the classroom like personal and professional e-mail correspondence, creative writing, and communication in social networking systems. The final option in this section included a comment box where respondents could include communication practices not listed as a means for students to accurately represent themselves as communicators.

In both the student and faculty surveys, I used close-ended questions because I wanted to recover as much information as possible from participants and because survey respondents are more likely to answer closed-ended questions (Minor-Rubino and Jayratne 301). Furthermore, close-ended questions are easier to analyze and make statistical interpretation clearer. There is less ambiguity in interpreting the data because each response has a firm value and as such that allows me to more accurately determine the extent to which faculty contribute to lore and the broader discourse about students as writers and how, if at all, students are influenced by that discourse. Finally, close-ended questions can be more specific and specificity was important for the kinds of information I was looking for via the deployment of these surveys. The responses were measured via a commonly used, five-point continuous Likert scale on a scale from Strongly Agree (1) to Strongly Disagree (5) for most questions. The first question in the student survey, "How frequently do you write in the following genres?" offered students a grid of twelve (12) regular communication practices<sup>6</sup> and a four-point continuous Likert scale (Very

<sup>&</sup>lt;sup>6</sup> The communication categories included: Personal E-mail, Professional Correspondence, Lab Reports, Specifications, Documentation, Research Papers or other research-based assignments, Abstracts of Executive Summaries, Memos, Personal Reflections or Essays, Short Stories, Poetry, and Social Networking. These items were developed based on Andrea Lunsford's Stanford Study of Writing and

Often, Often, Rarely, Never) to determine the frequency with which they engaged in these communication practices.

The next three sections were designed to ascertain student attitudes toward: the writing instruction they have received within their discipline and across the curriculum; their own writing; and how instructors assess their writing and perceive them as writers. In each section, students were asked to respond to a series of statements I developed based on lore statements about perceptions of student writing and general assumptions about student writing practices and attitudes I've heard throughout the five years I have taught writing at the college level. In the Attitudes Toward Communication section, for example, statements included, "I enjoy reading," "I dislike writing," and "Writing takes me a long time." With thirteen in all, I tried to develop statements grounded in student realities, providing them with statements that would make sense within the context of typical student experiences. I also balanced negative statements with positive statements to see if respondents would respond consistently to a positive and negative statement about the same criterion. In "Attitudes Toward Communication in Practice," I wanted to give students a voice to discuss how they felt about their writing, writing practices and processes, their writing ability using similar strategies in developing the fifteen statements within the section. Because this research is concerned with how students are characterized as writers in practitioner lore, the majority of the statements were positive in nature so as not to contribute to a negative discourse by the very nature of the questions themselves.

regular writing assignments required in courses, across the curriculum, at Michigan Technological University.

The statements in "Attitudes Toward Communication Instruction," were developed to allow students to vocalize how they feel about the ways their writing is assessed and how writing is taught because the student perspective about pedagogical approaches to writing instruction and assessment are just as important as the student perspective on their writing itself. In the final section of the survey, I collected a small amount of demographic information: each student's year in school and their major or academic discipline so I could analyze the results via different metrics to see if patterns emerged based on the length of time students have been in school and more importantly to see how, if at all, survey responses would change in looking at the responses of students across all disciplines, students majoring in engineering, and students not majoring in engineering.

The faculty survey was also divided into six sections and as with the student survey, the first section, "About this Project" included information about the research project, the estimated length of time for faculty to complete the survey, and other required IRB information to assure respondents that their responses were voluntary, securely received and stored, and handled with confidentiality.

I queried faculty, across disciplines, about their writing-related pedagogical and assessment practices and attitudes toward students as writers. In the second section of the faculty survey, "Writing Instruction," I developed seven statements to determine faculty attitudes toward incorporating communication instruction into their curricula. Instead of relying upon the literature about writing across the curriculum to inform my analysis, I wanted to query faculty directly with statements such as, "It is my responsibility to incorporate writing instruction into my curriculum" to see if faculty support or resent the

necessity of incorporating writing instruction into their curricula. In designing the faculty survey, I believed that faculty attitudes toward that responsibility might correlate in interesting ways to how they view students as writers and discuss and assess students as writers. The next section, "Assessing Student Writing," contained statements about assessment practices-whether or not faculty provide students with feedback and the nature of that feedback. I was interested in addressing this issue with faculty directly rather than relying upon anecdote and lore. Well in line with feminist research practice, I wanted faculty to benefit from the anonymity of the survey an use that opportunity to honestly and openly represent their attitudes on assessment. The "Attitudes Toward Student Writing," section was designed to expressly address practitioner lore, by assessing how faculty actually f eel about students as writers beyond the formal assessment that comes from grading. Statements in this section included, "I believe that students are inherently capable of good writing," and "I believe students write well." I chose such direct statements because I was interested in offering faculty the anonymity afforded by the survey to honestly reflect upon their sentiments about student writing and students as writers.

In the section, "Anecdotal Approaches to Student Writing," I again directly addressed the idea of lore, or this pervasive discourse about students as writers by asking faculty to reflect upon and respond to statements about the extent to which they actively participate in contributing to the negative discourse about students as writers. Statements not only addressed whether faculty discuss student writing in professional or personal settings but also how they feel about those discussions and how they feel when they are privy to such discussions. My interest, particularly in this section, was in understanding

not only if faculty contribute to a negative discourse but how that discourse functions and how faculty feel about the tenor of such discussions. Finally, in the sixth section, I collected demographic information from faculty including the number of years teaching, gender, the type of institution where they taught, professional rank and academic discipline.

The student and faculty surveys were distributed electronically via Survey Monkey, a popular and reputable online service that allows researchers to securely create and disseminate web-based surveys. I chose to disseminate an electronic survey because of the flexibility, cost-effectiveness, and convenience for respondents, of the medium. "Computer networks add value to the electronic survey because these systems locate respondents automatically, deliver survey instruments to remote locations (wherever respondents have access to the network), and permit respondents to answer questions at their own convenience" (Kiesler & Sproull 403). Because this research is informed by feminist methods, I was concerned that potential respondents without access to a computer would be unable to participate in the survey. However, respondents were recruited via email solicitations to listservs for student organizations at Michigan Technological University as well as national listservs for faculty such as the Council of Writing Program Administrators (WPA-L), the Association of Teachers of Technical Writing (ATTW-L), and listservs for engineering faculty. As such, I made the assumption that potential faculty respondents would have access to a computer to complete the survey because of the manner in which they received the solicitation. Michigan Tech students have access to public computer labs within their academic departments so even

if they did not have Internet and computer access at home, they would be able to participate in the project on campus.

The web-based surveys were anonymous to encourage honesty and to allow respondents to feel comfortable responding to some of the sensitive and challenging statements in the survey, particularly for students who are, in many ways, in a vulnerable position within the university system. To preserve their anonymity, respondents were not asked for personal or identifying information and were assured that no one would be able to identify their answers or know whether or not they participated in the study.<sup>7</sup> To that end, IP addresses were not collected and all survey responses were encrypted using 128-bit encryption.

Complete copies of the surveys are available in the Appendix.

#### **Delimitations and Limitations**

The student survey, in particular, was constrained by the low number of valid respondents—83. With that sample size, the margin of error was significant—11%. Broad conclusions about the influence of the discourse on student writing and how students perceive themselves as writers, cannot be drawn from such a narrow respondent pool and it was impossible to report any statistical significance in most of the results because any discrepancies generally fell within the margin of error. Nonetheless, the student responses did allow me to gain significant insight into how a given population, during a specific time and in a specific place, are influenced by the discourse about

<sup>&</sup>lt;sup>7</sup> This research project was submitted to and approved by the Michigan Technological University Institutional Review Board with the approval number M0450 and modification M0245.

students as writers and the practitioner lore contributing to that discourse. The survey deployed for students is confined to students at Michigan Technological University.

The margin of error for the faculty survey with 247 respondents, was 6%, still high, but more reasonable than that of the student survey. The sampling of instructors from both Michigan Technological University and other institutions may make it difficult to determine whether the influence, if any, of the discourse surrounding students as writers is a local phenomenon or one experienced by students at a broad range of institutions. Finally, the closed-ended nature of the statements students and faculty had to respond to in their respective surveys did not provide opportunities for respondents to elaborate further in ways that might have been beneficial for drawing broader conclusions about the negative discourse about students as writers, how students are affected by that discourse, and how faculty contribute, if at all, to that discourse.

Finally, the data in this study is self-reported and there is an inherent question of reliability where self-reportage is concerned. Would respondents be more likely to respond in ways that are dishonest? That is a question we cannot answer but the survey was anonymous to ensure respondent comfort and to protect their responses. Furthermore, there is evidence that there are merits to using self reported data because, "Self-report questionnaires have lower fidelity but greater bandwidth" (Gonyea 74) and "self-reported data from surveys are often the *only* practical source of certain types of information" (Gonyea 74). Given that the surveys deployed to students and faculty were attitudinal surveys, there was also the concern that as the researcher, I could not assume respondents would have a common understanding of the attitudinal phrases used to measure survey responses. To address these concerns, I followed guidelines for creating

effective questions for self-reported data which included phrasing questions clearly, asking respondents questions where the information being requested was known to them, and ensuring that the response options were complete and appropriate.

Any survey will have delimitations and limitations but despite those detailed here, the approach I took with this research project still produced valuable results and allowed me to draw conclusions about how faculty are implicated in practitioner lore about engineering students as technical communicators.

### **The Research Sites**

The student survey was disseminated to students at Michigan Technological University. With nearly 7,000 students pursuing degrees in 120 undergraduate degree programs, 32 master's degree programs and 22 doctoral programs, Michigan Tech has recently moved into the top tier of U.S. News and World Report universities. Several programs are ranked in the top 100 nationally including Geological and Mining Engineering Sciences, Mechanical Engineering and Mathematics. The majority of Michigan Tech students major in engineering and science disciplines. The university is also home to a nationally recognized graduate program in rhetoric and technical communication, housed in the Humanities Department, which also offers undergraduate majors in Scientific & Technical Communication, Communication & Cultural Studies, and Liberal Arts.

Because Michigan Tech is more focused on engineering and the sciences, students are often reluctant to take Humanities courses because they cannot see how those courses will benefit their professional development. At times, they resent having to add additional courses to an already demanding curriculum. A great deal of the practitioner lore among Humanities instructors is shaped by these attitudes, which students are often quite vocal in expressing. This initial reticence, however, generally dissipates once students are fully engaged with their Humanities courses and the students at Michigan Tech are, on the whole, bright, inquisitive, intuitive, and enthusiastic about learning. That enthusiasm led me to believe they would be an ideal student population for the student survey. Students from most disciplines only have one mandatory semester of writing instruction, via the UN 2001: Oral, Written & Visual communication course. While many majors require students to take additional courses, such as HU 3120: Introduction to Scientific & Technical Communication, this requirement is not universally applicable. As such, there is little guarantee that MTU students will have more than one or two semesters of explicit communication instruction, particularly when they are majoring in the engineering disciplines. This limited communication course requirement is due in large part to the UN general education course system, implemented in 2000, where all students at MTU take four core courses: UN 1001 (Perspectives on Inquiry) and 1002 (World Cultures), and UN 2001 (Oral Written & Visual Communication) and 2002 (Institutions) which are "designed to promote active engagement in learning, coherence within the curriculum, integration within and across disciplines, strong communication abilities, and development of university-level habits of mind" (Michigan Technological University).

The problem, if it can be termed as such, arises because these courses are often taught differently, across sections. While students are taking the same courses, which in theory, have the same curricular goals, students are not necessarily learning the same things and once they begin to take courses within their disciplines, the only courses they

have to take are those mandated by department's curricular requirements. If a department does not require students to take additional communication-related courses, we have to hope that those students take courses with faculty who believe in incorporating communication instruction into their discipline-specific courses. Within this context, I was interested in how students would respond to the survey and how their responses would support or contradict the practitioner lore that has developed among Humanities instructors at Michigan Tech.

MTU was chosen as the primary research site for students for several reasons. As a graduate teaching instructor at the university, I had firsthand knowledge of the student population and as such, the ability to contextualize their survey responses more effectively given the aforementioned climate with regard to writing instruction within the university. Michigan Tech was also one of the first institutions to develop and implement a Writing Across the Curriculum (WAC) program and as such, has a rich history of faculty developing an implementing writing instruction within disciplines and across the curriculum. This survey provided an opportunity to see if students perceive that the initial ambitions of WAC initiative are still being realized because while over the years, many critical advances in teaching writing and learning through writing across the curriculum have been made, we are still looking for the most effective ways to *sustainably* implement writing across the curriculum and how to integrate writing and writing instruction across and within the disciplines. Michigan Technological University instituted one of the earliest WAC programs through the efforts of Toby Fulwiler and Art Young, who developed a program where instructors, across disciplines, incorporated writing into their curricula to foster a more interdisciplinary environment within which

students could learn to write and communicate effectively. This program experienced early success but when the grant funding ended, it was up to individual faculty members to continue to incorporate WAC initiatives into their curricula. As I analyze the student survey results in the next chapter, I am interested in how, if at all, this individual responsibility for faculty to incorporate WAC initiatives into their curricula plays out in the student responses to the statements in the Attitudes Toward Communication Instruction section.

Despite the challenging writing instruction climate at this university, students at MTU are regularly exposed to communication practices, both through classroom instruction and extracurricular programs such as the Enterprise program<sup>8</sup> and the PAVLIS Institute, both of which often incorporate communication awareness and/or instruction programmatically. As such, interrogating students about their communication practices, their perceptions of themselves as writers, and how they perceive the ways in which communication is touch within and across the disciplines is feasible because they have a robust context from which to respond. Finally, as a technological university with a significant number of students majoring in engineering, MTU was also an ideal research site because engineers are the primary focus of my research and the majority of MTU students are majoring in an engineering discipline.

Faculty respondents were drawn from universities both within the United States and abroad. I chose to open the faculty survey to respondents beyond Michigan

<sup>&</sup>lt;sup>8</sup> The Enterprise program gives teams of students the opportunity to participate in real-world settings to solve engineering problems supplied by industry partners. The program prepares students for the challenges that await them after their educations, and gives new perspectives to sponsors, businesses and organizations who participate. The program began in 2000 and provides opportunities for more than 400 students each year (MTU Enterprise Program).

Technological University because I wanted to yield a significant number of respondents and felt that goal would be best achieved if I focused my faculty inquiry only on MTU. I also chose to broaden the faculty subject pool because if the survey results demonstrated that a negative discourse about students as writers does exist, I want to show that this negative discourse is not locally, but rather globally situated. Given the range of institutions these respondents represent, it is difficult to summarize the nature of those institutions. Demographic data collected indicates these respondents hail from public and private universities and colleges, professional schools and both 2 and 4-year institutions.

#### **The Student Respondents**

For the student survey, disseminated to students from all grade levels at Michigan Technological University, there were 104 respondents. Sixteen survey responses were discarded because those respondents did not complete the survey. In addition to the survey questions with regard to communication practices and how they perceived themselves as writers, students were also asked to provide some basic demographic information that would assist in the data analysis. These demographic questions were limited to asking students about their year in school and their major. In future versions of this survey, I will also ask students to provide their gender. It might also be useful to ask students about their race and/or socioeconomic backgrounds. These questions were omitted from this iteration of the survey to maintain a reasonable scope of inquiry. More importantly, I am primarily interested in a specific category—engineering students. In subsequent studies, I will narrow that category further looking at specific engineering disciplines as well as factors such as race, gender, and socioeconomic background to see how those factors complicate study findings.

Of the 88 completed surveys, 3 respondents were freshman, 22 were sophomores, 23 were juniors, 38 were seniors and 2 were graduate students. The freshman and graduate student responses were ultimately discarded because the sample sizes were too small to provide significant data. Figure 3.2 shows this demographic breakdown. The freshman and graduate student responses were discarded because they could not provide any meaningful data for this study.

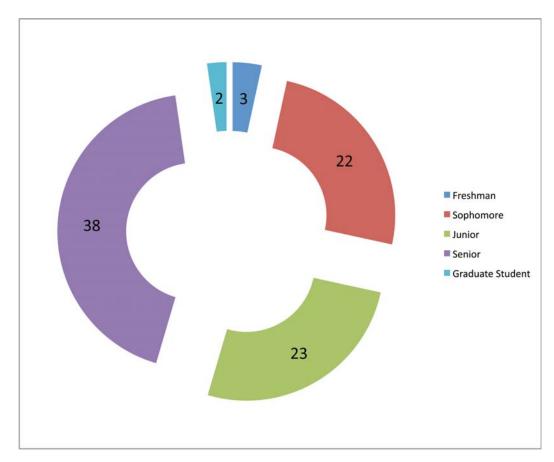
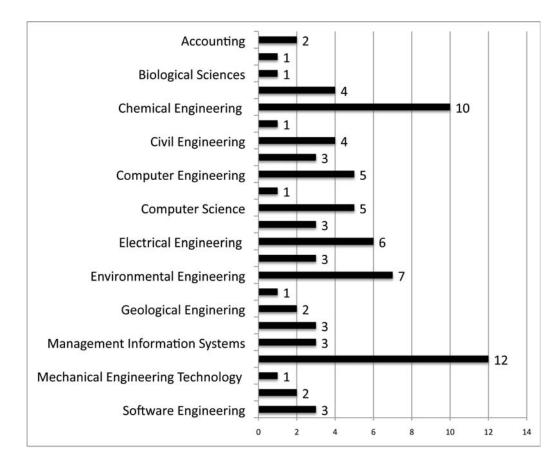


Figure 3.2: Year in School of Student Respondents

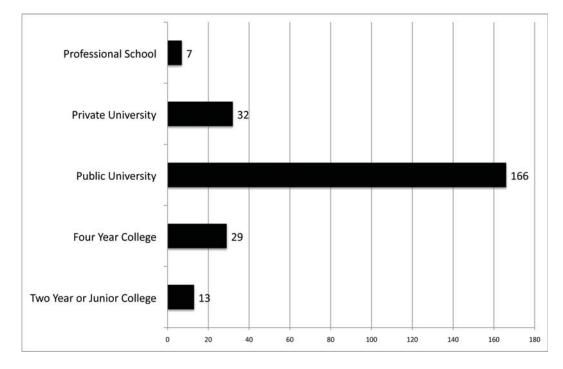
These 83 respondents represented 23 different majors. Sixty respondents majored in an engineering discipline and 32 respondents were non-engineering majors. Of the 57 engineering majors, the highest number of students came from Mechanical Engineering (12) and Chemical Engineering (10). Among the non-engineering majors, the highest number of respondents came from the Communication & Cultural Studies program (3). A complete breakdown of student respondents and their distribution across majors is included in Figure 3.3.



**Figure 3.3: Majors of Student Respondents** 

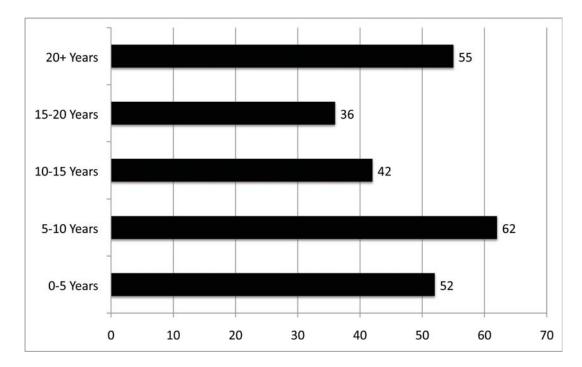
## **The Faculty Respondents**

For the faculty survey, there were 268 respondents from universities and other institutions of higher education. Of these respondents, 247 completed the survey. The 21 incomplete surveys were discarded to preserve the integrity of the data. There were 116 male respondents, 130 female respondents, and 1 transgender respondent. I also asked faculty respondents about the type of institution where they taught, the number of years in the profession, their professional rank, and their academic discipline. I asked these demographic questions so I could analyze faculty responses using filters for some of these demographic characteristics, a strategy that would better assist in determining patterns in faculty responses across disciplines, within the engineering discipline, and between engineering and non-engineering faculty.



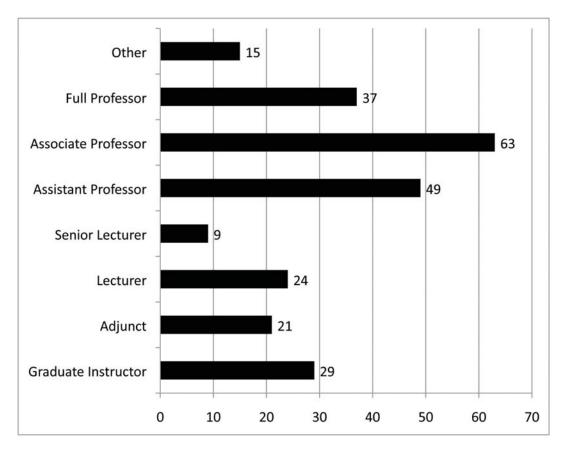
**Figure 3.4: Faculty Institution Types** 

Faculty hailed from all manner of institutions of higher education with 13 respondents teaching at Two Year or Junior Colleges, 29 respondents teaching at Four Year Colleges, 166 respondents teaching at Public Universities, 12 respondents teaching at Private Universities and 7 respondents teaching at professional schools. Figure 3.4 provides a visual breakdown of this distribution.



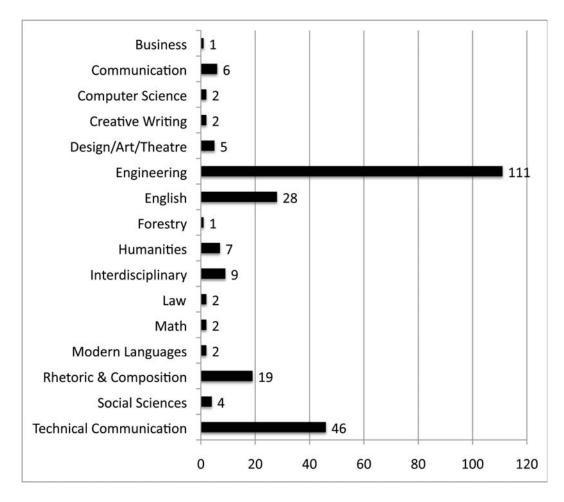
**Figure 3.5: Faculty Years in Profession** 

Faculty respondents were evenly distributed over five year ranges in terms of the number of years they have been in the profession—52 respondents have been teaching for 0-5 Years, 62 for 5-10 Years, 42 for 10-15 Years, 36 for 15-20 Years and finally 55 respondents have been teaching for more than 20 Years (see Figure 3.5).



**Figure 3.6: Faculty Rank** 

Faculty respondents were also fairly evenly distributed in terms of faculty rank— 29 respondents were Graduate Instructors, 21 were Adjuncts, 24 were Lecturers, 9 were Senior Lecturers, 49 were Assistant Professors, 63 were Associate Professors, 37 were Full Professors and 15 respondents indicated a faculty rank not included in this list. These respondents were primarily faculty at international institutions or American faculty at universities without tenure systems. Some respondents also chose to supplement their faculty rank in this section with information about program directorships, retirement and other circumstances that could not be effectively addressed in the survey options. Given the range of Other responses, survey responses were not filtered by faculty rank.



**Figure 3.7: Faculty Disciplines** 

Because this dissertation is not only concerned with determining if there is a discourse that positions students as bad writers but also with whether or not this discourse is more pervasive within the engineering community, I also asked faculty about their academic disciplines so that I would be able to compare and contrast the responses of engineering faculty versus non-engineering faculty. When I originally designed the faculty survey, I concluded there was no effective way to offer static choices. In that, I allowed faculty to respond to the question, "What is your discipline?" with self-selected

responses. Upon beginning to analyze the data I realized I had made a grave error and should have endeavored to give faculty a static range of disciplinary categories to choose from because each respondent interpreted the question in very individual and sometimes specific ways. Based on the responses, which varied wildly from straightforward responses like "Mechanical Engineering" to very unique, complicated responses such as, "Metallurgy, Non-Metallic Materials and Applied Statistics" I grouped faculty into general disciplinary areas as demonstrated in Figure 3.7. Engineers were the most significantly represented amongst the faculty respondents with 111 faculty indicating they specialized in an engineering discipline.

In this chapter I outlined my research methods and methodology and how they are informed by feminist research practicies, detailed my research questions and provided an overvie of both the student and faculty respondents for the two surveys I deployed for these groups as well as an analysis of how those surveys were designed. In Chapter 4, I analyze selections of the data collected from my research through a framework of various lore statements that are part of the negative discourse about students as writers.

## Chapter 4: Investigating the "Brutal Discourse of Ridicule and Control": How the Student Survey Results Speak to Practitioner Lore about Students as Writers

In the previous chapter, I outlined the feminist-informed methodology and methods used for this dissertation project and the dissemination of two attitudinal surveys—one for faculty at higher education institutions across the United States and one for students across disciplines at Michigan Technological University. The primary purpose of using a feminist-informed methodology was to prioritize students and their best interests as the primary focus of this project, to create new knowledge about the discourse about student writing, and to allow both student and faculty research participants to accurately and openly represent themselves and their perceptions. Chapter 4 discusses a selection of the results from the student survey disseminated for this research project. I analyze those results within the context of several elements of practitioner lore about students as writers and Etienne Wenger's scholarship on communities of practice. Wenger's work offers a useful framework for examining how the negative discourse about students as writers is a troubling example of the ways in which faculty are not effectively fulfilling their roles within their communities of practice and how the negative discourse might impede students from fully engaging with the academic community of practice. Wenger states "Engagement in practice—in its unfolding, multidimensional complexity—is both the stage and the object, the road and the destination. What they learn is not a static subject matter but the very process of being engaged in, and participating in developing an ongoing practice," (95). If faculty are not

fully engaged because they don't believe students are even capable of good writing, they compromise how students are able to participate, engage, and learn.

In Writing Students, Marguerite Helmers examines how students are constructed as writers in composition scholarship, and specifically practitioner testimonials. She asserts that faculty, particularly when discussing students as a means of addressing pedagogical issues and more effective ways of teaching composition, tend to characterize students in problematic, and narrow ways that function to consistently position students as lacking. She states that, "While generalizations are an inevitable aspect of discursive prose and are necessary to the development of schema that further understanding, we must question why generalized student types have become part of a brutal discourse of ridicule and control," (2). Such generalizations are a primary concern of this dissertation. In looking at practitioner lore about students as writers, and engineering students as technical communicators, we tend to generalize that "students can't write." This generalization doesn't begin to address why students can't write or how students can't write. Instead, we rely upon an overgeneralized assessment limiting what we expect from students. Furthermore we have to ask ourselves about the consequences for students of such a narrow, generalized assessment of their writing. How can and do students function when so often they are caricatured in practitioner lore?

The title of this chapter explicitly invokes Helmers's phrase, "the brutal discourse of ridicule and control," which I borrow to characterize the often negative discourse about student writers and the practitioner lore comprising that discourse. The language choices Helmers uses in this phrase are very deliberate and they are certainly designed to elicit a reaction. Brutality, and the invocation of it, is a difficult thing. Brutality is

uncomfortable and to see that term used within the context of academia, which we wouldn't necessarily consider brutal, is jarring and demands a moment of pause if not introspection as we ask ourselves how we contribute to that brutal discourse. Is brutal even an appropriate term to describe how student writing and students as writers are characterized?

When something is brutal, it is ruthless and unfeeling, harsh and severe. Helmers uses this phrase to describe the generalized ways in which students are constructed in compositionists' written testimonials in the late eighties and early nineties but the concept is just as applicable to examining practitioner lore about the technical writing of engineering students. We are still telling the negative stories about students as writers, stories that are, in certain circumstances *brutal* because they are limiting, unfair, and designed to not only ridicule students but to control what is possible for students to achieve as writers not only in our classrooms, but beyond. This discourse also helps us reinforce our positions within the academy as those with knowledge and it reinforces the student position as nothing more than vessels for that knowledge.

As faculty, we are not immune to assessing student performance in ways that are less than professional (gossip with friends, off-handed complaints, etc.) but a primary concern of this dissertation is that the tenor of these assessments, where we characterize students as "bad writers" does not evolve. These assessments are rarely offered in service of trying to improve the perceived deficiencies in student writing. Instead these assessments are, as Helmers characterizes them, a "brutal discourse of ridicule and control," that reduces students to nothing more than caricatures. Caricatures are exaggerations. They are static

and only as relevant as the moment they are drawn. How can we expect students to learn effectively in such a paradigm?

To analyze the results of the two surveys I deployed as part of this research project, I thought it would be useful to interpret those results within the context of some of those generalizations, the statements of lore about students and student writing that contribute to that "brutal discourse" and so often perpetuate negative attitudes toward students as writers. As I considered the results of this research study, I identified some of the practitioner lore I learned during my first year of teaching at MTU.

- 1. Students can't write, and engineering students, in particular, are unable to communicate effectively.
- 2. Students are not prepared for the communication demands of the workplace.
- 3. Students don't write outside of the classroom setting.
- 4. Students are resistant to and resentful of writing instruction and lack confidence in their writing skills.
- 5. Students are incapable of learning to communicate effectively.
- 6. Engineering faculty are unwilling and/or uninterested in incorporating writing instruction into their curricula.

This fourth chapter will address how the results of this research study confirm or contradict these six elements of lore about students generally and engineering students specifically, as communicators.

## Students Do Write Both In and Beyond the Classroom<sup>9</sup>

The survey deployed to students at Michigan Technology University yielded 83 valid responses. This is a relatively small number of responses so I cannot make sweeping claims about students as writers but I do believe this cohort of students provides me with the opportunity to think critically about the accuracy of practitioner lore about students as writers and engineering students as technical communicators.

The Stanford Study of Writing, briefly discussed in Chapter 1, whose findings revealed that despite the pervasive rhetoric to the contrary—the rhetoric that generalizes students as "illiterate"—college students are not only writing, they are doing so more than ever before. They are writing rhetorically and with complexity and consistently challenging the notion that college students don't write and have no interest in writing. The Stanford Study of Writing investigated students across disciplines because that university caters to students from a broader range of majors. With the unique student body character at Michigan Tech, this study is able to address similar issues with a more specific disciplinary focus—engineering students. At Michigan Tech, with so many students majoring in engineering and science, it is often said that the MTU students are a breed apart in terms of their resistance to writing and communication practices, that they are even more resistant to writing and writing instruction than the traditional college student at other institutions. Lore tells us students are reluctant and/or incompetent writers in academic contexts and aren't writing at all outside of the classroom. The first question I asked students focused on writing practices in the hopes to answer the

<sup>&</sup>lt;sup>9</sup> The headings in the fourth and fifth chapters draw from the various statements in the student and faculty surveys. The six statements of lore listed in the previous section are referred to throughout both chapters.

following questions: Are MTU students writing? What kinds of writing are they doing? With what frequency do they write? Do the answers to these questions support or contradict practitioner lore?

While I didn't investigate the manner in which students executed various forms of communication, the first question of the student survey was designed to ascertain the types of communication genres with which students potentially engage and how often they do so. Those genres included: personal e-mail correspondence, professional correspondence, lab reports, specifications, documentation, research papers or other research based assignments, abstracts or executive summaries, memos, personal reflections or essays, short stories, poetry, and communication via various social networks such as Facebook, Twitter and Myspace.

As Table 4.1 demonstrates, students at Michigan Tech engage in a wide range of communication practices in multiple contexts. The majority of those communication practices are informal, involving the genres students typically encounter outside of the classroom. For example, 59 (or 71.5%) of the student respondents indicated they Very Often communicate via e-mail for personal reasons while 41 (49.4%) of the respondents indicated they regularly communicate via social networking.

In terms of the genres students might encounter in the classroom, students reported they primarily write lab reports with 39.8% of respondents indicating they Often write lab reports and 25.3% of respondents indicating they Sometimes write lab reports. Respondents also reported they often or sometimes write documentation, research-based reports, memos, and personal reflections with some regularity. The only genre students

reported they rarely write, in an overwhelming manner, was specifications, which 55.4% of respondents indicated they rarely write.

	Very Often	Often	Sometimes	Rarely
Personal E-mail	71.50%	19.30%	7.20%	2.40%
Professional	6%	16.90%	56.60%	20.50%
Correspondence				
Lab Reports	7.20%	39.80%	25.30%	27.70%
Specifications	0.00%	8.40%	36.10%	55.40%
Documentation	3.60%	31.30%	44.60%	20.50%
Research papers	3.60%	31.30%	44.60%	20.40%
or other research- based				
assignments				
Abstracts or	3.60%	22.90%	28.90%	44.60%
Executive				
Summaries	1 4 5 6 6 4		00.100/	00.000/
Memos	14.50%	26.50%	30.10%	28.90%
Personal	12.00%	28.90%	34.90%	24.10%
Reflections or Essays				
Short Stories	4.80%	7.20%	14.50%	73.50%
Poetry	3.60%	7.20%	14.50%	74.70%
Social Networking (ie. Twitter, Facebook, MySpace, etc.)	49.40%	21.70%	14.50%	14.50%

Table 4.1 How frequently do you write in the following genres?

With regard to more formal communication practices students only sometimes write professional correspondence with 47 students or 56.6% of respondents indicating they Sometimes write professional correspondence. The student respondents indicated they rarely write short stories (73.5%) or poetry (74.7%).

Despite what the lore might have us believe, these results confirm what we learned from the Stanford Study of Writing. Students write regularly, both personally and within classroom or professional contexts.

# Students Are Resistant, Resentful, and Insecure: Are They Kicking and Screaming?

Practitioner lore would have us believe students are resistant to and resentful of writing instruction and lack confidence in their writing skills. Engineering students, in particular, are said to demonstrate especially high levels of resistance toward and insecurity about writing? Is this true? Are engineering students really the recalcitrant individuals the lore leads us to believe they are? In the second section of the survey, Attitudes Toward Communication, I included thirteen statements about general student attitudes toward writing to assess if student writing confidence or writing skills might be affected by a discourse where they are positioned as incompetent writers and communicators. I focus on four of those statements here, statements chosen because they best address practitioner lore telling us students are resistant to and resentful of writing instruction and lack confidence in their writing skills.

Do students believe in themselves as writers? This was one of the most critical questions guiding this dissertation because I posit that the negative discourse has the potential to influence both how students perceive themselves as writers and their writing itself. As Etienne Wenger notes in *Communities of Practice*, "Because the negotiation of meaning is the convergence of participation and reification, controlling both the participation and reification affords control over the kinds of meaning that can be created in a certain context and the kinds of person that participants can become" (93). In its most extreme, the negative discourse about students as writers indeed becomes the discourse of

control Helmers cautions us about and in turn, we control the kinds of writers our students can become.

Student responses to the statement, "I am confident about my writing" clearly challenged what the lore would have us believe about how students see themselves as writers.

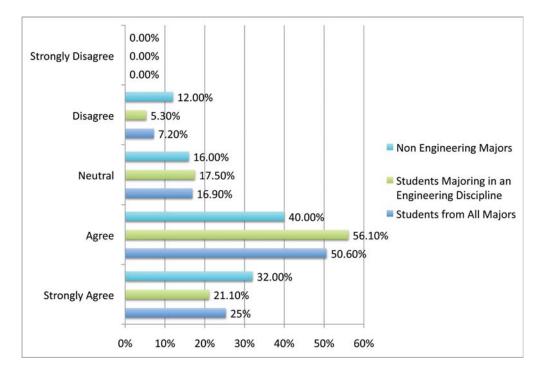


Figure 4.1 I am confident about my writing

In looking at students across the disciplines, students largely agreed that they were confident about their writing with 25% of the 83 respondents answering Strongly Agree and 50.6% of respondents answering Agree. I also filtered responses by student major to see what kinds of trends and relationships might emerge in looking students majoring in engineering disciplines versus non-engineering majors. Fifty-seven (57) respondents majored in an engineering discipline and 21.1% Strongly Agree they are

confident about their writing while 56.1% Agree. Among the 26 non-engineering majors, 32% of respondents Strongly Agree they are confident about their writing while 40% Agree. Combining the Strongly Agree and Agree responses, 75.6% of all respondents are confident in their writing ability, 77.2% of engineering majors are confident in their writing ability, and 72.2% of non-engineering majors are confident in their writing ability.

While the writing confidence of engineering majors is not significantly higher than the writing confidence of non-engineering majors and falls within the margin of error, it is interesting that the writing confidence of engineering majors is not lower than students overall, or non-engineering majors. This finding directly contradicts what the lore would have us believe about engineering students as insecure writers. The nature of this survey does not allow us to understand the nature of student writing confidence in specific ways and it could certainly be said, particularly as lore would have us believe, that said confidence is misplaced, but the survey results do clearly indicate that students are confident about their writing. They do not view themselves as writers in the same way the lore indicates faculty view students as writers.

I also filtered responses by the respondents' year in school to see how student responses might differ based on the length of time they have been in college. Are freshmen more or less confident in their writing skills than upperclassmen?

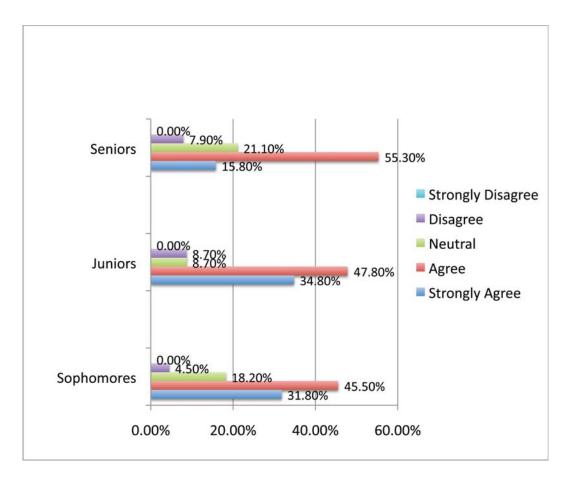


Figure 4.2 I am confident about my writing (by year in school)

On the whole, the responses indicate that writing confidence increases the longer students are in school. Among the sophomores, 31.8% of respondents Strongly Agree and 45.5% Agree while 34.8% of Juniors Strongly Agree and 47.8% Agree they are confident about their writing. At the senior level, 15.8% of respondents Strongly Agree and 55.3% Agree they are confident in their writing.

With experience and time to develop their communication skills, therefore, there is evidence writing confidence increases for students. These results affirm the results found in the Stanford Study of Writing where although writing confidence in students decreased as they transitioned from high school to college, writing confidence in students consistently increased with each subsequent year in school (Stanford Study of Writing). Similar findings have also been seen in other writing studies such as those conducted by Carroll and Beaufort. In Chapter 1, I discussed how often times the ability for engineers to communicate effectively is not constrained by ability but rather by limited exposure to writing instruction and a lack of opportunities for writing practice. I believe these results support the supposition that in order for students to feel confident in their writing, they require practice and a great deal of it, particularly if that confidence is to translate into more effective writing skills.

One of the discussions I remember most distinctly from my first year as an instructor was one where the participants passionately detailed the many ways in which students, and engineering students in particular, hated writing. I was left with the impression engineering students would sooner have the skin removed from their body without anesthesia than have to compose technical documents of any significance. As such, I was also interested in how students feel about writing because lore tells us not only are students not writing, when they are writing, they are doing so grudgingly and rarely deriving any enjoyment from the practice.

I look to Wenger who discusses two marginalities—marginalities of competence, where members of a given community are not full participants because they are considered in some way incompetent, and marginalities of experience where certain members of a community don't gain full participation because their experiences are "repressed, despised, feared, or simply ignored" (216). In considering the lore about how students feel about writing, these concepts of marginality offer insight into the potential consequences of carelessly dismissing student experiences and competencies. To that end, students were asked to respond to the statement, "I enjoy writing." Writing enjoyment is a relevant measure because it is possible that whether students enjoy writing is influenced by the negative discourse about students as writers. Furthermore, as Wenger notes, "participation is broader than mere engagement in practice" (57). That is, our interest in student writing should not merely extend to what and how students write but also the attitudes with which they approach writing. Across the board, fewer students agreed with this statement than the statement, "I am confident about my writing," but overall students responded positively.

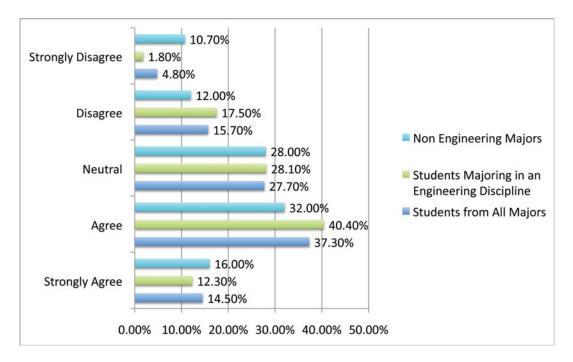


Figure 4.3 I enjoy writing.

The majority of students across all majors do agree they enjoy writing or are neutral with 14.5% of respondents indicating they Strongly Agree, 37.3% of respondents indicating they Agree and 27.7% of respondents indicating they are Neutral. Among engineering majors, 12.3% Strongly Agree, 40.4% Agree and 28.1% are Neutral. Within the non-engineering majors, 16% Strongly Agree, 32% Agree and 28% of respondents are neutral about the statement, "I enjoy writing." Combining the Strongly Agree and Agree responses, 51.8% of all students enjoy writing to some extent, 52.7% of engineering majors enjoy writing to some extent and 48% of non-engineering majors enjoy writing to some extent.

These numbers are significantly lower than the number of students who are confident in their writing. Despite the lore implying that engineers don't enjoy writing or that they begrudge having to write, such is not necessarily the case. It is also noteworthy that even though the results fall within the margin of error, engineering students report higher levels of writing enjoyment than non-engineering majors. The results imply there's a contradiction between what practitioner lore would have us believe and what students report.

I also analyzed the statement, "I enjoy writing" by student year in school, to see how, if at all, student enjoyment of writing evolves from the beginning of a college student's career to the end. The results are interesting in that student enjoyment does not follow a clear upward trajectory in the same way writing confidence does.

At the sophomore level, 22.7% of respondents Strongly Agree they enjoy writing and 45.5% of respondents Agree. Thirteen percent of Juniors Strongly Agree and 34.8% Agree while only 10.5% of Seniors Strongly Agree and 34.2% Agree. Combining the Strongly Agree and Agree responses, 68.2% of Sophomores enjoy writing to some extent, 47.8% of Juniors enjoy writing to some extent and 44.7% of Seniors enjoy writing to some extent. There is a noticeable downward trend in writing enjoyment as students progress through their academic careers so based on these results, while writing

confidence increases, writing enjoyment seems to decrease. There are any number of reasons why this may be the case. I speculate that given how curricular demands increase in rigor as students progress through their college careers it is not at all surprising that upperclassmen are less enamored with writing than underclassmen.

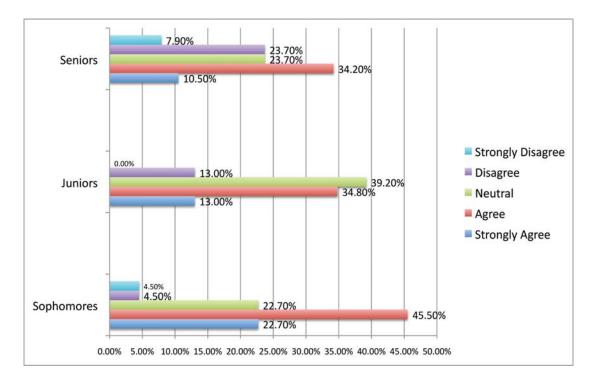


Figure 4.4 I enjoy writing (by year in school).

In addition to determining how students feel about writing confidence and their enjoyment of writing, I was also curious as to whether or not writing comes easily to students. I asked students to respond to the statement, "Writing comes easily to me" to gauge their perceptions of their natural facility with writing and to see if engineering students expressed more or less natural facility than their non-engineering counterparts and also to see if a lack of natural facility could contribute to poor student writing which contributes to the negative discourse about student writing.

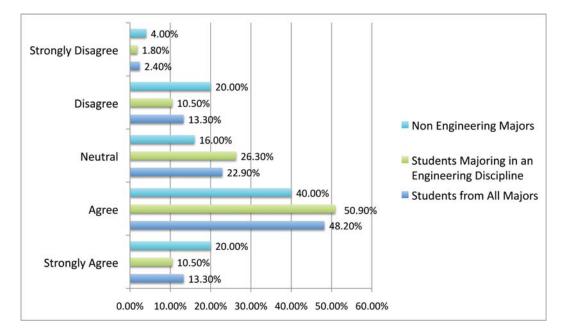


Figure 4.5 Writing comes easily to me.

The responses to this statement were fairly in line with responses to the previous two statements. Students across disciplines largely agreed writing comes easily with 13.3% of respondents reporting they Strongly Agree and 48.2% of respondents reporting they Agree. Among engineering majors, 10.5% indicated they Strongly Agree while 50.9% indicated thy Agree. Non-engineering majors indicated similar levels of agreement with 20% of respondents stating they Strongly Agree writing comes easily while 40% of respondents stated they Agree.

In looking at the Strongly Agree and Agree responses combined, across the three groups of respondents, the percentage of students who believe writing comes easily is nearly identical for students across disciplines (61.5%), engineering majors (61.4%) and

non engineering majors (60%). These results indicate that there is a positively correlated relationship between writing confidence and writing facility but that disciplinary focus is not a factor in terms of natural writing facility. When students believe in their writing, they find writing easier. While the lore would have us believe that students find writing laborious, these results clearly indicate that such is not the case, that writing is not the struggle we might assume it could be for students.

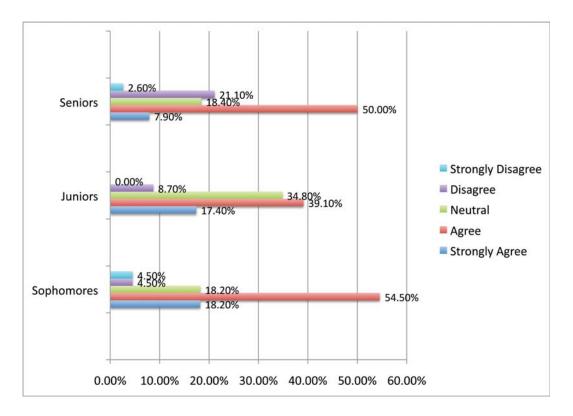


Figure 4.6 Writing comes easily to me (by year in school).

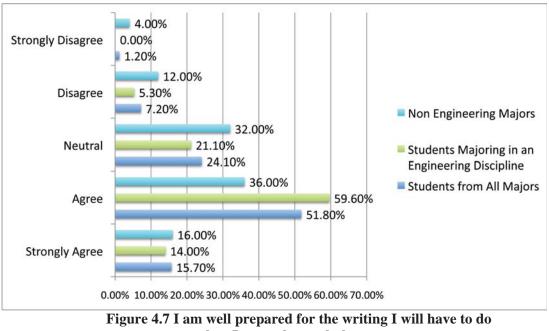
These results were also filtered by year in school to see how writing facility trends as students advance through their college careers. Among sophomores, 18.2% of respondents indicated they Strongly Agree and 54.5% indicated they Agree while for Juniors, 17.4% Strongly Agree and 39.3% Agree. Students in their Senior year were similar in their feelings about writing facility with 7.5% reporting they Strongly Agree writing comes easily and 50% of respondents reporting they Agree.

Students reported the most facility with writing during the sophomore year, with 72.7% agreeing or strongly agreeing writing comes easily. There is a curious drop in reported writing facility between Sophomore and Junior year, where 56.7% of Junior respondents believe writing comes easily. A little more than half of senior respondents, 57.5%, noted writing comes easily. Any number of factors could contribute in this decrease, which is unsurprising given that as students progress through their college careers, the demands on their writing skills become more rigorous. Just as writing enjoyment decreased the longer students are in school, the same holds true in terms of writing facility.

The lore implies students, and engineering students in particular, are hampered by a fundamental difficulty with communication. Whether students are "good writers" or not, these results reflect that students do not necessarily find writing inherently difficult.

Another statement in the "Attitudes Toward Communication" section stated, "I am well prepared for the writing I will have to do when I enter the workplace." This statement was designed to determine whether or not students feel confident in their preparation for the writing demands of the workplace where they aren't writing for a grade but rather as an integral part of their professional lives, and where in many ways, there is more at stake. In college, students are preparing to become part of a professional community of practice, one where, "what they learn and don't learn makes sense only as part of an identity" (Wenger 41). Preparing to communicate in that new community of

practice is a critical part of their identity development. As such, I wanted to see how students felt about their preparation and in turn, their identity as future professionals.



when I enter the workplace

Students across disciplines are fairly confident they are well prepared for the writing they will have to do in the workplace with 15.7% of respondents indicating they Strongly Agree and 51.8% of respondents indicating they Agree. Engineering students reported a higher level of confidence in their preparation with 14% noting they Strongly Agree and 59.6% noting they Agree. Non-engineering majors represented the lowest confidence in their preparation with 16% stating they Strongly Agree and 36% stating they Agree. In looking at the Strongly Agree and Agree responses in aggregate, 67.5% of students, across disciplines, believe to some extent they are well prepared for the writing demands of the workplace, 73.6% of engineers share that belief and only 52% of non-engineering majors hold that belief.

Where the lore would have us believe that engineers are unprepared for the workplace or insecure about their preparedness to write in the engineering workplace, such is not necessarily the case. I assumed engineering majors might exhibit less confidence in their workplace writing preparation, based on the historical discourse contradicting such confidence discussed in Chapter 1, but that assumption did not bear out.

Thus far, the results of the student survey have consistently contradicted what the lore would have us believe about students as writers. The majority of respondents are confident about their writing and their prepaparedness to write in professional contexts. They enjoy writing and find that it comes easily. This is not the portrait of students as writers that the lore depicts. This is a portrait of students as writers that openly challenges the generalizations about students we so often rely upon.

The final statement from the "Attitudes Toward Communication" I focus on here is, "Communication skills are valued in my discipline." The lore posits engineers don't believe writing is important even though there is a great deal of technical communication scholarship expressing that engineers understand quite clearly the importance of communication. There is ample evidence engineers would prefer to focus on engineering rather than having to communicate. Countless engineering texts, as evidenced in Chapter 2, spend a great deal of time discussing the amount of time engineers actually spend communicating and the importance of communication to the engineering community of practice as if technical communication scholars have to justify the importance of communication. We are left with the impression engineers don't value communication at all. I was very curious to see if the results of the survey would reinforce or contradict the

lore about how engineers value (or do not) communication. Why is there such a contradiction between lore and practice and where does that contradiction find its origins?

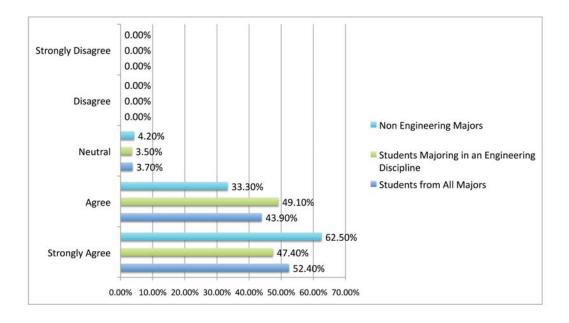


Figure 4.8 Communication skills are valued in my discipline.

The responses to this statement were fairly definitive with more than half (52.4%) of students across disciplines indicating they Strongly Agree communication skills are valued in their discipline and 43.9% of respondents indicating they agree. Among engineers, 47.4% of respondents Strongly Agree and 49.1% Agree. Finally, an overwhelming 62.5% of non-engineering majors Strongly Agree communication skills are valued in their discipline while 33.3% of respondents Agree. It is interesting to note that a negligible percentage of respondents were neutral on this statement and no

respondents from any of the isolation factors indicated they Disagree or Strongly Disagree.

On the whole, it is clear students understand the importance of communication in their disciplines. The notion engineers don't believe communication is valued in their discipline is contradicted by these results. There is no ambiguity in the responses to this statement and that no students indicated they Disagree or Strongly Disagree with this statement indicates just how far removed actuality is from the lore in this regard.

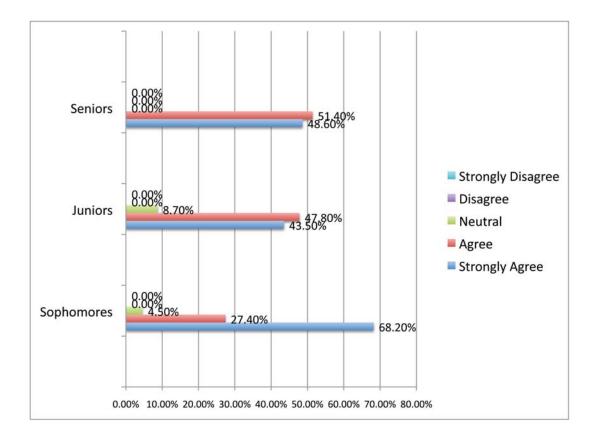


Figure 4.9 Communication skills are valued in my discipline (by year in school).

In looking at respondents by their year in school, the results are very similar. Among Sophomores, 68.2% of respondents Strongly Agree and 27.4% of respondents agree. In their Junior year, 43.5% of respondents Strongly Agree and 47.8% Agree. There was similar understanding with Seniors where 48.6% of respondents Strongly Agree and 51.4% Agree.

Regardless of their year in school, students are wholly convinced of the value of communication skills in their discipline. Why is this attitude not reflected in practitioner lore? Why do we not hear that students believe communication skills are valued in their discipline when we're discussing what students understand about communication? These are questions for which answers are critical if we are ever to move beyond the "brutal discourse" Helmers describes, the discourse that limits what we expect from students, what they can accomplish and how fully they can engage with the community of practice.

### **Students Can't Write: Gauging Student Attitudes Toward**

### **Communication in Practice**

The most pervasive, and perhaps pernicious statement in practitioner lore about students as writers is that they are simply incapable of writing effectively. There are any number of complaints about student writing. Faculty lament students don't write mechanically sound prose or take into account audience, context or purpose. There are complaints that students don't or won't take the time to revise their work. There are often complaints about how poorly students cite work and properly attribute where they are getting their ideas from and faculty indicate students aren't taking the time to use a

writing process to help them produce polished drafts of written work. The laundry list of the inadequacies of student writing in practitioner lore is overwhelming and ever-present. It's not hard to start believing it is impossible to find student writing that meets our standards. The futile attitude with which we approach student writing is another instance of brutality, another instance where we force students into an untenable position and compromise the learning experience. Furthermore, this attitude prevents the university from functioning as an effective community of practice. But how do students feel about their writing in terms of what it takes to produce effective writing?

The second section in the student survey, "Attitudes Toward Communication in Practice," was designed to query students about actual writing practices including their confidence in public speaking, how they compare their writing to the writing of others, whether or not they use rhetorical principles when they write as well as the kinds of support they draw from when they need help with their writing. Students were asked to respond to fifteen statements on a five-point scale from Strongly Agree to Strongly Disagree. I will focus on two statements in this section—"I use rhetorical principles to make my writing more effective" and "I use a writing process that involves brainstorming, outlining, and creating multiple drafts," because these are two emphases in many composition and technical communication courses and the argument could be made that faculty concerns in these two areas are frequently raised.

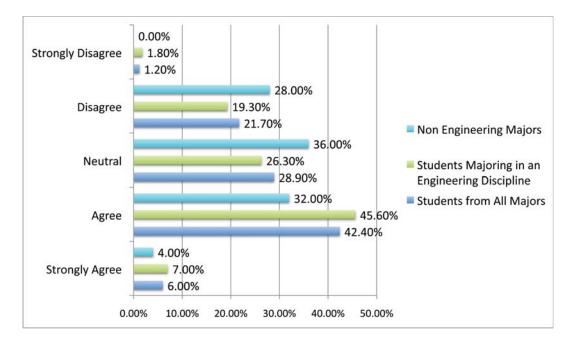


Figure 4.10 I use rhetorical principles to make my writing more effective

Students across disciplines provided a wider range of responses to the statement, "I use rhetorical principles to make my writing more effective." Although I do not know how students interpreted the phrase *rhetorical principles*, the question was intended to determine if students incorporate an awareness of context, purpose and audience in their writing as well as rhetorical appeals. Engineering students report their writing approach is more in line with what many faculty want to see in student writing than their nonengineering peers. Only 6% of respondents across disciplines stated they Strongly Agree and 42.4% of respondents stated they Agree. A full 28.9% of respondents were neutral, 21.2% stated they Disagree and only 1.2% of respondents stated they Strongly Disagree. Among engineering majors, responses were very similar with 7% of respondents indicating they Strongly Agree and 45.6% indicating they Agree. As with other statements, engineering majors indicated a statistically insignificantly higher level of agreement (52.6%) than students across disciplines (48.4%). Among non-engineering majors, 4% of respondents Strongly Agree they use rhetorical principles in their writing while only 32% note they Agree. It is interesting to note that only 36% of non-engineering majors indicate they use rhetorical principles in their writing to some extent, which is quite a bit lower than the percentage of engineering students who incorporate rhetorical awareness into their writing practices.

Do these results reinforce what the lore has to say about student writing that abandons rhetorical awareness? Perhaps. It certainly offers a contradictory perspective to the claim that engineering students are writing with less rhetorical awareness than their non-engineering peers. The results continue to reflect a different student than the one characterized and caricatured by practitioner lore. As Gee tells us, discourse allows for people to be identified in specific ways. These continued contradictions between lore and the attitudes expressed by students are, I believe, a reflection of how discourse about students as writers identifies students in very specific, limiting ways that control what is possible for students as writers to achieve because the expectation of failure and disappointment has been so deeply embedded within the discourse.

I also asked student about whether or not they use a writing process because lore tells us students aren't using formal writing processes—they're putting words to the page without much critical thought or planning. Students from across disciplines indicated that 7.2% Strongly Agree they use a writing process of some kind while 20.1% indicated they Agree. The majority of respondents, 31.3%, indicated they Disagree with this statement and as such, don't really use a writing process as part of their writing practices. Among engineering majors, 7% of respondents Strongly Agree they use a writing process while 35.1% of respondents Agree. A significant minority of respondents, 29.8%, indicated they Disagree that they use a writing process. Finally, among non-engineering majors, the fewest percentage of respondents indicated they use some kind of writing process with 4% indicating they Strongly Agree and 20% indicating they Agree. The largest percentage of respondents who disagreed that they use a writing process, 36%, comes from non-engineering majors.

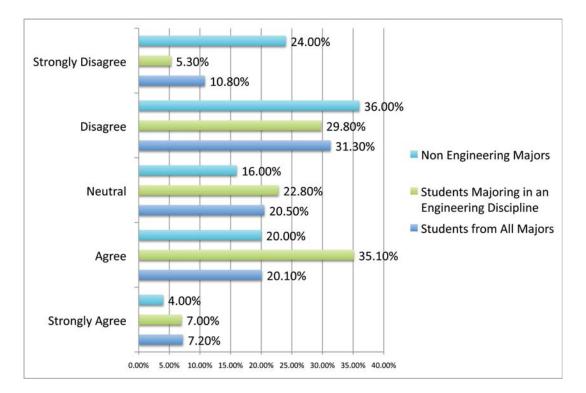


Figure 4.11 I use a writing process that involves brainstorming, outlining, and creating multiple drafts.

While the survey results thus far have consistently contradicted practitioner lore when students reflected on how they felt about writing and themselves as writers, their responses about writing practice and process are, in some ways, more in line with some of the criticisms faculty direct toward student writing. Why? How students write is the primary area where students and faculty interact directly. Although my hypothesis states that the ways in which faculty construct students as writers through practitioner lore influences how students perceive themselves as writers, such matters of self-assessment are more internal to the student experience with writing. They are often judging themselves according to personal criteria that may or may not have anything to do with classroom performance and faculty assessments. These results cannot be addressed so simply as to say, "these results do or do not contradict what we think we know about students." These results do, however, offer insight into potential areas of focus we can address more explicitly as we teach writing within and across disciplines, such as developing an effective writing process or a more comprehensive incorporation of the uses of rhetoric in communication practices.

### They Won't Learn From Us: Student Attitudes Toward

### **Communication Instruction**

Practitioner lore indicates students are resistant to writing instruction—that students cannot or will not learn from us. In the third section of the student survey, I provided students with eleven statements about their experiences with teachers and writing instruction to gauge student attitudes toward the instruction they receive, how they feel they are viewed by their teachers and to see if the hypothesis outlined in the third chapter—that the discourse influences how students see themselves as writers bears out in these regards. In this section, I focus on three of these statements—"I receive positive feedback on my writing from my teachers," "I receive negative feedback on my writing from my teachers," and "My teachers think I am a good writer." Focusing on these statements is another useful means of assessing how much the negative discourse about students as "bad" writers influences students because we can gain insights into student attitudes about the direct ways in which they interact with faculty and the ways in which their writing is assessed.

Students across disciplines largely agree they receive positive feedback on their writing from their teachers with 21.7% of respondents indicating they Strongly Agree and 65.1% responding they Agree. Students majoring in engineering reported that 15.8% Strongly Agree they receive positive feedback while 71.9% Agree they receive positive feedback. Non-engineering majors reported they Strongly Agree they receive positive feedback at a rate of 32% and Agree at a rate of 52%. Overall, 86.8% of students across disciplines receive positive feedback and 84% of non-engineering students receive positive feedback. Engineering majors report higher rates of agreement than both students across disciplines and non-engineering majors.

These results reflect a disconnect or discontinuity between what students report and what we say about student writing. While there are numerous complaints about student writing and students as writers, what does it suggest when students overwhelmingly report that they receive positive feedback from faculty? Is the discourse something we simply perpetuate amongst ourselves, but are professional enough to set aside when we assess student writing? Why is there a disconnect between our assessment practices and the negativity we contribute to the discourse about student writing through practitioner lore? Foucault states, "The discursive formation is not therefore a developing

totality, with its own dynamism or inertia, carrying with it, in an unformulated discourse, what it does not say, what it has not yet said, or what contradicts it at that moment; it is not a rich, difficult germination, it is a distribution of gaps, voids, absences, limits, division" ("Archaeology of Knowledge" 119). He goes on to say that, "on the contrary in discovering what special place it [the discursive statement] occupies, what ramifications of the system of formations make it possible to map its localization, how it is isolated in the general dispersion of statements" ("Archaeology of Knowledge" 119). We can look at this contradiction, and the significance it holds, in the context of how it relates to other discursive statements. Although lore says faculty are wholly dissatisfied with student writing we have an added layer of complexity because of this statement's isolation from the rest of the discourse.

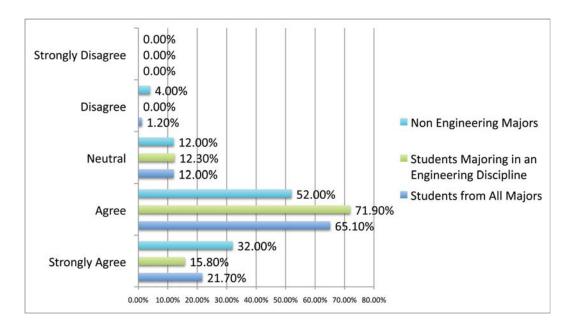


Figure 4.12 I receive positive feedback on my writing from my teachers

I was interested in the converse of the previous statement so I also asked students if they receive negative feedback on their writing from teachers so I could have a more balanced understanding of how students perceive the ways in which their writing is assessed. As with the previous statement, it is also noteworthy that as with most of the statements in the student survey, engineering students receive more positive feedback and less negative feedback from their instructors. Only 1.2% of students, across disciplines reported they Strongly Agree while 13.3% Agree. Among engineering majors, no students Strongly Agree and only 10.5% Agree. Within the non-engineering majors cohort, 4% Strongly Agree and 20% Agree.

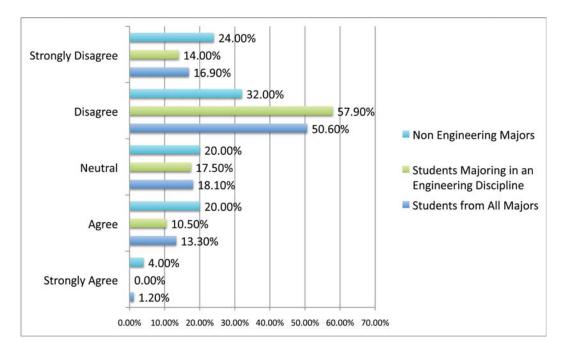


Figure 4.13 I receive negative feedback on my writing from my teachers

Based on these results, students indicate they receive a minimum of negative feedback about their writing from their teachers. Why is there such a pronounced disconnect? How can lore tell us we are extremely dissatisfied with student writing when

students report they're not receiving that message? How can we expect student writing to improve if we're not providing them with frank assessments of their writing performance? Perhaps the state of affairs, particularly among engineers, is not necessarily as dire as the lore would lead us to believe. They are not the aberrant communicators we might assume they are given how students are constructed by practitioner lore. Foucault offers valuable context. He states, "The referential of the statement forms the place, the condition, the field of emergence, the authority to differentiate between individuals or objects, states of things and relations that are brought into play by the statement itself; it defines the possibilities of appearance and delimitation of that which gives meaning to the sentence, a value as truth to the proposition" ("Archaeology of Knowledge" 91). These discursive statements are not only relevant for what they tell us, they are also relevant within the context of other discursive statements, thus the significance of students reporting they don't receive negative feedback on their writing must also be considered within the context of what faculty say about the type of feedback they provide students. This context will be provided in the following chapter which examines the faculty survey results.

Finally, I asked students if they believe their teachers think they are good writers to get a sense of whether or not students had faith that their teachers have faith in their writing ability. These results indicate students are confident their teachers think they are good writers. The majority of respondents, across the three cohorts, reported they believe their teachers think they are good writers with 14.5% of students across disciplines reporting they Strongly Agree with the statement "My teachers think I am a good writer" while 51.8% of all students Agree. Among engineering majors, 14% of students Strongly Agree and 49.1% of students Agree. In the non-engineering majors cohort, 12% of respondents Strongly Agree their teachers think they are a good writer and 60% of non-engineering students agree. This is the only statement where a higher percentage of non-engineering students (72%) agreed with the statement than engineering majors (63.1%) or students across all disciplines (66.3%). The percentage difference, 8.6% is not incredibly high, but is still worth noting.

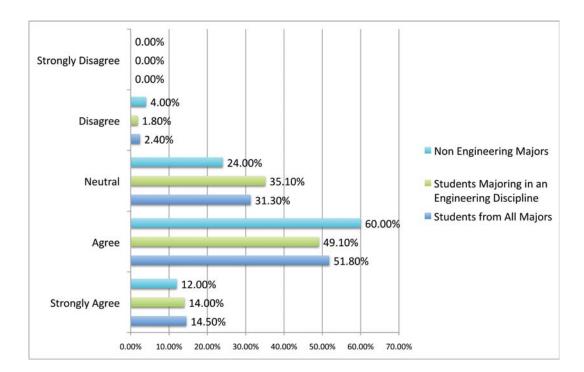


Figure 4.14 My teachers think I am a good writer

Should we be optimistic about these results? Whatever negativity faculty might be expressing via practitioner lore is not necessarily influencing students, their writing, and how they perceive themselves as writers. According to Wenger, novices in a community of practice must look to the experts, what he refers to as "old-timers" for affirmation of their worthiness to participate in a given community of practice. Faculty are clearly affirming this worthiness for students by providing them with positive feedback but as the next chapter reveals, that affirmation may be disingenuous because several results indicate faculty don't believe students write well. This discontinuity between practice and ideology is, ultimately, a betrayal, a reflection of the brutality of the discourse about students as writers.

## Chapter 5: Investigating the "Brutal Discourse of Ridicule and Control": How the Faculty Survey Results Speak to Practitioner Lore about Students as Writers

In the previous chapter I analyzed the results of a survey disseminated to 83 students at Michigan Technological University, and found that their attitudes toward writing contradicted a great deal of practitioner lore about students as writers in that they expressed a great deal of confidence in their writing, their preparation for communicating in the workplace, and noted that they generally receive positive feedback on their writing from faculty. Even more surprising, engineering students, who are often discussed in lore as "bad writers," demonstrated higher levels of confidence than their non-engineering peers.

Chapter 5 discusses a selection of the results from the faculty survey disseminated for this research project. As with the previous chapter, I analyze those results within the context of several elements of practitioner lore about students as writers and Etienne Wenger's scholarship on communities of practice. I've chosen this framework because a key element of an effective community of practice is mutual engagement. As such, it is critical to determine if students and faculty are expressing similar attitudes about writing and writing instruction within the academic community of practice or if there is a disconnect between how students perceive themselves as writers and how faculty perceive students as writers. Are we truly mutually engaged in the academic community of practice? Are we as invested in contributing to an effective community of practice in practice as we are in theory? The survey deployed for faculty yielded 247 valid responses from faculty in all ranks ranging from adjuncts to full professors. This survey was divided into five sections: Writing Instruction, Assessing Student Writing, Attitudes Toward Student Writing, Anecdotal Approaches to Student Writing and Demographic Information.<sup>10</sup>

## The Other Side of the Story: Faculty Attitudes Toward Writing Instruction

In the first section, Writing Instruction, I was keenly interested in faculty attitudes toward their responsibilities where writing instruction is concerned. There is practitioner lore indicating some faculty, particularly in non-writing disciplines, don't believe that writing instruction is part of their responsibility and that engineering faculty, in particular are unwilling and/or uninterested in incorporating writing instruction into their curricula. To identify the extent to which this lore reflects or contradicts faculty attitudes, I selected two statements to focus on, the first being, "I incorporate writing instruction into my curriculum."

These results make a strong case that most instructors, across disciplines, feel it is their responsibility to incorporate writing instruction, in some way, into their curricula. The majority of faculty, across disciplines, incorporate writing instruction into their curricula with 57.1% of faculty reporting they Strongly Agree and 27.9% indicating they Agree. As with responses to the student survey, I filtered responses to analyze trends between engineering and non-engineering faculty. Non-engineering faculty reported that 76.5% of them Strongly Agree they incorporate writing instruction into their curriculum

<sup>&</sup>lt;sup>10</sup> A copy of the faculty survey is available in the appendix.

and 14% Agree while among engineering faculty, 33.3% Strongly Agree and 45% Agree. Combining the Strongly Agree and Agree responses, 85% of all faculty incorporate writing instruction into their curricula, 90% of non-engineering faculty incorporate writing instruction into their curricula and 78.3% of engineering faculty incorporate writing instruction into their curricula.

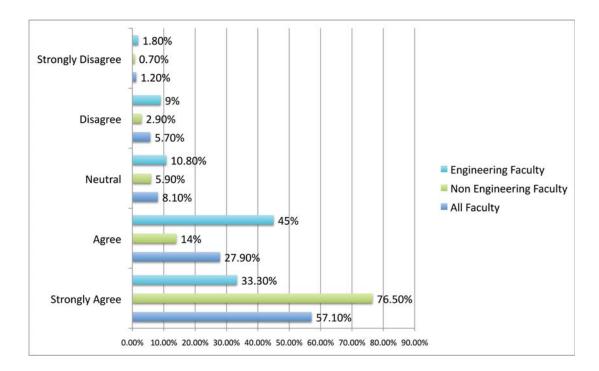


Figure 5.1 I incorporate writing instruction into my curriculum

As aforementioned, one of the aspects of lore I remember most distinctly from my first year as an instructor at Michigan Tech was the notion that engineering faculty were particularly recalcitrant in terms of embracing the importance of communication. Although there is an 11.7% decrease between non-engineering faculty and engineering faculty who feel it is their responsibility to include writing instruction in their curricula, it is quite telling, and a very positive indicator, that more than three-quarters of engineering faculty believe it is important to include writing instruction in their teaching.

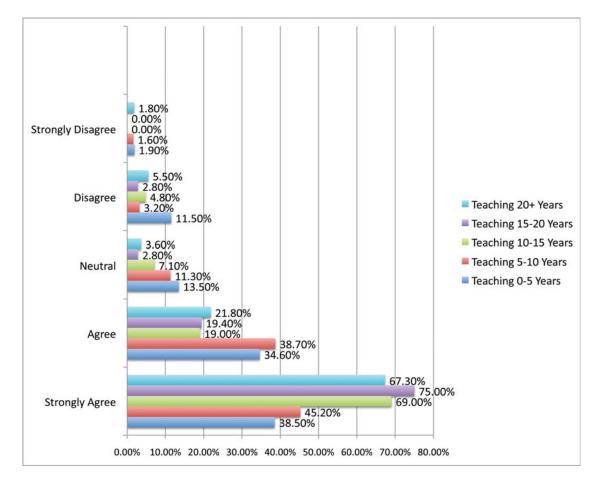


Figure 5.2 I incorporate writing instruction into my curriculum (by years in the profession)

In the Demographic Information section, faculty were asked if they have been teaching 0-5 Years, 5-10 Years, 10-15 Years, 15-20 Years or 20 Years or more. As with the student results, I was interested in seeing how faculty attitudes develop across years in the profession and whether or not there was a relationship between more time in the profession and expressing negative attitudes toward student writing.

It was very illuminating to filter faculty responses to the statement, "I incorporate writing instruction into my curriculum," by the number of years faculty have been teaching. Overall, the results show that the longer faculty members have been in the profession, the more they feel it is their responsibility to incorporate writing instruction into their curricula. Among newer faculty, in the profession for 0-5 years, 38.5% of respondents Strongly Agree they incorporate writing instruction into their curricula and 34.6% Agree. As faculty achieve tenure in the 5-10 Years cohort, 45.2% of respondents Strongly Agree they incorporate writing instruction into their curricula and 38.7% agree. Sixty-nine percent of faculty who have been teaching for 10-15 years Strongly Agree they incorporate writing instruction into their curricula and 19% Agree. Faculty who have been teaching 15-20 Years report the highest level of agreement with this statement with 75% of respondents indicating they Strongly Agree and 19.4% of respondents indicating they agree. Faculty who have been teaching for twenty years or more indicate similarly high levels of agreement with 67.3% of faculty reporting they Strongly Agree and 21.8% indicating they Agree. I attribute this to faculty becoming more familiar, the longer they teach, with the pedagogical approaches that will best serve students in the long run as well as the skills students need to transition beyond the undergraduate experience.

Incorporating communication skills into curricula involves more than simply teaching oral, written and visual communication. Faculty must also teach student about what it means to communicate and write within their disciplines—what it means to write like an engineer or an economist or a biochemist, for example. I wanted to know if faculty complicated their approaches to communication instruction in this manner so I also asked faculty to respond to the statement, "I teach students what it means to write

within my discipline" to see whether or not faculty incorporate knowledge about writing within communities of practice into their curricula. These results show that faculty are doing more than simply teaching students how to write, they're teaching students what it means to function as a communicator within a given community of practice.

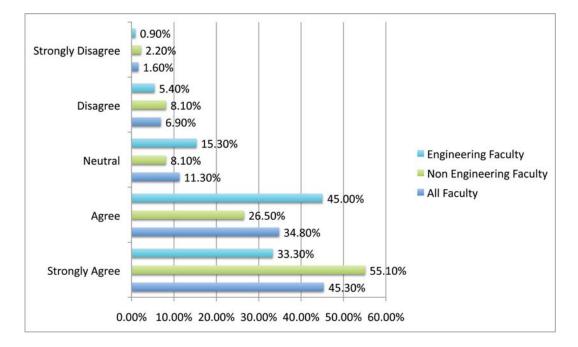


Figure 5.3 I teach students what it means to write within my discipline

The majority of faculty report they do teach students what it means to write within their disciplines. Across all disciplines, 45.3% of faculty Strongly Agree and 34.8% of faculty Agree. Among non-engineering faculty, 55.1% of faculty Strongly Agree and 26.5% of faculty Agree. Within the engineering faculty cohort, 33.3% of faculty Strongly Agree and 45% of faculty Agree they teach students what it means to write in their disciplines. As with the statement, "I incorporate writing instruction into my curriculum," engineers report slightly higher levels of agreement with 81.6% of respondents indicating they either Strongly Agree versus 80.1% for faculty across disciplines and 78.3% among non-engineering faculty.

There is only a small degree of difference between engineering faculty and nonengineering faculty, but as has been consistently been the case, engineering faculty are more inclined to support writing and writing instruction not less than their nonengineering counterparts, challenging the lore describing engineering faculty as stubbornly unwilling to teach anything other than engineering leads us to believe.

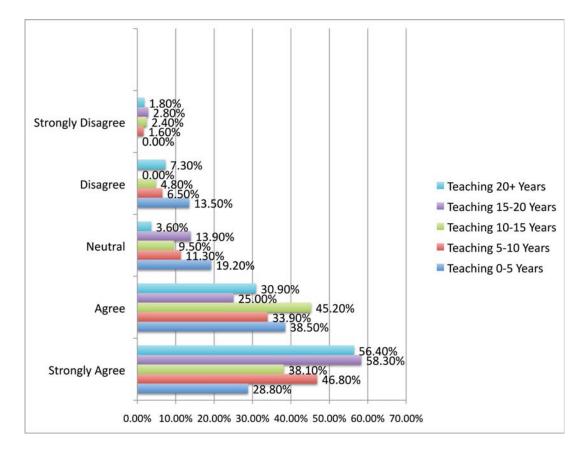


Figure 5.4 I teach students what it means to write within my discipline (by years in the profession)

Just as faculty incorporate writing instruction into their curricula the longer they've been in the profession, that same trend is apparent in terms of whether or not faculty teach their students what it means and how to write within their disciplines. Among newer faculty (0-5 Years) 28.8% Strongly Agree and 38.5% Agree they teach students about writing within their disciplines while 46.8% of faculty who have been teaching 5-10 Years Strongly agree and 33.9% Agree. The highest response rate comes with faculty who have been teaching more than 20 years. They report that 56.4% Strongly Agree and 30.9% Agree they include instruction about writing within their discipline. As faculty mature professionally, they seem to develop more sophisticated pedagogical practices and a broader understanding of what it takes to teach communication within and cross the disciplines.

## Students Can't Write: Faculty Attitudes Toward Assessing Student Writing

I believe part of this negative discourse about students as writers and engineers as technical communicators, manifests through how faculty assess student writing. As I designed this section of the survey, I considered many of the frustrations colleagues and I have expressed about student writing and how we try to communicate those frustrations to students in ways that are constructive but clear in terms of identifying areas where student writing needs improvement. Do faculty believe they are able to strike that difficult balance effectively? From the second section of the faculty survey, I chose to focus on two statements—"I generally give my students feedback about their writing" and "I generally give students positive, constructive feedback about their writing," to ascertain not only if faculty provide students with feedback but the nature of that feedback.

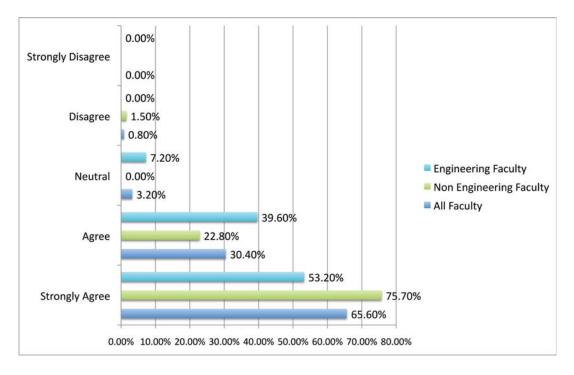


Figure 5.5 I generally give my students feedback about their writing

This matter of feedback is relevant not only because I am interested in how assessment contributes (or doesn't) to the discourse about students as writers but also because as Wenger details in *Communities of Practice*, one of the cornerstones of community coherence and effective learning is active engagement by all members of a given community. Engagement, and mutual relationships in particular enhance and help define communities of practice. Wenger believes this kind of engagement, "connects participants in ways that can become deeper than more abstract similarities in terms of personal features or social categories" (76). In addition to active teaching, assessment is a key way in which faculty can engage with and create deeper relationships with those students so ultimately this question begins to explore the ways in which faculty might approach fostering such deeper relationships.

On the whole faculty across disciplines provide students feedback of some kind on their writing. The entire cohort reports that 65.6% Strongly Agree and 30.4% Agree they provide feedback. Non-engineering faculty report that 75.7% Strongly Agree and 22.8% Agree. Among engineering faculty, 53.2% Strongly Agree and 39.6% Agree they generally give students feedback about their writing.

Though all three groups of faculty report very high levels of agreement with regards to providing writing feedback, engineers report the lowest with 92.8% of engineering faculty indicating they give students feedback on their writing though the term "lowest" is a bit inaccurate given the overwhelmingly affirmative responses to this statement. These results provide clear evidence that faculty are invested in providing students with feedback.

Faculty both at the beginning of their careers and faculty who have been teaching for a significant amount of time hold the attitude that feedback is important. As Figure 4.21 demonstrates, faculty across the range of years in the profession, generally agree they provide their students with feedback with the highest levels of agreement coming from faculty who have been teaching for 5-10 Years where 98.4% of faculty indicate they agree to some extent that they provide their students with feedback on their writing. This necessitates asking what that feedback looks like. Students indicate that faculty are largely positive when providing feedback. Next, I examine the character of that feedback.

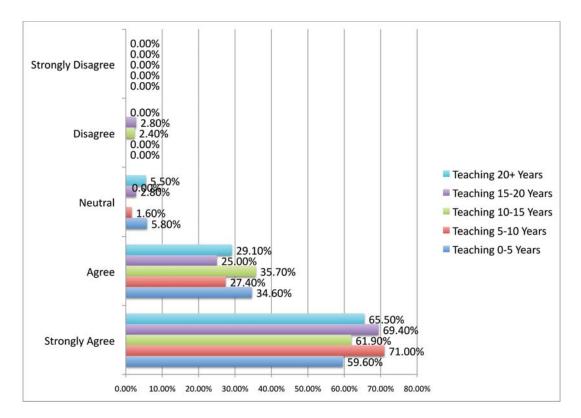


Figure 5.6 I generally give my students feedback about their writing (by years in the profession)

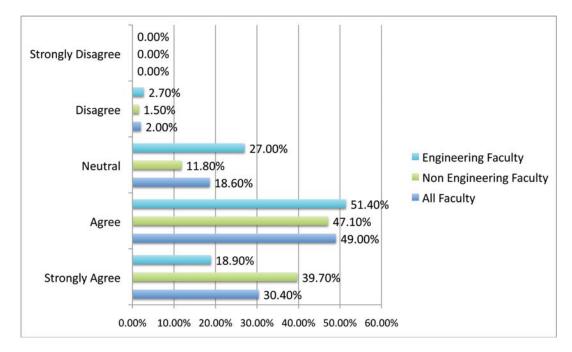


Figure 5.7 I generally give my students positive, constructive feedback about their writing

Practitioner lore conveys a strong level of faculty dissatisfaction with student writing. Is faculty dissatisfaction expressed through the feedback they provide students? Is disciplinary focus a factor in the character of the feedback faculty provide students about their writing? The student survey results indicated that most students receive positive feedback about their writing. Would those results bear out in faculty responses? Whereas among student responses, engineering majors responded to the statements in that survey with higher levels of agreement and positivity, among the faculty, those in the engineering disciplines consistently expressed lower levels of agreement. That trend holds true with regards to the feedback engineering faculty report they provide students about their writing. Most faculty respondents noted that they do provide positive feedback and yet lore tells us that students can't write.

Why is there some disconnect between what students perceive and how faculty have responded? Why is there a disconnect between what faculty do and what they say? Across disciplines, 30.4% of faculty indicate they Strongly Agree that they provide positive, constructive feedback while 49% Agree they provide positive, constructive feedback. Non-engineering faculty report that 39.7% of the cohort Strongly Agree they provide feedback and 47.1% Agree. Finally, among engineering faculty, 18.9% Strongly Agree they provide feedback and 51.4% Agree. Looking at both Strongly Agree and Agree responses, 86.8% of faculty in disciplines other than engineering report they provide positive, constructive feedback to some extent while engineering faculty indicate that 70.3% provide positive, constructive feedback, reflecting a difference of 16.5%.

The majority of engineering faculty do indeed provide positive, constructive feedback, however fewer do so than their non-engineering counterparts implying that

engineering faculty are less satisfied with student writing. There is also a discontinuity between what engineering faculty report and what engineering students report because nearly 90% of engineering students noted they receive positive feedback from faculty. This is a discrepancy likely addressed by the fact that the student population came from one university while the faculty respondents came from many.

## Students Can't and *Won't* Write Well: Faculty Attitudes Toward Student Writing

In the third section of the faculty survey, I presented respondents with a series of statements to gauge attitudes toward student writing, the quality of that writing, student preparedness for the demands of the workplace and how well students meet faculty standards through their writing. The primary message practitioner lore delivers about student writing is, simply, that students cannot write. Would the survey results bear this out? In this section I focus on five of the statements—"I believe that students are inherently capable of good writing" "I believe students fulfill their writing potential" "I believe students write well" "I believe that students from my institution are well-prepared for the writing demands of the workplace" and "I feel that student writing apart from assessment. Do faculty believe students write well and can write well or are they experiencing, if you will, a crisis of faith? There are serious implications of such a crisis. As "experts" within the academic community of practice, faculty are supposed to guide students and model ways of engaging in the community of practice. We are again

confronted by the notion of brutality in a community where the experts are modeling ways of engagement in disingenuous ways.

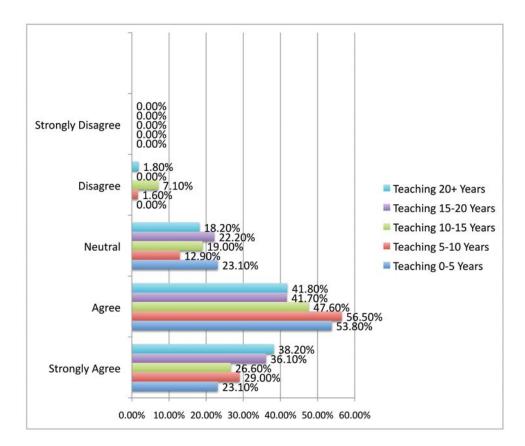


Figure 5.8 I believe that students are inherently capable of good writing

The underlying hypothesis of this research is that faculty no longer have faith in student writing. To that end, I asked faculty to indicate their level of agreement with the statement, "I believe that students are inherently capable of good writing." Faculty indicate they provide students with positive feedback about their writing and believe it is their responsibility to incorporate writing instruction into their curricula but when it comes to student writing, there is a distinct shift in attitude. Responses to this statement provide more explicit evidence of the negative discourse with which this dissertation is concerned. Faculty, across disciplines, report that 16.6% Strongly Agree with this statement while 40.1% Agree. Non-engineering faculty report that 22.1% Strongly Agree and 40.4% Agree. Engineering faculty report the lowest level of confidence in a student's inherent ability to write well with 9.9% of engineering faculty stating they Strongly Agree and 39.6% stating they Agree. With only 49.5% of engineering faculty agreeing, to some extent, that students are capable of good writing. While 29.7% of engineering faculty are Neutral about their students' inherent capability to write well, 17.1% disagree, the largest percentage of disagreement among the three groups of faculty.

Lore tells us engineers can't write and slightly fewer than half of engineering faculty believe students are even capable of good writing let alone writing well. Why? Yet another disconnect emerges that complicates these matters because as teachers, it could be said that one of our responsibilities is to believe students are capable of performing well but our attitudes do not reflect that we live up to that responsibility.

Faculty were also asked to indicate their agreement with the statement, "I believe students write well," to determine faculty attitudes toward student writing itself. The responses to this question were somewhat disheartening and a cause for concern. Students exhibit high levels of confidence in their writing and their facility with writing and yet many faculty demonstrate that not only do they believe students are incapable of writing well, they do not believe students write well in practice.

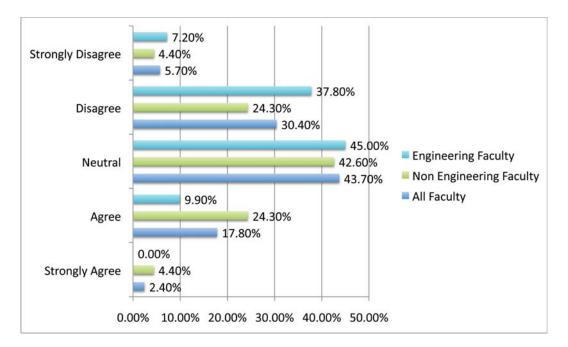


Figure 5.9 I believe students write well

Of all the survey responses, those to this statement inspire more questions than answers. Only 2.4% of faculty, across disciplines Strongly Agree students write well while 17.8% Agree. Only 4.4% of non-engineering faculty Strongly Agree while 24.3% Agree. Engineering faculty report the lowest levels of confidence in student writing with no engineering faculty indicating they Strongly Agree with the statement, "I believe students write well, and only 9.9% of faculty indicating they Agree. In terms of explicit disagreement, a full 37.8% of faculty state they Disagree that they believe students write well and 7.2% indicate they Strongly Disagree.

Why are faculty providing positive feedback to students about their writing when, particularly among engineering faculty, there is a notable lack of faith in student writing? What brings about this "crisis" of faith? Are faculty responding, perhaps to the pressures of grade inflation when they assess student writing?

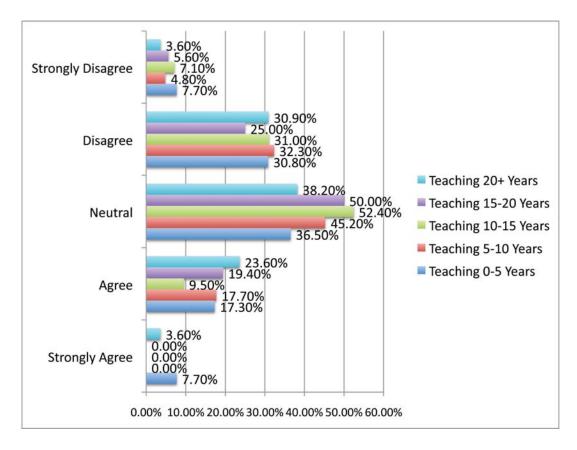


Figure 5.10 I believe students write well (by years in the profession)

I also filtered responses to the statement, "I believe students write well" by the number of years faculty have been in the profession to see how faculty attitudes toward student writing shift as they progress through their teaching careers. There is an overall downward shift. The longer faculty teach the less inclined they are to believe students write well. Newer faculty report the highest level of agreement with 7.7% of respondents stating they Strongly Agree students write well and 17.7% stating they agree. Faculty who have taught between 5-10 Years indicate that none of the respondents Strongly Agree students write well and 17.7% Agree. Faculty who have been teaching for 10-15

Years represent the lowest level of agreement with no faculty indicating they Strongly Agree and only 9.5% indicating they Agree. This disbelief might stem, in part, from instructional fatigue or that the longer faculty teach, the more consistently they see the same problematic elements in student writing.

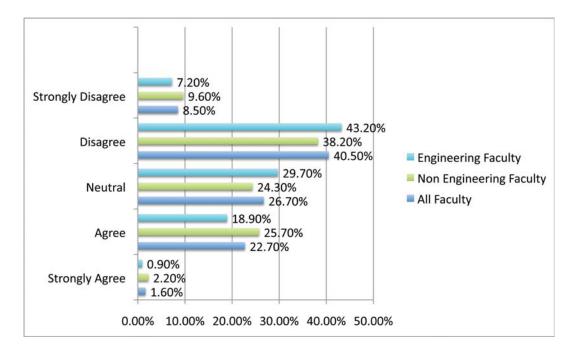


Figure 5.11 I believe that students from my institution are well-prepared for the writing demands of the workplace

Whereas many of the responses to the statements in both the faculty and student surveys directly contradicted practitioner lore, when it comes to how faculty feel about students as writers, the lore is, more often than not, reaffirmed. The notion that faculty believe students can't write is not just a story that we tell each other over e-mail or during faculty meetings. It appears to be a belief many faculty hold. What are the consequences of not believing students write well? How can community of practice function when the experts, faculty, have no confidence in the novices, or students? This is a question I will take up more explicitly in the sixth chapter.

Just as I asked students if they feel they are well prepared for the writing demands of the workplace, I queried faculty as to whether or not they believe their students are well prepared. I was particularly interested in this statement because employers consistently contribute to the negative discourse that is the focus of this dissertation by expressing dissatisfaction with the preparation of recent graduates. Engineering employers are particularly concerned about early career engineers and their understanding of what it means to communicate like an engineer as well as how to put that knowledge into practice effectively. While I did not deploy a survey to employers for this research project, I did want to see how faculty confidence in student preparedness for the communicative demands of the workplace compared to the rather high levels of confidence students exhibited in their survey responses.

As with the previous two statements, faculty do not express a great deal of agreement and, in turn, confidence in what students are learning about communication and what it means beyond their college education. Not only do faculty largely disagree or remain neutral in the belief that students write well, they are not at all confident that students are prepared to use their writing skills effectively upon entering the workplace. This is another instance where the lore is supported rather than contradicted by faculty responses. Only 1.6% of faculty, across disciplines, Strongly Agree students are wellprepared for the writing that will be expected of them in the workplace and 22.7% Agree. Among non-engineering faculty, a mere 2.2% of faculty Strongly Agree and 25.7% Agree. Engineers continue to demonstrate the lowest level of confidence with a very slim

0.9% of engineering faculty stating they Strongly Agree students are well prepared for the writing demands of the workplace and 18.9% of faculty indicating they Agree. Engineering faculty also expressed the highest level of disagreement by a small margin with 50.4% of faculty indicating they either Disagree (43.2%) or Strongly Disagree (7.2%) that students are well prepared to write in the workplace versus 38.2% of nonengineering faculty indicating they Disagree and 9.6% of non-engineering faculty indicating they Strongly Disagree and 40.5% of faculty across disciplines indicating they Disagree and 8.5% indicating they Strongly Disagree.

This survey only allowed faculty to respond to closed-ended questions but in future work, it would be beneficial and illustrative to ask faculty why they feel students aren't prepared to communicate in the workplace as well as how faculty might be implicated in that inadequate preparation. Nevertheless, these results offer valuable insights into the extent, or lack thereof, to which students are prepared to transition into a new community of practice upon graduation. It also speaks volumes about faculty assumptions about student preparedness and implies a certain complacency that is troubling.

A lack of faculty confidence in student writing must, ultimately, stem from a set of faculty expectations not being met. In trying to take a more nuanced approach to understanding how the lore about students as writers aligns or doesn't with reality, faculty were also asked to respond to the statement, "I feel that student writing doesn't meet my standards." As with the previous statements in this section, results show that a significant number of faculty are skeptical about how well students meet their expectations and this is another instance where the lore is confirmed. Among faculty

across disciplines, 8.9% of respondents strongly agree while 42.9% agree that student writing does not meet their standards. Non-engineering faculty report the lowest levels of agreement with 6.6% of these respondents stating they Strongly Agree and 36.8% of respondents stating they Agree. Engineering faculty responded least favorably to this statement with 11.7% of respondents stating they Strongly Agree and 49.5% of respondents stating they agree, for a total of 61.2% of engineering faculty agreeing to one extent or another that they don't believe student writing meets their standards.

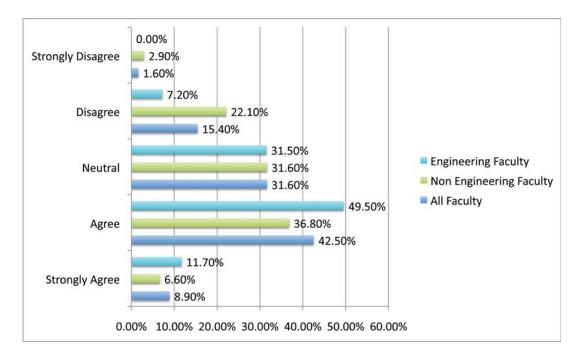


Figure 5.12 I feel that student writing doesn't meet my standards

If practitioner lore has one dominant message, which is that student writing isn't meeting faculty standards and expectations and if students aren't meeting faculty expectations, why are students so confident about their writing and so confident about how faculty consider them as writers? Why is the climate portrayed by students so

different from the one portrayed by faculty? Wenger states, "If we proceed without reflecting on our fundamental assumptions about the nature of learning, we run an increasing risk that our conceptions will have misleading ramifications" (9). What are the ramifications of faculty possessing a fundamental lack of faith in student writing or a student's ability to learn to write well? Wenger characterizes communities of practice as fields of possible trajectories. As experts, faculty model possible trajectories for students but when we don't believe students can write well, when we have no faith in their potential, we are not exposing students to possible trajectories. Instead, we are exposing them to an untenable, static position where they cannot fully "engage with their own future as embodied by old-timers," (Wenger 156).

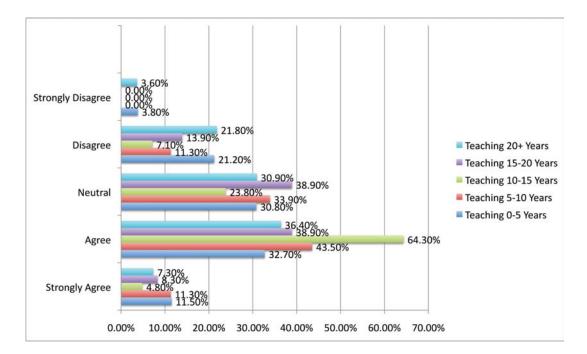


Figure 5.13 I feel that student writing doesn't meet my standards (by years in the profession)

These responses were also filtered by years in the profession. In this instance, faculty were more inclined to agree with this statement, the newer they were to the profession with the highest level of agreement coming from faculty who have been teaching for 10-15 years. Newer faculty, teaching for 0-5 years, responded they Strongly Agree at a rate of 11.5% and they Agree at a rate of 32.7%. Among faculty who have been teaching 5-10 years, 11.3% of respondents Strongly Agree student writing doesn't meet their standards while 43.5% agree. At 10-15 Years in the profession, 4.8% Strongly Agree and 64.3% Agree. In the latter two groups, the number of faculty who agree with this statement disagrees significantly with 8.3% of faculty who have been teaching for 15-20 Years reporting they Strongly Agree and 38.9% reporting they agree while only 7.3% of faculty who have been teaching for more than twenty years Strongly Agree and 36.4% Agree. These results, as others in this study do, imply that the longer faculty teach, the less faith they have in students as writers, what students are capable of, and how they perform in relation to our expectations.

# The Parts We Play in the "Brutal Discourse": Faculty Attitudes Toward Discussing Student Writing Formally and Informally

Practitioner lore is primarily transmitted by way of the stories and experiences faculty share with one another. While formal assessment in terms of grading and providing students with feedback is one element of the discourse about student writing, the lore I am even more interested in uncovering, lies in the casual comments we make about student writing with one another, the e-mails we exchange where we say things like, "You wouldn't believe what a student turned in today," and other such practices that belittle students, their writing and only contribute to a negative climate where as Helmers notes, "One gets the distinct impression from testimonials that experiences with students are commonly negative" ("Writing Students" 21). In this section of the faculty survey I wanted to determine if and how faculty contribute to the discourse about students as bad writers, how their characterizations and, possibly, caricaturing of students only enhances negative lore about students as writers, and how faculty feel about their participation within that discourse. To that end, faculty were asked to respond to a series of statements about the ways in which they characterize student writing, where those discussions take place, and how they feel about those discussions. Because this dissertation is primarily concerned with the idea that a negative discourse exists, I focus on eight statements in this section that foreground areas where this discourse emerges, so we might have a clearer understanding of the discourse and the extent to which it is perpetuated.

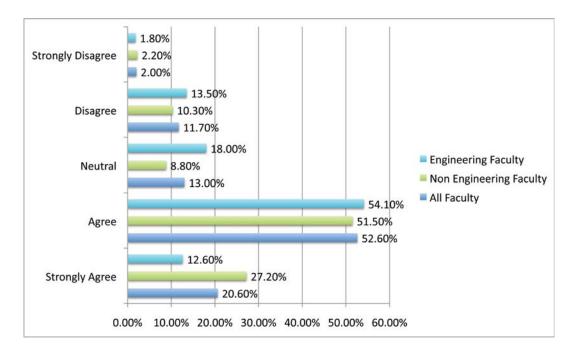


Figure 5.14 My colleagues and I discuss student writing in professional settings

There are any number of opportunities for faculty to discuss student writing professional, whether in faculty meetings, committee meetings, in dealing with programmatic assessment and campus-wide curricular objectives, as well as during accreditation audits, to name a few. I wanted to determine whether or not faculty participate in discussions about student writing during such opportunities. Responses indicate that the majority of faculty do discuss student writing in professional settings though the question does not allow for more specific information on what exactly is said during such discussions. To the statement, "My colleagues and I discuss student writing in professional settings such as faculty meetings or other official gatherings on campus" 20.6% of faculty across disciplines stated they Strongly Agree while 52.6% stated they Agree. Among non-engineering faculty 27.2% of respondents indicated they Strongly Agree and 51.5% stated they Agree. Engineering faculty reported slightly lower levels of agreement with 12.6% of faculty stating they Strongly Agree and 54.1% of faculty stating they Agree. What is the tenor of these professional discussions? Do faculty frame student writing positively, or are their discussions more negative in tone? These questions will be addressed in the following statements.

While faculty clearly discuss student writing professionally, I was even more interested in finding out if faculty discuss student writing in social, and informal settings, where they might be less constrained by the decorum generally demanded by professional settings. Foucault states "The rules of formation are conditions of existence (but also of coexistence, maintenance, modification, and disappearance) in a given discursive division" ("Archaeology of Knowledge" 38).

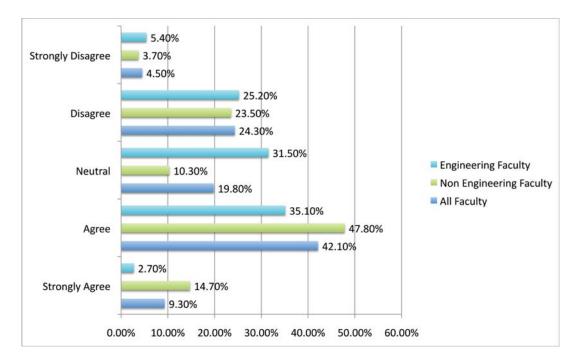


Figure 5.15 My colleagues and I discuss student writing in social settings

My interest in where and how faculty discuss student writing speaks to this idea that there are, as Foucault has coined the phrase, *rules of formation*, which control the discourse. What are the rules faculty establish that guide and control the discourse about students as writers? Overall, more than half of faculty respondents, 51.4%, indicate they discuss student writing in social settings. To the statement, "My colleagues and I discuss student writing in social settings" 9.3% of all faculty Strongly Agree and 42.1% Agree. Within the non-engineering faculty cohort, 14.7% Strongly Agree with this statement and 47.8% Agree. Engineering faculty report the lowest level of agreement with 2.7% of faculty stating they Strongly Agree and 35.1% stating they Agree. These responses beg the question, how are faculty discussing student writing? Are the discussions merely collegial, or are they derivive in tone? The responses to the next statement take up these questions more explicitly.

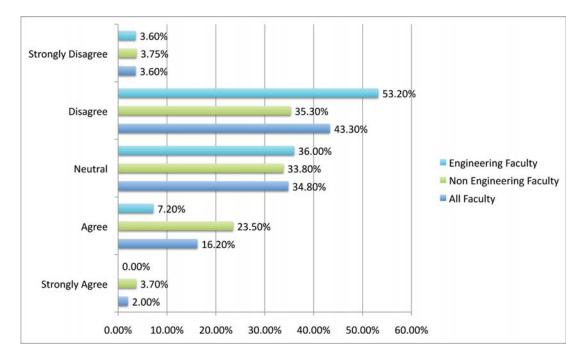


Figure 5.16 When my colleagues and I discuss student writing our assessments are generally positive

I presented faculty with several different statements about the nature of their discussions about student writing. Lore tells us faculty are deeply dissatisfied with student writing and many of the faculty who participated in this project do not contradict that lore. There is, as Helmers notes, often an assumed universality of experience implied by faculty testimonials about student writing, and that universality is reflected by many of the faculty responses. To the statement, "When my colleagues and I discuss student writing our statements are generally positive," a mere 2% of all faculty responded they Strongly Agree and 16.2% Agree. Non-engineering faculty report that 3.7% Strongly Agree and 23.5% Agree. It is rather eye opening that no engineering faculty Strongly

Agree with this statement and only 7.2% Agree. In fact, a full 53.2% of engineering faculty disagree with this statement in comparison to 35.3% of non-engineering faculty and 43.4% of all faculty. These results strongly indicate that when faculty are discussing student writing, they don't have positive things to say and engineering faculty are particularly dissatisfied with engineering students as technical communicators.

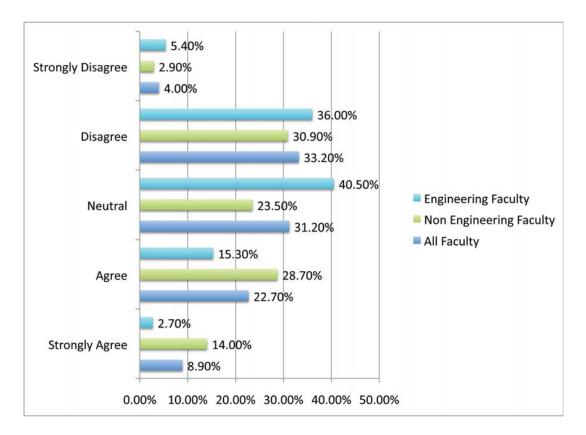


Figure 5.17 It makes me uncomfortable when I hear colleagues say negative things about student writing

Knowing faculty discuss student writing negatively is one thing. I also wanted to determine how faculty feel about the negative nature of such discussions. Does it disturb faculty to hear negative discussions about student writing or do faculty simply accept such discussions as acceptable, much in the way that other brands of practitioner lore are

legitimized? Does the assumed universality of experience allow faculty to justify the negative tenor of so many discussions about student writing? On the whole, faculty are either not uncomfortable or neutral when they hear negative statements about student writing. Only 8.9% of all faculty Strongly Agree that negative statements about student writing make them uncomfortable while 22.7% Agree. Among non-engineering faculty, 14% Strongly Agree and 28.7% Agree, representing the highest level of discomfort. Engineering faculty report that only 2.7% Strongly Agree and 15.3% Agree. Engineering faculty also report the highest level of disagreement with this statement with 36% indicating they Disagree and 5.4% indicating they Strongly Disagree.

These results give the impression that faculty have become so accustomed to the lore about students as writers that they are not uncomfortable in those scenarios where that lore is perpetuated and cultivated. In such a climate, faculty are creating an atmosphere where negative attitudes toward student writing are considered community norms. In *Communities of Practice*, Wenger outlines four theories that contribute to a social theory of learning—theories of social structure, practice, situated experience, and identity. These theories prioritize institutions, norms and rules (social structure), the dynamics of everyday existence (situated experience), the production and reproduction of specific ways of engaging with the world (social practice) and the social formation of the person (identity).

Within the context of these theories of learning, a context complicated by a climate where faculty either actively contribute to a negative discourse about students as writers or are passive in the face of that discourse, there are serious questions we must raise about what students are learning, not only from faculty curricula but also by these

theories that influence social learning. In addition to our disciplinary subjects, what are we teaching students when negativity about their writing is embedded within community norms, everyday dynamics, the ways in which faculty engage with students and how students are constructed as writers? Are we unduly forcing students into untenable subject positions? I assert that we are distorting Wenger's social theories of learning by perpetuating a negative discourse about students as writers by exposing students to a compromised social structure where they are not valued.

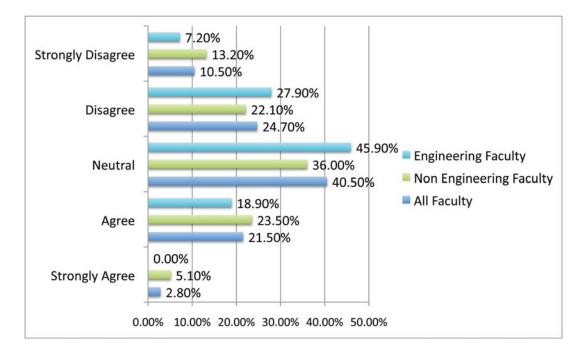


Figure 5.18 I enjoy the stories my colleagues share about "bad" student writing

In addition to exploring whether faculty are uncomfortable when they hear negative statements about student writing, I believe it is equally useful to determine if faculty actively enjoy such discussions. It is one thing to feel indifferent about negative statements about student writing but do faculty take pleasure in hearing negative stories? Does shring lore about student writing become a source of amusement where students are ridiculed? While faculty are not necessarily uncomfortable when they hear negative statements about student writing, their responses indicate they are not necessarily reveling in such discussions either. With regard to this statement, faculty report a high level of neutrality (40.5% for all faculty, 36% for non-engineering faculty and 45.9% for engineering faculty). Among all faculty, 2.8% state they Strongly Agree and 21.5% state they Agree while 5.1% of non-engineering faculty state they Strongly Agree and 23.5% state they Agree. Within the engineering faculty cohort, no faculty Strongly Agree with the statement, "I enjoy the stories my colleagues share about 'bad' student writing" and 18.9% Agree.

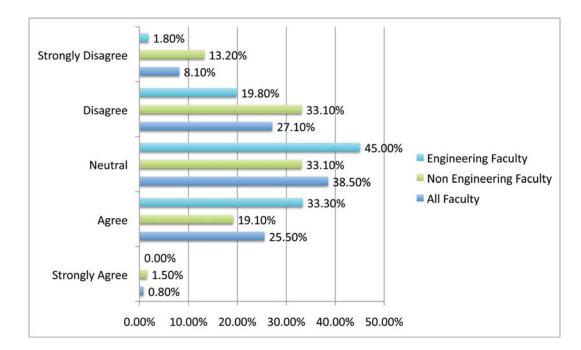


Figure 5.19 When discussing student writing I generally say negative things

These responses are interesting in that while faculty don't necessarily object to a negative discourse about student writers, many respondents indicate they aren't active

participants. This, of course, begs the question, if the majority of 247 respondents aren't actively participating in the discourse, and yet they acknowledge this discourse exists, who is, in fact, perpetuating the discourse?

The final two statements I focus on in this chapter deal with what faculty actually say when discussing student writing to assess the tenor of faculty commentary on student writing. The responses to most of the statements in the faculty survey reflect a lack of confidence in students and student writing and yet when explicitly asked if their contributions to lore about student writing are negative, faculty respond neutrally, perhaps even indifferently. To the statement, "When discussing student writing, I generally say negative things," only 0.8% of all faculty stated they Strongly Agree and 25.5% of faculty stated they Agree. Among non-engineering faculty, 1.5% of faculty Strongly Agree. There were no engineering faculty who Strongly Agree and 33.3% Agree. As with the previous statement, faculty attitudes were largely neutral about whether faculty make negative statements about student writing with 38.5% of all faculty stating they felt Neutral, 33.1% of non-engineering faculty expressing neutrality and 45% of engineering faculty stating they felt Neutral.

This is the sort of lore statement where one could assume faculty would have a definitive response either in the affirmative or negative. Are these responses borne of a faculty reticence to be entirely candid? Why do faculty indicate neutral attitudes about whether they make negative statements about student writing when the majority of respondents are dissatisfied with student writing and demonstrate a lack of confidence in a student's ability to write?

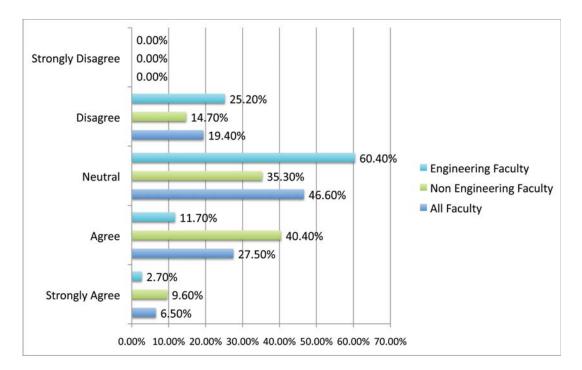


Figure 5.20 When discussing student writing I generally say positive things

The final statement I focus on in this chapter is, "When discussing student writing, I generally say positive things." Even if they aren't actively contributing, there's a certain passivity reflected by these results implying that even when faculty aren't contributing, they're not doing anything to change the tenor of the discourse about students as writers. Six and a half percent of all faculty Strongly Agree while 27.5% Agree. Among non-engineering faculty, 8.6% Strongly Agree and 40.4% Agree while among engineering faculty only 2.7% Strongly Agree and 11.7% Agree. No faculty across the three cohorts Strongly Disagree however faculty expressed very high levels of neutrality at 46.6% of all faculty, 35.3% of non-engineering faculty and 60.4% of engineering faculty.

These results indicate a curious ambiguity as if a significant segment of respondents are unwilling to take a definitive stance on the nature of the lore statements they contribute to the discourse about students as writers. Engineering faculty report the highest level of neutrality suggesting that the specific and often negative lore about engineering students as technical communicators is reinforced in practice by faculty.

In the fourth and fifth chapters, I analyzed a selection of the results of attitudinal surveys deployed to faculty and students, results indicating conflicting trends with regard to students, their confidence in their writing, how they perceive the ways in which their writing is assessed and considered by faculty and how faculty view, assess and formally and informally discuss student writing. In Chapter 6, I discuss the significance of the conflicting results discussed in this fourth chapter within the context of the theoretical framework informing this dissertation project—with a focus on the ways in which the discourse about students as writers is one that is: encoded with an epistemic privilege; culturally embedded within higher education; and functions ideologically as a means of reinforcing a hierarchy where students are constrained by an untenable subject position.

Based on the results in the previous two chapters, I found that student attitudes conflicted a great deal with practitioner lore while faculty attitudes often reflected lore. I initially hypothesized that the way students perceive themselves as writers, in essence their writing confidence, could be influenced by a discourse where students are consistently positioned as incompetent writers. The results, although drawn from only 83 student respondents, did not bear this hypothesis out. Students expressed a great deal of confidence in their writing skills, their preparedness for communicating in the workplace, and how faculty evaluate them.

The faculty responses, on the other hand, largely confirmed faculty do indeed hold many of the beliefs espoused by practitioner lore about students as writers. Faculty across disciplines believe it is their responsibility to incorporate communication instruction into their curricula and many faculty report that they provide their students with positive, constructive feedback. At the same time, the majority of faculty respondents neither believe students are prepared for the communication demands of the workplace, nor that students are capable of writing well, and there is an overall sense that faculty are very dissatisfied with student writing. In comparing responses between engineering and non-engineering faculty, the lore telling us engineers don't understand the importance of communication is largely contradicted by the data but compared to their non-engineering counterparts, engineering faculty reported more dissatisfaction with student writing and less confident in their students' preparation or ability to communicate effectively. In this chapter, I discuss the significance of these results within the context of the theoretical framework that informs this dissertation. I also address the questions that have guided this project:

- Who benefits from a negative discourse about student writing?
- What does the discourse reflects about what we value in student writing?
- How, if at all, does this discourse influence how students see themselves as writers?
- What is the significance of the discontinuities between faculty and student responses to the surveys?
- How we might change the discourse into a more productive discussion of student writing?

I assert we need to contribute to and encourage a more positive, productive discourse about the nature of student writing. We need to start fostering more realistic expectations, both within the academy and the workplace, about what kind of writing skills to expect from recent graduates and what can be realistically accomplished in four or five years. I ask how we can reframe the discourse about students as writers so we are having more productive conversations that can lead to more innovative pedagogical approaches in the teaching and evaluation of student writing. Finally, I discuss future plans for this research which include incorporating the employer perspective, a longitudinal study of students throughout their college careers, and a new faculty survey including open-ended questions to interrogate faculty more explicitly about the ways in which thy contribute to the discourse about students as writers.

# A Distortion of Meaning: The Consequences of a Lack of Faith in Student Writing

In Communities of Practice, Etienne Wenger states, "Our engagement in practice may have patterns, but it is the production of such patterns anew that gives rise to an experience of meaning" (52). Throughout this dissertation, I have expressed a concern for the consequences of a negative discourse about students as writers, a discourse limiting what we can accomplish as teachers, what students can learn and how students experience meaning throughout their academic experience. In this discourse, faculty use practitioner lore as a means of consistently constructing students as writers in negative ways—only 20.2% of faculty believe students write well and only 9.9% of engineering faculty agree students write well. In surprising numbers, we have created a mythological character-the hapless student who, as a writer is irredeemable-unable to write well, unable, even, to learn to write. As this discourse is transmitted between practitioners, we begin to produce rigid patterns where we are creating a new experience of meaning for students, where we are distorting what it *means* for students to become effective communicators because we do not believe such a thing is possible. Students are placed in the untenable position of being unable to meet faculty expectations simply because faculty no longer have expectations and when faculty do have expectations, the predicted outcome is failure. In such an atmosphere can we truly help students develop into effective writers and more specifically, engineering students into effective technical communicators?

We cannot. We deprive students of the capacity to engage critically with acquiring effective communication skills because we compromise the ways in which they can engage in the academic community of practice. The survey results indicate that most of us don't believe students write well, can write well, are prepared to communicate in the workplace and or meet our standards and expectations. We don't believe they are valuable participants in the academic community of practice. In "A Pedagogy of Multiliteracies," The New London Group discusses situated practice as one of our primary pedagogical goals—providing students with a degree of mastery not only in theory but also practice. They state, "human knowledge, when it is applicable to practice, is primarily situated in sociocultural settings and heavily contextualized in specific knowledge domains and practices" (31). They go on to state that part of situated practice is the "immersion in meaningful practices within a community of learners who are capable of playing multiple and different roles based on their backgrounds and experiences," (33). We are not immersing students in meaningful practices when we have no faith in their communication skills. The knowledge we present students about writing is that there are ways to write well but that students will never be able to successfully acquire those skills. We are provided them with situated learning that is impoverished.

# Overcoming the Fetish for Forcing Students Into an Untenable Subject Position

The word "fetish" has several definitions. The definition that interests me most is, "a course of action to which one has an excessive and irrational commitment," (Oxford

English Dictionary). A vigorous dissatisfaction with student writing has been a constant throughout the history of higher education. We contribute to and forward this discourse and the statements of practitioner lore comprising that discourse, like a fetish. Lamenting student writing is a course of action to which too many academics are excessively and irrationally committed. It is telling that in the first chapter of this dissertation I was able to find newspaper articles from 1892 and 2010 essentially bemoaning the same concerns—college students cannot write. While higher education has evolved, academics and the general public alike have held fast to the notion that student writing is unacceptable, lazy, always lacking. Where engineers are concerned, the discourse becomes even more negative, more pronounced, more pervasive. Within the academy, in the workplace, in the public realm, the notion that engineers can't write flourishes. Engineers can't write, they don't want to write, they don't think writing matters. While there is ample evidence that engineering and technical communication programs are evolving beyond the discourse, lore about engineers as bad writers continue to be exchanged between faculty.

Helmers states, "The idea of lack presumes that there must either be a way to fill the absence or to bring the student to normal standards" ("Writing Students" 61). She also states, "Constructing students as 'those who lack' establishes their impotency as writers and reinforces their dependency on the power of the instructor as the one who is able to initiate change" ("Writing Students" 23). If perpetuating the negative discourse about students as writers is a fetish, perhaps these statements can offer insight into what brings about that compulsion to consistently force students into a subject position where they are lacking as communicators. We can posit that the discourse rises out of a

defensive position where we propagate the notion students can't write so there will always be a need for faculty to try and address that incompetence. The problem is that the discourse, particularly as the results of the faculty survey show, is that not only do many faculty believe students don't write well, they believe they can't write well.

Indulging a fetish for decrying student writing puts us at cross purposes because, "Designing for learning, therefore, cannot be based on a division of labor between learners and nonlearners, between those who organize learning and those who realize it, or between those who create meaning and those who execute it," (Wenger 234). The academy is comprised of many different disciplines, each one which is a community of practice in and of itself. As a whole though, the academy is also a community of practice, one where faculty, administrators and students must mutually engage because a community of practice is not just a matter of our being faculty or students being students and how we fulfill those roles. The community is primarily characterized by its members sustaining "dense relations of mutual engagement organized around what they are there to do" (74). Both faculty and students hold responsibilities in this community because, "each participant in a community of practice finds a unique place and gains a unique identity, which is both further integrated and further defined in the course of engagement in practice" (76). By indulging our fetish to negatively characterize students as writers, we limit the ways in which we can mutually engage with students and how deeply they can integrate themselves into the community of practice. We compromise their ability to gain a unique identity in order to protect our own identities within the academic community of practice. To function effectively as a community of practice, we have to

find a way to move beyond the fetishization of complaining about student writing, and the fetish for reinforcing the rigid division of labor between teacher and student.

### Creating New Rules for the Discourse: Recognizing the Limits of Practitioner Lore

Realizing that writing instruction at the university level is a complex, politically fraught system is a first step toward understanding how the negative discourse about students as writers has been sustained for so long. According to Foucault there are rules for the formation of a discourse. He asserts we must first determine where the objects or statements of discourse first emerged. We must understand the authorities controlling the discourse and finally, we must analyze the systems within which this discourse is grouped, divided, and classified.

We can identify several sites in the university system where this negative discourse about students as writers emerged. Writing instruction is often relegated to underpaid, adjunct or interim faculty and/or graduate students who are handling course loads similar to those of tenure track faculty. Composition programs often provide universities with a significant revenue stream<sup>11</sup> but while the university values the student as a source of that revenue, the same cannot always be said for the teacher who provides a service, instruction, in service of that revenue. Some universities support Writing Across the Curriculum initiatives while others don't. Instructors in many disciplines have noted they don't feel qualified to teach writing and communication skills in their

<sup>&</sup>lt;sup>11</sup> In *Textual Carnivals: The Politics of Composition* Susan Miller asserts that "\$100 million is spent each year in America on something we might think of as teaching students to write at the college level... Whatever else composition is, it is a major national industry when measured monetarily" (5).

classrooms. Then there is writing instruction itself. There are countless, sometimes contradictory theories as to what it means to write well, how to teach students to write well, and how to best evaluate writing. Finally, there are the students themselves who come to our classrooms with diverse literacy experiences, writing facility and attitudes toward writing instruction.

Although we may never know when faculty dissatisfaction about student writing became more than a matter of assessment, it is clear that this discourse continues to fester in an environment where there are competing and conflicting interests and contested spaces that have, for whatever reason, prevented us from appreciating the extent to which the negative discourse about student writing persists. We have, perhaps, ignored these fissures, discontinuities and ruptures as sites where the negative discourse flourishes because we are afraid what we will find there. We are afraid to face what those fissures, discontinuities, and ruptures say about our competence as instructors and our investment and participation in the academic community of practice. Such circumstances are a breeding ground for resentment that can influence how these instructors assess student writing. Susan Miller states, "We need to marshal the interpretive energy to 'read' composition as though the politics in question are equal to the working of social interests that we have already recognized in a broader discourse" (3). I believe we need to "read" the discourse about students as writers in the same way, as part of a broader discourse where politics and economics are significant factors.

The brief history of technical communication is another site where the negative discourse about student writing emerges. Technical communication which, in the history of the academy, is still relatively new, is a field where faculty are not only challenged by

the work that takes place in the classroom, they also, until recently, had to legitimize their position in the academy, justify the necessity for technical communication programs (see: Kynell, Tebeaux, Savage, et al). When it comes to teaching engineering students writing, there are the complications of a very rigorous and inflexible curriculum where, oftentimes, writing instruction is not and, in certain cases, cannot be prioritized

This dissertation began with a story I heard, believed and treated as legitimate during an introductory pedagogy seminar when I began teaching at Michigan Technological University. As a zygote of an instructor, with no prior teaching experience, I had every reason to believe the disturbing stories I heard about students as bad writers. . This practitioner lore provided my peers and me with a very structured (limited?) language for discussing and evaluating student writing and it was the result of a complex genealogy comprised of the many years of experience shared by the various instructors. In considering discourse as ideological, culturally embedded, a sustained and maintained social process, as something that provides us with a language for discussing a given topic, the lore transmitted in that pedagogy seminar and beyond those two weeks functioned quite effectively as discourse.

Foucault also tells us that power produces knowledge. Knowledge production is quite evident in the discourse about students as writers where many faculty have adopted the stance that they *know* students are bad writers and they *know* students aren't capable of writing effectively and they *know* students aren't prepared for the communicative demands of the workplace. This was the brand of knowledge espoused not only in one pedagogy seminar at one university, but is also reflected in many of the responses to the faculty survey.

We can make the claim that some faculty attitudes toward student writing are treated as epistemological and those attitudes are bestowed with epistemic privilege where we believe the informal assessment of student writing we exchange via practitioner lore, is the most accurate, the most useful, the most truthful. Unfortunately, that knowledge, like most epistemological knowledge, is often treated as incontrovertible— 20.2% of faculty, across disciplines Strongly Agree or Agree that students write well and 36.1% either Strongly Disagree or Disagree. When more faculty believe students can't write well than believe students *can* write well, that knowledge assumes a position of epistemic privilege because, as discussed in Chapter 2, we use our position to gain legitimacy for our perspective to the detriment of other perspectives, namely that students are even capable of good writing. This epistemic privilege enables us to continue positioning students as lacking, incapable, and incompetent. That same privilege allows us to position ourselves as possessing the answers, capable, and competent.

Throughout this dissertation I have discussed practitioner lore as the primary discursive statements I am concerned with. When Stephen North introduced practitioner lore as a legitimate brand of academic scholarship, he allowed for a wider range of knowledge to be valued within the academy. As an instructor who has benefitted greatly from practitioner lore, I am by no means trying to say that practitioner lore should be devalued. At the same time, it could be useful to ask ourselves about the limits of lore's utility. Negative stories about students as writers cannot nor should not be applied to all students. While the perspectives gained from working with students expressing a range of writing skills are valuable, we need to temper those perspectives with common sense and an open mind as we consider our own students.

We have to consider the extent to which practitioner lore influences our pedagogy because, "To make a case for the revaluation of practitioner inquiry, we must draw stronger parallels between the ways practitioners, scholars, and researchers construct knowledge within their own communities" (261). She notes that for North, the focus is on what we do as teachers, what works, what doesn't work and what could potentially work but she is troubled by how we measure what works and is also concerned about a "generally uncritical acceptance of all practitioner inquiry" (261). The results of this study do reflect the dangers of an uncritical acceptance of practitioner lore and I also believe Rankin's call to draw stronger parallels between how knowledge is constructed in a given community is a valid one. The lore that develops in one community is not necessarily applicable in another. At the 2008 Conference on College Composition and Communication, for example, I delivered a paper on the topic of how engineering students are constructed as writers and a faculty member from a technical communication program in Canada indicated that at his institution there was no such discourse about engineering students as bad writers. The lore that influenced me as an instructor was not at all present in this individual's program. The results of this survey imply that the audience member's experience was an exception rather than a rule but it does speak to the limitations of lore—the experiences which shape my practitioner lore may not be the same experiences that shape your practitioner lore. There are limits. We have to ask ourselves where we draw the line between valuing and learning from lore and overvaluing lore and allowing discursive statements like "students can't write" or "engineers can't write" to inform our perspectives.

# Examining the Discontinuities or Ruptures Between Student and Faculty Attitudes

When I outlined my methodology for this research, I stated my work was influenced by feminist research theory. At the heart of my work is a genuine concern for students and how they are characterized through the discursive statements of practitioner lore. How student writing is both formally and informally assessed as well as a desire to contribute to a new body of knowledge about student writing and faculty attitudes toward student writing are also critical to this project's work. To determine if there was, in fact, a discourse that positioned students as bad writers, I could have simply deployed a survey for faculty and left students out of the scope of my inquiry. To stay true, however, to the ideals of feminist-informed research that prioritize the research subject's interests as a primary focus, I included students and allowed them to become part of the conversation about how they are positioned as writers. I wanted to see if there were similarities and/or differences between the faculty and student perspectives. Now that the study has been completed I also see that some of the most interesting results are the discontinuities and ruptures between student and faculty attitudes.

If the results of the student survey reflect anything, at least within the context of Michigan Technological University, it is that not all the discursive statements fueling the practitioner lore about students as writers are accurate. First and foremost, the student survey reinforces the similar results gathered from the Stanford Study of Writing— students are writing both formally and informally. While this study did not explore the specific character of that writing, or the quality of that writing because student responses

were self-reported and the questions they were asked focused specifically on selfassessment of writing and writing confidence, there remains a lot to be learned from the data.

The results from the student survey are intriguing because for the most part, they distinctly contradict my original hypothesis that the discourse about student writing creates a self-fulfilling prophecy where students internalize the belief they are "bad writers" and, in turn, write not to the best of their abilities but instead to a compromised set of expectations. The results also contradict much of what we think we know about student attitudes toward writing. The students who participated in this study are overwhelmingly confident about their writing skills, their academic preparation, and how faculty assess and critique their writing. While faculty may not have faith in student writing, students have faith in themselves and how faculty teach and assess their writing. Because so often we hear that "engineers can't write," I hypothesized that engineering students would exhibit less confidence in their writing skills. Such was not the case. In fact, a higher percentage of engineering students expressed confidence in their writing than non-engineering students when they responded to the statement, "I am confident about my writing."

Clearly, faculty are doing something right for students to exhibit such high levels of confidence. At the same time, there's something that's not quite right because faculty are not participating ethically in the academic community of practice when they say one thing and do another. Another characteristic of communities of practice is the notion of competent membership, defined by mutual engagement, accountability, and the negotiability of the repertoire ("the ability to make use of the repertoire of the practice to

engage in it" (137)). When we contribute to a negative discourse about students as writers while assessing student writing positively, we are not competent members because we are not holding ourselves accountable nor are we participating in ways that are mutually engaged. We are simply further reinforcing our subject position and the untenable one where place students.

On the other hand, with regard to the statement, "I believe students write well," faculty were ambivalent at best. Whether looking at all faculty, non-engineering faculty, or engineering faculty, the highest percentage of respondents were Neutral about the statement "I believe students write well," and significant percentage of faculty disagreed with the statement. How can we account for this significant discontinuity between students reporting high levels of confidence in their writing and how faculty assess that writing?

The limitations of this study don't allow me to provide answers to this question but I do believe the disparity in attitudes reflects a fracture or rupture in how the academic community of practice functions. In *Communities of Practice*, Wenger states, "Identity in practice is defined socially not merely because it is reified in a social discourse of the self and of social categories, but also because it is produced as a lived experience of participation in specific communities. What narratives, categories, roles, and positions come to mean as an experience of participation is something that must be worked out in practice" (151). Student attitudes about their writing confidence reflect a vastly different social discourse than the one implied by faculty attitudes. The discontinuity between the student and faculty discourses means both student and faculty engagement within the community is compromised. If we do not believe students can

write well, we will not strive to challenge them and push them toward becoming better communicators. Our pedagogy becomes as mediocre as our opinion of student writing. The university as community *of* practice is flawed *in* practice, which impoverishes possibilities for effective learning to take place. By perpetuating the negative discourse about student writing, we contribute to the culture of a commodity-based educational system discussed in the first chapter where students perform in exchange for a grade and faculty teach in exchange for compensation without prioritizing full, ethical participation in the academic community of practice.

A disturbing fracture emerges between student responses to the statement, "I am well prepared for the writing I will have to do when I enter the workplace" and faculty responses to the statement, "I believe that students from my institution are well-prepared for the writing demands of the workplace." While students expressed high levels of confidence about their ability to communicate in the workplace, faculty expressed little such confidence. Students participate in multiple communities of practice throughout their academic experience and that participation is conducted, most of the time, in the service of preparing to transition to the workplace as community of practice upon graduation. We can consider this distortion between student and faculty responses about preparedness to enter the workplace within the context of competent membership in a communicate in the workplace, we are not holding ourselves appropriately accountable for how we are fulfilling our responsibilities because, "For learning in practice to be possible, an experience of meaning must be in interaction with a regime of competence"

(137). When we do not embody a regime of competence, we make learning in practice impossible for students.

Even though students believe they have authentic access to participating in the academic community of practice, this study's results indicate otherwise. Students largely agreed with the statement, "I receive positive feedback on my writing from my teachers." They were also asked to respond to the statement, "I receive negative feedback on my writing from my teachers." Student responses, across majors, were consistent in that few students indicated they receive negative feedback on their writing. I asked students to respond to the statement that ultimately gets at the heart of my hypothesis—"My teachers think I am a good writer." This was the only statement from the student survey I focused on in Chapter 4 where engineering students expressed a lower level of confidence than non-engineering majors, supporting practitioner lore that engineering faculty are particularly dissatisfied with student writing. Nonetheless, the majority of students both within engineering and across disciplines believe their teachers think they are good writers. They have faith that their faculty are fully engaged and participating in the academic community of practice. They are contributing to a regime of competence even when faculty are not because, "In order to support learning, engagement requires authentic access to both the participative and the reificative aspects of practice in concert" (184).

Many of the survey results demonstrate that students and faculty are not functioning within the same communities of practice. Another critical element of communities of practice is alignment, which "requires the ability to coordinate perspectives and actions in order to direct energies to a common purpose" (Wenger 186).

When we say one thing and do another, where student writing is concerned, we are not making alignment possible, further impoverishing the academy as a community of practice. I asked faculty several questions about assessment and how, if at all, they respond to student writing because that feedback, I assert, functions as one of the signs that permit, according to Foucault, the exercise of power. When asked to respond to the statement, "I generally give my students positive, constructive feedback about their writing," most faculty indicated they give positive feedback. However, there is a considerable difference between non-engineering and engineering faculty with far fewer faculty indicating they provide their students with positive feedback about their writing. Nonetheless, these responses correlate fairly well with student responses to the statement, "I receive positive feedback on my writing from my teachers." Those responses do not correlate, however with discursive statements about how faculty feel about student writing and a student's inherent ability to write well. The stark contrast between what we say and what we do speaks to a troubling complacency, and if it is not too harsh to say, a troubling hypocrisy. If we are simply doing what needs to be done to assess student writing without working to help students write more effectively so that our opinion of their writing might change, we are not doing what we are charged to do as educators.

#### **Future Research Directions**

In the first chapter of this dissertation I discussed several definitions of discourse. I would like to include one more. In "A Pedagogy of Multiliteracies," The New London Group defines a discourse as "a construction of some aspect of reality from a particular point of view, a particular angle, in terms of particular interests," (24). The results of this study both confirmed and contradicted practitioner lore about student writing and students as writers but ultimately the research raised more questions than answers. In future work, I would like to examine the "particular interests" served by a negative discourse about students as "bad writers" in greater detail. Why does the discourse about bad student writing persist even when there is often evidence to the contrary? Foucault has informed this dissertation in many ways and will continue to influence future work. In *The Archaeology of Knowledge*, Foucault sets forth that very thing—an archaeology, an excavation, highlighting the importance of studying the history of a discourse, the discontinuities within that discourse, the ruptures and breaks. This dissertation was primarily concerned with the discursive statements of practitioner lore. Future work will include a textual analysis of scholarly work on student writing to see how this discourse has been expressed in more formal practitioner work.

The results of the student survey indicated students feel confident in their writing and how writing is taught. Engineering students, contradicting practitioner lore, often expressed higher levels of confidence in and facility with writing. These responses, however, only tell the story of one university. Do the trends that emerged from data from data collected from students at Michigan Technological University exist at other universities with differently composed student bodies? Faculty indicate they incorporate communication instruction into their courses but demonstrate a lack of faith in student writing. Do faculty feel they are fully engaged in their communities of practice? Do they perceive themselves as contributing to a brutal discourse of control when they forward practitioner lore about students as bad writers? What other discourses about students do faculty perpetuate? To answer these questions, I will expand the scope of my project to students, across disciplines, from universities beyond Michigan Technological University to see if the confident outlook Michigan Tech students have on writing and how they feel faculty perceive their writing is espoused by students at other colleges and universities. I would also like to conduct a longitudinal study of a cohort of faculty and students within one institution, adding a qualitative component where I interview faculty about writing instruction, assessment and how they do or do not participate in the discourse that characterizes students as bad writers and where I interview students to get more detailed information about how they see themselves as writers, how they feel about their writing, and how they feel their writing is perceived by their faculty. To enhance my analysis, I also want to collect graded writing samples from study subjects to see if their confidence in their writing is reflected in how their writing is assessed by faculty.

Finally, as discussed in Chapter 1, a great deal of the literature about engineering communicate reveals that employers, across industries, are often discouraged by the quality of writing by recent graduates and entry level employees. Is employer participation in the workplace community of practice as impoverished as faculty participation? Can employers be fully, mutually engaged if and when they too contribute to a negative discourse about student writing? To determine the extent to which employers contribute to a discourse that negatively characterizes students as writers, I intend to develop a survey for employers to gauge their attitudes on the quality of writing among new employees. My primary intention is to expand upon this dissertation project and convert it into a book-length work that looks more comprehensively at how the discourse about students as writers functions ideologically and epistemically.

### **Toward Change**

If this study indicates anything, there is, by all accounts, a deep frustration among faculty about the quality of student writing, how well students meet our expectations, and the extent to which students fulfill their writing potential. Students, at least at one university, don't seem to perceive this frustration, but the potential is out there, the deeper faculty frustrations grow, the more intensely practitioner lore persists, for students to become more actively affected by the negative discourse to which faculty are contributing when they assess and discuss student writing in negative ways and continue to perpetuate an ideological discourse where there is little hope for student writing or what students will accomplish with their writing upon entering the workplace and new communities of practice.

How do we begin to change this discourse? How do we continue to value practitioner lore without allowing it to be overly influential in how we assess student writing? We need to find more effective, equitable, and ethical ways to provide students with constructive feedback—feedback accurately reflecting our assessment of student writing. We need to endeavor to eliminate from the social realm discursive statements negatively framing students as writers when those statements are not made in service of engaging productively with students. "What makes information knowledge—what makes it empowering is the way in which it can be integrated within an identity of participation" (Wenger 220). During those first two weeks of my pedagogy seminar, negative practitioner lore about students as writers was integrated into an identity of participation in ways that were epistemically privileged. The manner of that integration created an impoverished body of knowledge about student writing that was embedded with the

power to influence how newer instructors evaluate student writing. That approach enabled my peers and me to enter the discourse uncritically and unwittingly and diminished our participation in the academic community of practice. As we look to ways of preparing new instructors, we have to consider not only pedagogy but how we integrate information into identities of participation, how we create knowledge.

Finally, we need to initiate conversations about what we should realistically expect from students as writers when students benefit from limited explicit writing instruction over the course of their college careers and when there is ample evidence that students can only learn so much without the opportunity to learn to write in contextually situated ways provided by the workplace and other communities of practice. It may be that students, across disciplines and within engineering, aren't meeting our expectations because we are holding students to the wrong set of unrealistic expectations. Instead, perhaps we should design sets of expectations that allow us to prepare students to and evaluate how well students understand the communities of practice they will potentially become a part of upon graduation. Perhaps we should dispel the myth that students will graduate from college as fully evolved communicators readily able to meet the communication demands of any workplace environment so that the discourse about student writing becomes reframed in ways that allow students to have their writing assessed and evaluated beyond the constraints of an untenable subject position where they are always "bad" writers who cannot and will not meet our expectations. Wenger states that, "A learning community is therefore fundamentally involved in social reconfiguration: its own internally as well as its position within broader configurations" (220). As we try to move beyond the negative discourse about students as writers, our

challenge is to find a way to reconfigure how we engage with students within this community, and how we prepare them for the communities of practice they will transition into. We must find a way to renew our faith.

- "About the Enterprise Program." *Michigan Technological University*. Michigan Technological University, nd. Web. 16 April 2010.
- Anton, Corey and Valerie V. Peterson. "Who said what: Subject positions, rhetorical strategies and good faith." *Communication Studies* 54.4. (2003): 403-419. Web.

Aydelotte, Frank, ed. English and Engineering. New York: McGraw-Hill, 1917. Print.

- Babin, Edith and Kimberly Harrison. *Contemporary Composition Studies: A Guide to Theorists and Terms*. Westport, CT: Greenwood Press, 1999. Web.
- Beer, David and David McMurrey. A Guide to Writing as an Engineer. New York: John Wiley & Sons, 1997. Print.
- Berlin, James. "Rhetoric and Ideology in the Writing Class." *College English* 50.5. (1988): 477-494. Web.
- Brandt, Deborah. "Writing for a Living: Literacy and the Knowledge Economy." *Written Communication* 22. (2005): 166-197. Web.

- Brennan, M. "Job Market Healthy for New Chemistry Graduates." *Chemical and Engineering News* 75. (1997): 10. Web.
- Burke, J.D. "The emergence of career wellness programs. *Chemical and Engineering News* 76. (1991): 77-78. Web.
- Brooks, Cleanth. *The Fundamentals of Good Writing: A Handbook of Modern Rhetoric*. New York: Harcourt Brace, 1949. Web.
- Charlton, Michael. "That's Just a Story: Academic Genres and Teaching Anecdotes in Writing-Across-the-Curriculum Projects." *The WAC Journal* 18. (2007): 19-29. Web.
- Charney, Davida. "Empiricism is Not a Four-Letter Word" in "Johndan Johnson-Eilola and Stuart A. Selber, eds. *Central Works in Technical Communication*. New York: Oxford University Press, 2004. 281-299. Print.
- Charney, Davida et al. "I'm Just No Good at Writing: Epistemological Style and Attitudes Toward Writing." *Written Communication*. (1995): 298-329. Web.
- Connatser, Bradford. "Two Centuries of Progress in Technical Communication." *The Journal of Technical Writing and Communication.* 37.2 (2007): 129-149. Web.

- Cope, Bill and Mary Kalantzis. *Multiliteracies: Literacy Learning and the Design of Social Futures*. New York: Routledge, 2003. Print.
- Cresswell, John W. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Thousand Oaks, CA: Sage Publications, 2003. Print.
- "Current Research Questions". Stanford Study of Writing. April 17, 2010 <a href="http://ssw.stanford.edu/about/research\_questions.php">http://ssw.stanford.edu/about/research\_questions.php</a>>.
- Daly, John A. and Michael D. Miller. "The Empirical Development of an Instrument to Measure Writing Apprehension." *Research in the Teaching of English* 9.3. (1975): 242-249.
- Dannels, Deanna, et al. "Challenges in Learning Communication Skills in Chemical Engineering." *Communication Education* 52.1. (2003) 50-56. Web.
- Davies, John and Glynis Cousin. "Engineering Students' Writing Skills." *Proceedings of the International Conference of Engineering Education*. (2002): 1-6. Web.
- "Engineering Communication Centre Online Handbook". University of Toronto College of Applied Sciences and Engineering. 15 April 2010. <a href="http://www.ecf.utoronto.ca/~writing/handbook.html">http://www.ecf.utoronto.ca/~writing/handbook.html</a>.

- Felder, Richard and Rebecca Brent. "Designing and Teaching Courses to Satisfy the ABET Engineering Criteria." *Journal of Engineering Education* 92.1. (2003): 7-25.
- Flateby, Teresa and Ralph Fehr. "Assessing and Improving Writing in the Engineering Curriculum." The International Journal of Engineering Education, 2008, 24 (5): 901-905. Web.
- Foucault, Michel. *The Archaeology of Knowledge and the Discourse on Language*. New York: Pantheon, 1972.

*Power: Essential Works of Foucault, 1954-1984.* ed. Paul Rabinow. New York:W.W. Norton, 1997.

———. *Power/knowledge: Selected interviews and other writings, 1972–1977* ed. Colin Gordon. New York: Pantheon, 1980.

- Franklin, Benjamin. *Pennsylvania Gazette*, August 2, 1733 as quoted in Andrews,Deborah C. and Blickle, Margaret D. *Technical Writing: Principles and Forms*.New York: Macmillan Publishing Co., 1982.
- Frost, Harwood. *Good Engineering Literature*. Chicago: Chicago Book Company, 1911. Print.

- Froyd, Jeffrey E. and Matthew W. Ohland. "Integrated Engineering Curricula." *Journal* of Engineering Education. (2005): 147-164. Web.
- Fulwiler, Toby. "How Well Does Writing across the Curriculum Work?" *College English*46. 2. (1984): 113-125. Web.
- Gee, James Paul. Social Linguistics and Literacies: Ideologies in Discourses. New York: RoutledgeFamler, 2006. Print.
- Goldberg, Natalie. *Writing Down the Bones: Freeing the Writer Within*. Boston: Shambhala Publications, 2010. Web.
- Gonyea, Robert M. "Self-Reported Data in Institutional Research: Review and Recommendations." *New Directions for Institutional Research* 127. (2005): 73-89. Web.
- Goodman, N.W., Martin B. Edwards, & Andy Black. *Medical Writing: A Prescription for Clarity*. 3<sup>rd</sup> ed. Cambridge, UK: Cambridge University Press, 2006. Web.
- Gurak, Laura J. and Mary M. Lay, eds. *Research in Technical Communication*. Westport, CT: Greenwood Publishing Group, 2002.

- Hall, Stuart. "The West and the Rest: Discourse and Power" in Stuart Hall and BramGieben, eds. *Formations of Modernity*. Cambridge, UK: University/Polity Press, 1992. 275-331. Print.
- Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14.3. (1988): 575-599. Web.
- Harbarger, S.A., Anne B, Whitmer and Robert Price. *English for Engineers*. New York: McGraw-Hill, 1943. Print.
- Harrington, John Lyle. "The Value of English to the Technical Man." *English and Engineering*. Ed. Frank Aydelotte. New York: McGraw-Hill, 1917. 45-61. Print.
- Helmers, Marguerite H. "Constructing Students in the Rhetoric of Practice." *ADE Bulletin* 105 (1993): 33-36. Web.
- Writing Students: Composition Testimonials and Representations of Students.
   Albany, NY: State University Press of New York, 1994. Print.
- Hendricks, Robert W. and Eric C. Pappas. "Advanced Engineering Communication: An Integrated Writing and Communication Program for Materials Engineers."*Journal of Engineering Education* (1996): 343-352. Web.

- Hesse-Biber, Sharlene Nagy and Patricia Lina Leavy. *Feminist Research Practice*. Thousand Oaks, CA: Sage Publications, 2007. Print.
- Howell, A.C. *Handbook of English in Engineering Usage*. New York: John Wiley & Sons, 1930. Print.

"ideology, *n*." *The Oxford American College Dictionary* . 2002. *VOCEL*. Oxford University Press. 4 March 2010. iPhone application.

- Jayaratne, Toby Epstein. "The Value of Quantitative Methodology for Feminist Research."
- Johnson, Robert R. User-centered Technology: A Rhetorical Theory for Computers and Other Mundane Artifacts. Albany, NY: State University of New York Press, 1998. Print.
- Katz, Susan M. "The Entry-Level Engineer: Problems in Transition from Student to Professional." *Journal of Engineering Education*. (1993): 171-174. Web.
- Kelly, Liz, Linda Regan, and Sheila Burton. "Defending the Indefensible? Quantitative Methods and Feminist Research." *Working Out: New Directions for Women's Studies*. eds. Hilary Hinds, Ann Phoenix and Jackie Stacey. London: The Falmer Press, 1992. Web.

- Kiesler, Sara and Lee S. Sproull. "Response Effects in the Electronic Survey." *The Public Opinion Quarterly* 50.3. (1986): 402-413.
- Kynell, Teresa C. and Michael G. Moran. *Three Keys to the Past: The History of Technical Communication*. Stamford, CT: Ablex Publishing Corp., 1999. Print.
- Lawson, Victoria. "The Politics of Difference: Examining the Quantitative/Qualitative Dualism in Post-Structuralist Feminist Research." *Professional Geographer* 47.4. (1995): 449-457. Web.
- Letherby, Gayle. *Feminist Research in Theory and Practice*. Buckingham, UK: Open University Press, 2003. Web.
- MacKinnon, Jamie. "Becoming a Rhetor: Developing Writing Ability in a Mature, Writing-Intensive Organization." in Spilka, Rachel ed. Writing in the Workplace: New Research Perspectives. Carbondale, IL: Southern Illinois University Press, 1993. Print.
- McHoul, Alec and Wendy Grace. A Foucault Primer: Discourse, Power and the Subject. New York: New York University Press, 1993. Print.

- McKenna, Bernard. "How Engineers Write: An Empirical Study of Engineering Report Writing." *Applied Linguistics* 18.2. (1997): 189-211.
- Michigan Technological University. "Media Kit Fast Facts. " *Michigan Technological University*. Michigan Technological University, 2010. http://www.mtu.edu/umc/services/pr-news/media-kit/fast-facts/. Web.
- Miller, Carolyn. "A Humanistic Rationale for Technical Writing." *College English* 40.6. (1979): 610-617. Web.
- ———. "Genre as Social Action." *Quarterly Journal of Speech* 70. (1984): 151-167.Web.
- Miller, Kara. "Failure to communicate: The inability of many students to write clear, cogent sentences has costly implications for the digital age." *The Boston Globe*. 19 May 2010. Web.
- Miller, Susan. *Textual Carnivals: The Politics of Composition*. Carbondale, IL: Southern Illinois University Press, 1991. Print.
- Miner-Rubino, Kathi and Toby Epstein Jayaratne. "Feminist Survey Research" in Sharlene Nagy Hesse-Biber and Patricia Lina Leavy, eds. *Feminist Research Practice*. Thousand Oaks, CA: Sage Publications, 2007. Print.

- New London Group. "A Pedagogy of Multiliteracies: Designing Social Futures" in Cope, Bill and Mary Kalantzis, eds. *Multiliteracies: Literacy Learning and the Design* of Social Futures. New York: Routledge, 2003. 9-37. Print.
- North, Stephen M. *The Making of Knowledge in Composition: Portrait of an Emerging Field.* Portsmouth, NH: Heinemann, 1987. Print.
- Patton, Martha D. "Beyond WI: Building an Integrated Communication Curriculum in One Department of Civil Engineering." *IEEE Transactions on Professional Communication* 51.3. 2008: 313-327. Web.
- Penrod, Diane. Composition in Convergence: The Impact of New Media on Writing Assessment. Mahwah, NJ: Lawrence Erlbaum, 2005. Web.

Petroski, Henry. "Engineers as Writers." American Scientist 81. 5. (1993): 419-423. Web.

- Rankin, Elizabeth. "Taking Practitioner Inquiry Seriously: An Argument With Stephen North." *Rhetoric Review* 8.2. (1990): 260-267. Web.
- Rhoads Teri Reed, Sarah J. Duerden and Jeanne Garland. "Views About Writing Survey—A New Writing Attitudinal Survey Applied to Engineering Students." 1998 FIE Conference Proceedings. 973-979.

Rider, Maurice. "Engineers Are Writers Too." College English. 15.5. (1954): 291-292.

- Sageev, P. & C.J. Romanowski. "A message from recent engineering graduates in the workplace: Results of a survey on technical communication skills." *Journal of Engineering Education* 90.4 (2001): 685–692. Web.
- Sales, H.E. *Professional Communication in Engineering*. New York: Palgrave Macmillan, 2006. Print.
- Saliba, Joseph E. and Trudy Krisher. "Developing Competent Civil Engineering Writers." *Journal of Professional Issues in Engineering Education and Practice* 119.1. (1993): 70-74. Web.
- Sawyer, Herbert A. "Humanities for Engineering Students." *The Journal of Higher Education* 22.9. (1951): 470-475. Web.

Schick, Kurt. "Through Glasses Half Full." The Writing Lab Newsletter 33.3. (2008): 1-4.

Schubert, William H. "Our Journeys into Teaching: Remembering the Past." *Teacher Lore: Learning from Our Own Experience*. Ed. William H. Schubert and William
 C. Ayers. New York: Longman, 1992. 3–10.

- Scott, William. *Communication for Professional Engineers*. London: Thomas Telford Ltd, 1984. Print.
- Shannon, Patrick. *Text, Lies, and Videotape: Stories about Life, Literacy, and Learning.* Portsmouth, NH: Heinemann, 1995. Print.
- Smith, Summer. "The Role of Technical Expertise in Engineering and Writing Teachers' Evaluations of Student Writing." *Written Communication* 20. (2003): 37-80.Web.
- . "What is 'Good' Technical Communication? A Comparison of Standards of Writing and Engineering Students. "*Technical Communication Quarterly* 12. (2003): 7-23. Web.
- Stevenson, Susan and Steve Whitmore. *Strategies for Engineering Communication*. New York: John Wiley & Sons, 2002. Print.
- Street, Brian. Social Literacies: Critical Approaches to Literacy Development, Ethnography and Education. New York: Longman, 1995.
- Strunk, William & E.B. White. *The Elements of Style*. 4<sup>th</sup> ed. New York: Penguin Group, 2008.

- Sypherd, Wilbur Owen. *Handbook of English for Engineers*. New York: Scott, Foresman and Company, 1913. Print.
- Tenopir, Carol & Donald W. King. Communication Patterns of Engineers. Hoboken, NJ: Wiley, 2004. Print.
- Therborn, Goran. *The Ideology of Power and the Power of Ideology*. London: Verson, 1980. Web.
- Wenger, Etienne. *Communities of Practice*. New York: Cambridge University Press, 1998.
- Wickenden, William E. "The Engineer's Valuation of English. *The English Journal*. 16.6. (1927): 446-453.
- Winsor, Dorothy A. "Engineering Writing/Writing Engineering." College Composition and Communication 41.1. (1990): 58-70.
  - ——. Writing Power: Communication in an Engineering Center. Albany, NY: State University of New York, 2003. Print.

- Yeo, Roland. "An Integrative Approach to the Teaching of Technical Communication Skills." *Innovations in Education and Teaching International*\_38.1. (2000): 93-100.
- Youra, Steven. "Rewriting the Engineering Curriculum: Professionalism and Professional Communication." *Journal of Technical Writing and Communication* 17.4. (1987): 407-416. Web.

# APPENDIX

### **Student Writing Behaviors**

### **1. About This Project**

### Description of the research and your participation

You are invited to participate in a research study conducted by Dr. Ann Brady and Roxane Gay. The purpose of this research is to gain greater insight into how engineering students perceive themselves as communicators and how parties with a vested interest in how engineers communicate discuss engineers' communication skills.

Your participation will involve completing a survey, and/or participating in an interview. The amount of time required for your participation will be approximately 15-20 minutes for the survey. <

### **Risks and discomforts**

There are no known risks associated with this research.

### Potential benefits

There are no known benefits to you that would result from your participation in this research. The information you provide will help us to gain greater insight into how students perceive themselves as communicators and how they feel about writing and more broadly, communication and the role it will fill in their professional lives.

### Protection of confidentiality

This web-based survey is anonymous. You will only be asked for your name and contact information if you are willing to be contacted for an in-person interview. We will not collect IP addresses. Please be aware, however, that absolute anonymity cannot be guaranteed over the Internet. All responses will be coded with a marker indicating the student's major and a randomly assigned number. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. Should the data be published, no individual information will be disclosed.

In rare cases, a research study will be evaluated by an oversight agency, such as the Michigan Technological University Institutional Review Board or the federal Office for Human Research Protections that would require that we share the information we collect from you. If this happens, the information would only be used to determine if we conducted this study properly and adequately protected your rights as a participant.

### Voluntary participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

### **Contact information**

If you have any questions or concerns about this study or if any problems arise, please contact Roxane Gay at Michigan Technological University at rgay@mtu.edu. The Michigan Tech Institutional Review Board has reviewed my request to conduct this project. If you have any concerns about your rights in this study, please contact Joanne Polzien of the Michigan Tech-IRB at 906-487-2902 or email jpolzien@mtu.edu.

### Consent

I have read this consent form and have been given the opportunity to ask questions. By completing this survey I give my consent to participate in this study.

# 2. How You Communicate

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# 3. Attitudes Toward Communication

# \* 1. Please indicate how strongly you agree or disagree with each of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Writing takes me a long time.	$\bigcirc$	0	0	0	0
I am confident in my ability as a public speaker.	0	0	0	0	0
I dislike reading.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
I enjoy writing.	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
I am confident about my writing.	0	0	0	$\bigcirc$	0
Communication skills are valued in my discipline.	0	0	0	0	0
I am confident in my ability to design documents.	0	0	0	0	0
I am well prepared for the writing I will have to do when I enter the workplace.	0	0	0	0	0
I avoid writing whenever possible.	0	$\bigcirc$	0	$\bigcirc$	0
I dislike writing.	0	0	0	0	0
I enjoy reading.	0	0	0	$\bigcirc$	0
I understand the kinds of writing and other communication I will have to do when I enter the workplace.	0	0	0	0	0
Writing comes easily to me.	0	0	0	0	0
	0	0	0	0	Ŭ

# 4. Attitudes Toward Communication In Practice

# \* 1. Please indicate how strongly you agree or disagree with each of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My writing contains few or	0	0	0	0	0
no grammatical errors. I think of my writing as	0	0	0	0	0
persuasive.	0	0	0	0	0
It is easy for me to generate ideas when I write.	$\bigcirc$	0	$\bigcirc$	0	0
I don't think I write as well as most people.	0	0	0	0	0
I write better than most people.	0	0	0	0	0
l enjoy public speaking.	0	0	0	0	0
I think about audience when I write.	Õ	Õ	Õ	Õ	Õ
I think about context when I write.	0	0	0	0	0
I think about purpose when I write.	$\bigcirc$	0	0	0	0
I use rhetorical principles to make my writing more effective.	0	0	0	0	0
My writing is well- organized.	0	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
I use a writing process that involves brainstorming, outlining, and creating multiple drafts.	0	0	0	0	0
I visit the MTU Writing Center when I need help with a specific writing project or task.	0	0	0	0	0
I visit the MTU Writing Center regularly.	0	0	0	0	0
I visit online writing centers such as Purdue's Online Writing Center for tips and other information on writing.	0	0	0	0	0

# 5. Attitudes Toward Communication Instruction

# \* 1. Please indicate how strongly you agree or disagree with each of the following statements.

Statemento.					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I receive positive feedback on my writing from my teachers.	0	0	0	0	0
I have been taught document design.	0	0	0	0	0
I receive negative feedback on my writing from my teachers.	$\bigcirc$	0	0	0	0
I have been taught oral communication or public speaking skills.	0	0	0	0	0
Instructors teaching courses in my major also teach writing and other communication skills.	0	0	0	0	0
I have been taught about communicating for multiple audiences.	0	0	0	0	0
I get positive feedback on my document design.	0	$\bigcirc$	0	$\bigcirc$	$\bigcirc$
I have been taught about the use of context and purpose in communication.	0	0	0	0	0
I get positive feedback about my oral communication or public speaking skills.	0	0	0	0	0
When I write, my audience is my teacher.	0	0	0	$\bigcirc$	0
My teachers think I am a good writer.	0	0	0	0	0

Student Writing Behaviors
6. Demographic Information
★ 1. What is your year in school?
Freshman
Sophomore
Junior
Senior
Graduate Student

# \* 2. What is your major?

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(	Accounting (BS)
(	Anthropology (BS)
(	Audio Production & Technology (BS)
(	Biochemistry & Molecular Biology – Biology Focus (BS)
(	Biochemistry & Molecular Biology - Chemistry Focus (BS)
(	Bioinformatics (BS)
(	Biological Sciences (BS)
(	Biomedical Engineering (BS)
(	Chemical Engineering (BS)
(	Cheminformatics (BS)
(	Chemistry (BS)
(	Chemistry, Pharmaceutical (BS)
(	Civil Engineering (BS)
(	Clinical Laboratory Science (BS)
(	Communication & Culture Studies (BA)
(	Computer Engineering (BS)
(	Computer Network & System Administration (BS)
(	Computer Science (BS)
(	Computer Systems Science (BS)
(	Construction Management (BS)
(	Ecology & Environmental Sciences, Applied (BS)
(	Economics (BS)
(	Electrical Engineering (BS)
(	Electrical Engineering Technology (BS)
(	Engineering (BS)
(	Engineering, General
(	Environmental Engineering (BS)
(	Exercise Science (BS)
(	

Student Writing Behaviors
Finance (BS)
Forestry (BS)
Geological Engineering (BS)
Geology (BS)
Geophysics, Applied (BS)
Health & Physical Education (BS)
History (BA)
Humanities (ASC)
Industrial Technology (BS)
Liberal Arts (BA)
Management (BS)
Management Information Systems (BS)
Marketing (BS)
Materials Science & Engineering (BS)
Mathematics (BS)
Mechanical Engineering (BS)
Mechanical Engineering Technology (BS)
Operations & Systems Management (BS)
Pharmaceutical Chemistry (BS)
Physics (BS)
Physics, Applied (BS)
Psychology (BS)
Scientific & Technical Communication (BA) (BS)
Social Sciences (BS)
Software Engineering (BS)
Sound Design (BA)
Surveying Engineering (BS)
Theatre & Electronic Media Performance (BA)
Theatre & Entertainment Technology (BA) (BS)
Wildlife Ecology & Management (BS)

Other (please specify)	_	

### 1. About This Project

### Description of the research and your participation

My dissertation research examines if and how student writing is affected by the ways in which university faculty, adjuncts and graduate instructors, across disciplines, teach, assess and discuss student writing.

To that end, I am conducting a survey of faculty, adjuncts and graduate instructors, to assess our attitudes and behaviors toward student writing.

### **Risks and discomforts**

There are no known risks associated with this research.

### Potential benefits

The information you provide will help us to gain greater insight into how students' communication skills and how students perceive themselves as communicators are influenced by the ways in which faculty members teach, assess, and discuss student communication skills so that ultimately we might find more effective ways of teaching communication across and within disciplines.

### Protection of confidentiality

This web-based survey is anonymous.

We will not collect IP addresses. Please be aware, however, that absolute anonymity cannot be guaranteed over the Internet. All responses will be coded with a randomly assigned number. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. Should the data be published, no individual information will be disclosed.

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### **Contact information**

If you have any questions or concerns about this study or if any problems arise, please contact Roxane Gay at Michigan Technological University at <u>rgay@mtu.edu</u> or 906.370.2169. The Michigan Tech Institutional Review Board has reviewed my request to conduct this project. If you have any questions or concerns about your rights as a research participant, please contact the Michigan Technological University Institutional Review Board at <u>jpolzien@mtu.edu</u> or 906.487.2902.

# 2. Writing Instruction

\* In thinking about your pedagogical practices, please indicate how strongly you agree or disagree with each of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
It is my responsibility to incorporate writing instruction into my curriculum.	0	0	0	0	0
It is not my responsibility to incorporate writing instruction into my curriculum.	0	0	0	0	0
I teach students what it means and how to write within my discipline.	0	0	0	$\bigcirc$	0
I encourage students to use rhetorical principles in their writing.	0	0	0	0	0
I emphasize the importance of the mechanics of writing (grammar, punctuation, etc.) in my curriculum.	0	0	0	0	0
I incorporate writing instruction into my curriculum.	0	0	0	0	0
I encourage my students to think about an audience other than myself, as their teacher.	0	0	0	0	0

# 3. Assessing Student Writing

\* In thinking about how you assess student writing within your discipline, please indicate how strongly you agree or disagree with each of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I generally give my students feedback about their writing.	$\bigcirc$	$\bigcirc$	0	0	0
When providing feedback on student writing, I focus on the use of context, purpose and audience.	0	0	0	0	0
I generally give my students negative feedback about their writing.	$\bigcirc$	$\bigcirc$	0	$\bigcirc$	0
When providing feedback on student writing, I focus on organization and flow.	0	0	0	0	0
I don't believe it is my responsibility to assess student writing.	0	$\bigcirc$	0	$\bigcirc$	0
It is my responsibility to assess student writing.	0	$\bigcirc$	0	$\bigcirc$	0
When providing feedback on student writing, I focus on mechanics such as grammar, spelling, and punctuation.	0	0	0	0	0
I generally give my students positive, constructive feedback about their writing.	0	$\bigcirc$	0	$\circ$	0
When providing feedback on student writing, I focus on how well students meet the expectations for what it means to write effectively in my discipline.	0	0	0	0	0

# 4. Attitudes Toward Student Writing

\* In thinking about your outlook on student writing, please indicate how strongly you agree or disagree with each of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I believe that students are able to transfer their writing skills from one class to the other.	0	0	0	0	0
I feel that student writing doesn't meet my standards.	0	$\bigcirc$	0	$\bigcirc$	0
I believe that students are inherently capable of good writing.	$\bigcirc$	$\bigcirc$	0	$\bigcirc$	0
I feel that students ignore constructive feedback about their writing.	0	$\bigcirc$	0	0	0
I believe students write well.	0	0	0	0	0
I believe that students at my institution are well-prepared for the writing demands of the workplace.	Õ	Õ	Õ	Ō	Õ
I feel that students benefit from constructive feedback about their writing.	$\bigcirc$	$\bigcirc$	0	$\bigcirc$	0
My students can write well but choose not to.	0	$\bigcirc$	0	$\bigcirc$	0
I believe that students fulfill their writing potential.	0	$\bigcirc$	0	$\bigcirc$	0
I believe that students are literate.	0	0	0	$\bigcirc$	0

## 5. Anecdotal Approaches to Student Writing

\* In thinking about how you discuss student writing either professionally or personally, please indicate how strongly you agree or disagree with each of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
My colleagues and I discuss student writing in professional settings such as faculty meetings or other official gatherings on campus.	0	0	0	0	0
My colleagues and I discuss student writing in social settings.	0	$\bigcirc$	0	0	0
It makes me uncomfortable when I hear colleagues say negative things about student writing.	0	0	0	0	0
When my colleagues and I discuss student writing our assessments are generally positive.	0	0	0	0	0
When my colleagues and I discuss student writing our assessments are generally negative.	0	0	0	0	0
When discussing student writing, I generally say negative things.	0	$\bigcirc$	0	0	0
When discussing student writing, I generally say positive things.	$\bigcirc$	$\bigcirc$	$\bigcirc$	$\bigcirc$	0
I enjoy the stories my colleagues share about "bad" student writing.	0	$\bigcirc$	$\bigcirc$	0	0

Instructor Attitudes About and Behaviors Toward Student Writing					
6. Demographic Information					
* How long have you been teaching?					
0-5 Years					
5-10 Years					
0 10-15 Years					
0 15-20 Years					
O 20+ Years					
What is your gender?					
Male					
Female					
◯ Transgender					
Other (please specify)					
* Which of the following best characterizes your institution?					
Two-Year Community or Junior College					
Four Year College					
Public University     Private University					
Professional School					

What is your professional rank?         Graduate instructor         Adjunct         Berrior Lacturer         Associate Professor         Other         Other	nstructor Attitude		Behaviors 7	oward Stud	ent Writing	
Adjunct Lecturer Senior Lecturer Assistant Profesosr Associate Professor Full Professor Other Other	* What is your pro	essional rank?				
Lecturer Senior Lecturer Assistant Profesosr Associate Professor Full Professor Other Other	Graduate Instructor					
Senior Lecturer Assistant Profesosr Associate Professor Full Professor Other Other	Adjunct					
Assistant Profesosr     Associate Professor     Associate Professor     Full Professor     Other Other	C Lecturer					
Associate Professor Full Professor Other Other	Senior Lecturer					
C Full Professor O Other Other (please specify)	Assistant Profesosr					
Other Other (please specify)	Associate Professor					
Other (please specify)	Full Professor					
	O Other					
* What is your discipline?	Other (please specify)					
* What is your discipline?						