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A Conscience of Diversity

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One of the most compelling rationalizations we have heard regarding the lack of diversity in professional and technical communication has to do with recruitment of students into scientific and technical fields. It has been said, within our earshot at meetings and conferences, that those candidates with interest and aptitude for technical communication are recruited into science and engineering, where they are handsomely rewarded. Why attract the best and brightest when what we offer is less lucrative, arguably less prestigious, certainly less powerful. This argument, as compelling as it appears on its face, misses the point that teachers at a variety of institutions are already providing instruction in writing that we would understand as technical and scientific communication, and whose programs might find support and camaraderie amongst the members of an organization like the CPTSC. It elides the underlying and very easily empirically provable point that this is a homogenous population, no matter our hopes and aspirations for student, classroom, and institutional diversity. Simply put, we're an awfully white group.

And diversity runs much deeper than what's been mocked as Benetton or visual diversity in our shades of skin color: we have yet to scratch the surface of social class, as James Ray Watkins' *A Taste for Language* (2009) demonstrates. Diversity of outlook is as important as visual diversity, as is the location in a variety of institutions offering recognized courses, concentrations, certificates, majors, and graduate emphases in technical, scientific, and professional writing and communication. Diversity does not only look different. Rather, diversity allows for varieties of experience and ways of thinking, seeing, and representing the world in different ways. Competing globally, one challenge among many remains finding ways of including everyone's contributions even when they are not immediately

recognizable. We cannot waste the labor of any hand in the competitive global arena: future success depends upon our ability to include those once excluded.

Diversity of thought and experience is a wellspring for innovation. Whether these program administrators are themselves members of underrepresented populations or faculty from dominant culture teaching classes with significant numbers of underrepresented students, they ought to be encouraged to become part of our conversations (the ultimate decision of whether to join must, clearly, be left to each individual). Another way to say this is contained in the essay so effectively researched and presented by Savage and Mattson in this volume, "Neo-liberal diversity discourse, for the most part, is a status quo buttressing" (Vorris Nunley, as quoted in Mattson & Savage). That is, one can sometimes convince oneself that change is inevitably slow and that one is doing all that can be done, given the circumstances. However, what members of the organization realized was that there was little data or analysis available and it was not clear what the buttresses were resting on, let alone whether they could hold up the roof.

It is now 2011. It was 2003 when Cythia Selfe challenged this organization to rethink its relationship to diversity issues, and 2004 when Samantha Blackman joined the CPTSC conference at Purdue and offered a powerful keynote on minority, women, and African American representations in virtual space, 2006 when Adam Banks' *Race, Rhetoric and Technology* was published, and 2009 when Damian Baca's powerful work on anti-Colonialism was published (not merely post-Colonial, but actively anti-Colonial). In 2010, the CPTSC approved and now in early 2011 is distributing its Diversity Scholarship application, fully and generously funded by the CPTSC membership. Change simultaneously comes too slow and too swift. How can it be 8 years since that call to attention? We've achieved much in these eight years. Is it enough? There are calls, as we write this editorial, for special journal issues on diversity at three other professional, technical and scientific journals. Thankfully, there is diversity even among these definitions of diversity: national and international, workplace and academic, theoretical and practical. Not only do we look forward to reading each special issue, we hope the essays contained here in *Programmatic Perspectives* are cited as the groundbreaking and foundational studies they are. Our hope is that future research finds these essays not only important information upon which to build further knowledge, but compelling reading. Equally, we look forward to the data becoming anachronistic, included among shocking facts cited about the early twenty-first century by future historians.

And so it is with great enthusiasm and humble belief that 2011 will be seen as a turning point: release of this issue of *Programmatic Perspectives* offers two insightful pieces of scholarship that we are excited to be able to describe

to you, both co-authored by Gerald Savage. Professor Savage has been at the forefront of efforts to realize the Diversity Scholarship that will support travel to the organization's annual conference for scholars and administrators who might otherwise not be able to attend. Co-author Natalia Matveeva leads the efforts to gather as many applications for that scholarship as possible. Their essay "Toward Racial and Ethnic Diversity in Technical Communication Programs" surveys and reports on programs at Tribal (TCU) and Historically Black Colleges and Universities (HBCUs), at once broadening and deepening our sense of ourselves as a field of study and as a discipline that has, yes, widespread utility, but that also introduces the study of rhetoric, writing, and culturally grounded study of human knowledge creation.

Technical and scientific writing is a rich site to begin studying comparative epistemologies. For instance, Savage and Matveeva cite an Institute of American Indian Arts course description titled *Indigenous Perspectives on Knowledge* in which: "Students examine the value of indigenous knowledge, particularly its potential contribution to sustainable development, to the alleviation of poverty, and to cultural survival and renewal" (cited in this volume). Here, we have evidence, rigorously and substantially collected, coded, and presented, upon which we can build further knowledge as well as build bridges to institutions, administrators, and students we have neglected, to open our definitions to include those who we have overlooked. Expanding epistemology: by diversifying what is valued and recognized as knowledge, the network of knowing further expands, allowing more ways of thinking to be validated. Not colonially but dialogically.

Here, Robert Johnson's *User Centered Technology* (1998) comes to mind. Its expression of the user-centered is flawed and, no offence to Bob, starting to show its 13 years. But at the time, it was powerful, groundbreaking, and important. It still is important. Until the reader thought about technology in this new way, as students often do when first encountering the text, in this user-centered way, the older once-naturalized system-centered technology design that had been made into a secondary nature, requires further thinking. System-centered and user-centered; the fish suddenly becomes aware of the water in which it swims. And in so doing knowledge increases exponentially rather than arithmetically, as different ways of knowing multiply the known, as well as the realm of the knowable, as well as defining limits: helping explorers to articulate the known unknowns, the unknown unknowns, and the baffling unknowables.

What better way to build knowledge not about what we think we know, the gaps we feel are all too present, or the ways in which we do not yet achieve our lofty goals set for ourselves. Nor are we satisfied with the status quo, no matter how we buttress it. Rather, Kyle Mattson joins Gerald Savage in "Perceptions of

Racial and Ethnic Diversity in Technical Communication Programs” to compare the data of curricula with our perceptions of the discipline at these institutions. The essay begins with this sentence, which too closely and accurately reflects attitudes we have heard expressed: “Many of the challenges for improving diversity in technical communication programs seem intractable.” They *seem* intractable. They are not. And Jerry and Kyle effectively deconstruct our perceptions so that we might better get some traction in the direction of effective change. So it is with great humility and expectation that we offer this, the first issue of the third volume of *Programmatic Perspectives*. It is with great hope for change that we thank Cynthia Selfe for getting the issue on the map eight years ago, Samantha Blackmon for accepting the invitation to speak at CPTSC in 2004, and Kyle Mattson, Natalya Matveeva, and Gerald Savage for their research and writing, to the six anonymous reviewers who reviewed and provided such insightful commentary and revision notes, and to the CPTSC for seeing issues of diversity through to this point.

And so ends the celebration: we have only just begun. In some ways, we are late to the game; it is already in progress. Our hope is that 2011 is a point in time from which we mark the emergence of answers and a deeper, sustained relationships with diversity, that the research published here is broadly cited and valued, and that we continue to see change year to year and conference to conference in a variety of important ways. Our hope is that this editorial is anachronistic and future graduate students mock the celebratory tone and dire warnings as they imagine just what it meant in 2011 to call for attention to diversity. Today we read that upon receiving the Presidential Medal of Freedom from President Barak Obama, Congressman and founder of SNICC John Lewis said “It’s hard to believe that in a short time, that we have come so far as a nation and as a people. When you look back, the year that Barack Obama was born 50 years ago, black people and white people in the American South couldn’t sit together on a bus or on a train or in a waiting room. And we changed that.”

Perceptions of Racial and Ethnic Diversity in Technical Communication Programs

Gerald Savage

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Abstract. Based on a survey of technical communication program directors in the US and Canada, this study asks in what ways diversity is perceived in such programs. Addressing four areas of diversity concerns in technical communication programs, the survey respondents provided insights about the need for and obstacles to enhancing student diversity, faculty diversity, curricular diversity, and institutional advocacy for diversity policies and actions in their programs as well as their sense of the status of diversity in other programs. The study also recommends specific areas for action to support diversity in technical communication programs.

Keywords. culture, curriculum, diversity planning, ethnicity, globalization, race, social justice

The increasing importance of intercultural technical communication challenges us to find ways to increase diversity in our technical communication programs. Commitment to diversity is now vital to sustained relevance for our field. Our field is deeply involved in the complex processes of globalization, processes that not only entail opportunities and benefits for businesses, professions, and human lives but that also often sweep through cultural, social, environmental, and economic domains in destructive ways. Insofar as technical communication as a practice and as an academic discipline participates in and seeks to benefit from globalization, it also shares responsibility for globalization's effects, whether good or ill.

The broader obligation, within which globalization is implicated, is to social justice for marginalized groups of people who may lose more than they gain from globalization's effects. We believe our field and a number of technical communication programs are beginning to address this obligation. The present study asks a question we hope will interest many: In what ways are

technical communication programs addressing issues of diversity—respecting and advocating for underrepresented groups of people? In asking this question, we have made the assumption that a first-level concern for those of us involved in program design and administration should be the equitable representation of diverse populations in student enrollments, in faculty, and in curricula.

Many challenges for improving diversity in technical communication programs seem intractable. Although obstacles to diversity might be overcome with imaginative and determined efforts, it has been the tendency for many of us—the authors of this study included—to keep our distance from obstacles we feel incapable of surmounting. We may have regarded the challenges of working for program diversity to have no direct connection to our agendas for research, teaching, or service. We may ask, if solutions always seem beyond reach, why take action now? But what if we consider that by regarding obstacles to diversity as peripheral to our work, we in fact tolerate and sustain those obstacles? By not engaging with diversity's challenges, are we disregarding the needs, interests, and access to technology of people of color, of people with disabilities, of people of different cultural, linguistic, or socioeconomic backgrounds, of a particular gender or sexuality, of an age group? It is our concern that inaction on diversity issues at the course and program levels results in at least passive complicity with larger structural forces that constrain students and faculty alike.

This study offers a baseline of information about diversity in technical communication programs. Based on results from a survey of technical communication program directors and chairs in the United States and Canada, the study focuses primarily on issues of race and ethnicity. We believe these findings will give other researchers a starting point for new studies concerning not only race and ethnicity but also other aspects of diversity in technical communication.

In 2003, Cynthia Selfe challenged the annual business meeting of the Council for Programs in Technical and Scientific Communication (CPTSC) to take up the issue of the lack of diversity in technical communication. In that meeting, a number of members committed themselves to forming an ad hoc Diversity Committee, chaired by Selfe. Meeting online later that fall, the committee developed a set of goals, which Selfe presented in a written report to the business meeting the following year (Selfe, 2004). In anticipation of that report, the conference theme for 2004 was "Pathways to Diversity," and the program included a number of presentations about issues of race, ethnicity, gender, disabilities, and international perspectives. In addition, a concluding "Forum on Building Diversity" proposed four goals for ongoing work by CPTSC:

1. Create a more formal network to identify and recruit individuals from underrepresented groups into the field.
2. Develop a faculty/alumni mentoring system.
3. Improve funding and scholarship opportunities for individuals from underrepresented groups.
4. Add information on the CPTSC website that explains how to become a graduate student in this area and makes means of entering into the field more visible.

Action: Continue to implement recommendations from the Committee on Diversity as outlined in the report, and consider additional recommendations from this year's Forum on Diversity.

(Forum on Building Diversity, 2004, p. 106)

Relatively little discussion of programmatic aspects of diversity occurred in the next several years. This lack was not because of indifference but due rather to a lack of continued formal leadership for diversity action. After the ad hoc Diversity Committee completed its report, the group disbanded and no committee chair or permanent committee was appointed. After several years, to more effectively implement the goals expressed in Selfe's Diversity Report, the Executive Committee formed a standing Diversity Committee to which Jerry Savage was appointed chair. In his report that year, Savage asked the Diversity Committee to advocate for more active work toward the goals of the original Diversity report. The present study responds to the first in a list of recommended projects in the 2004 report: "To gather current demographics on race from the technical communication profession in the workplace and in the academy" (Selfe, 2004). This project, in addition to being first in a list of eleven, was also one of five projects flagged as "those we think should be undertaken immediately" (p. 2). For the Ad Hoc Diversity Committee, issues of race and color appeared to constitute a priority; these terms were used in seven of the eleven proposed projects, more than any other term associated with diversity, including "class," "underrepresented groups," and "first-generation college."

What Do We Mean by Diversity?

From a number of formal and informal conversations about diversity issues in technical communication at CPTSC and ATTW conferences and among our own department colleagues, we gained a sense that many of us are uncertain where the most critical diversity issues exist for the field as a whole, or even whether we have a common understanding of the term "diversity." Therefore, the current project began by asking, "What do we mean by diversity?" Despite the general perception in our field that diversity is a critical concern, the word is resisted or reluctantly used by many people considered to be members of social categories to which the term is usually applied. It is also resisted or reluctantly used by

people whose work engages the social problems included in the term. The concept and the word itself have been the topic of a CCCC Committee on Diversity blogging series begun in May 2008 and ongoing as of 2010.¹ Professor Frankie Condon, in her invited blog entry of August 7, 2008, expresses the ambivalence of many who have participated in the blog:

Okay, so I don't hate the word [diversity]. I need it sometimes, I admit. But it's not a word that drives my teaching, writing or service. That work—or what drives the work—gathers at the threshold of the term, “diversity:” the history, the materiality, of lived conditions within, through, and under racism, homophobia, sexism, classism, ableism, ageism, xenophobia, anti-Semitism—these drive the work. Irritatingly, perhaps, I want to change the terms of the question. I want to respond to the question, “How do you address the work of anti-oppression in your scholarship, teaching, and service?” (Condon, 2008)

Similarly, a colleague in our department who is a leader in advocating and acting for increased racial and ethnic diversity in our program recently commented that she doesn't necessarily like to use the word “diversity” because it has become a “feel-good” word, a term nobody resists anymore and that covers up too many difficult and unresolved problems that we may be uncomfortable talking about or actively addressing in more precisely descriptive language.

Another contributor to the CCCC FeedBlitz blog, Vorris Nunley (2009), claims that typical diversity policies and practices promote what he calls *neo-liberal diversity*:

Neo-liberal diversity discourse, for the most part, is a status quo buttressing, political rationality that inadvertently smuggles in hegemonic institutional, social, and racial relations through the backdoor of tolerance and market logics. Neo-liberal diversity does not reconfigure or dismantle what constitutes legitimate political and social knowledge.

Instead, it jettisons rhetorics of gender, race, and sexual orientation from the epistemic and then explicitly or implicitly relegates them to the stagnant, theoretical backwaters of difference, the cultural, the resistant, the sociological, and my personal favorite, the alternative. (Nunley, 2009)

¹ The CCCC Committee on Diversity blogging series can be found at <http://cccc-blog.blogspot.com/search/label/Conversations%20on%20Diversity%20%231>.

Damián Baca (2009) pointed out that all categories of diversity have histories, many of which are histories of colonization, oppression, and domination. He suggested that without understanding and acknowledging these multiple histories, the ways we regard diversity too often, however unintentionally, erase and replace those histories with the dominant narrative of Western history. In terms of contemporary theories of rhetoric and composition, “the field’s compassionate colonialism . . . systematically deforms the history and theory of writing under divisive periodizations and spacializations that declare the Western cosmology as the genesis and center of all critical thought” (Baca, 2009). An anticolonialist approach to diversity in writing instruction, said Baca, “would interrogate the overhanging colonial determinant of the study of written language—not for what it declares, but for what it conceals: the epistemic limits of an enduring Eurocentric telos, too often passed off as universal and disembodied, without cultural roots or limitations” (Baca, 2009).

Issues of Diversity in Higher Education Studies

The issues these voices raise about how the idea of diversity gets coded in the discourses of higher education may be even more important to address for the applied rhetorical concerns of technical communication. These discourses, along with the communication practices found in corporate, nonprofit, government, and other organizational sites, impact social, economic, technological, and material effects of individual lives and identities, social and cultural groups, and environments. Given the proximity of many technical communication practitioners to economic activity and material production, including the globalizing and often colonizing processes called development, technical communicators can begin to identify and to seek opportunities for transforming our professional practices in ways that advance, not hinder or oppose, social justice. But, as this article argues, we believe it is vital to begin by transforming technical communication programs in terms of the people who populate them and the curricula within which those people are shaped as practitioners or scholars.

Scholars in higher education research have in different ways exposed uncritical assumptions about diversity, showing that although the term does not have one universally accepted meaning, the varieties of ways it is understood have not necessarily led to productive debate (Morrison, 2006; Siegal, 2006). Consequently, by limiting ourselves to the word “diversity,” we may seem to share common values and attitudes, although we have a wide range, and varying degrees, of tolerances toward particular cases of diversity. Indeed, in part because of different meanings for the term, a number of studies indicate surprisingly different rationales for diversity action in higher education contexts. David Siegel (2006) studied the way four schools in a single university

approached diversity, including their motivations for doing so. For each school, their diversity rationale reflects the core values of the discipline represented by the school. Thus, in the Business School,

diversity was understood within the framework of supply and demand.... important to companies because it allows the penetration of multicultural consumer markets, helps companies establish relationships with business partners and governments in the international arena, is a source of innovation, and has been shown to result in notable performance advantages such as the enhanced creativity of work teams. (p. 471)

The School of Social Work was motivated above all by principles of social justice, values "intricately ingrained in the ethos of the field" (p. 471). The School of Public Health was similarly motivated by concerns of social welfare and justice relating to health, often especially acute in some minority populations. The School of Engineering expressed values similar to those of the Business School, "what amounted to a business case for diversity" (p. 472). Siegel observes that in Engineering "not a single informant suggested that the School was motivated by a sense of equity, social justice, or the belief that diversity was 'the right thing to do'" (p. 471). Thus, the idea of diversity appears to occupy a wide range of meanings and values for different fields of practice. Likewise, diversity action may be motivated by quite dissimilar priorities and goals, not necessarily including civil rights or equal educational opportunity. We might reasonably hope that the outcomes of actions to achieve diversity in educational programs would result in greater openness toward and acceptance of differences among different populations whether or not such outcomes motivated the actions. However, in a study of the legal history of the "diversity rationale" in educational affirmative action, Michelle Moses and Mitchell Chang (2006) acknowledged the claims of some critics that the presence of "diverse races and cultures provide no guarantee of diverse ideas and opinions." Moses and Chang pointed out, however, that "several studies have found that increasing racial diversity on college and university campuses provides a better chance of developing cross-cultural exchange and understandings than does racial homogeneity" (2006, p. 8). On the other hand,

Education researchers need to be aware of how the diversity rationale can skew the debate over race-conscious policies in a direction away from concerns about discrimination, inequality, and injustice. We advocate a more nuanced and complex understanding of the diversity rationale for race-conscious education policies... At its best it is a strategic and reasonable legal and political compromise; at

its worst it allows people to ignore rationales for race-conscious policies based on equality and social justice. (p. 10)

Thus, for example, diversity initiatives may focus on visible differences while leaving, unexamined and unchanged, exclusive, supposedly universal standards for admission, hiring, or curricular content and design. Tammie Kennedy, et al. (2005) associate such approaches with “whiteness,” which they argue “is reproduced as a neutral category—in other words, universal, invisible, normal, and unmarked” (p. 367).

In the present study we also asked, “What is the current status of diversity in the technical communication field?” In conversations at CPTSC conferences since 2004 we have gained a sense that scholars and teachers in the field believe the greatest area of need is racial and ethnic diversity, a perspective confirmed by the responses to the survey that provided the data for this article. Thus, for example, we have not detected a strong concern for gender diversity, or if there is a problem in that aspect it may actually be a concern about declining numbers of men in the field.²

Although fair treatment and equal demographic representation are both issues of social justice, the present study focuses only on perceptions of demographic representation. Moreover, it would be a mistake to suppose that any aspect of diversity concern can be examined or addressed in isolation from most other aspects. Thus, although the present study foregrounds issues defined in terms of race and ethnicity, we hope our discussion will not be interpreted as essentializing or reifying these terms or suggesting that they can be addressed without attention to class, gender, or other socio-cultural, or historical contextualization. Indeed, we suspect that any list of complicating terms is inevitably reductive compared with the complex, contradictory, and dynamic forces that continually construct and deconstruct identities, relations, and material conditions.

In exploring these issues, we have had to consider, as well, where we might most effectively begin to work for change in order to realize the goal of a diverse field. The common division between industry and the academy is one

² We wish to emphasize, however, that in suggesting that men and women may be approximately equally represented demographically in the field we are not attempting to claim that women are treated fairly in other ways, including salary equity, career advancement, or freedom from harassment or from other sexist behaviors. Although most work contexts in the US and Canada may be able to show improvement in these areas over the past several decades, we are not convinced that women fare significantly better in technical communication jobs than in other job sectors. Neither do we suggest that other aspects of gender diversity are not issues in need of attention in our technical communication programs. Such issues as representation of women and sexuality need ongoing research and curricular attention (Cargile Cook, 2000; David, 2001; Malone, 2010; Ranney, 2000).

place we might begin, as suggested in the 2004 CPTSC Diversity Report. Considering that, as an applied field, one of our central goals is to educate practitioners, we might well decide to focus efforts for increased diversity hiring in the nonacademic workplace. At the same time, however, our efforts over the past thirty years or more to professionalize technical communication may now be making our programs the most common source of qualified practitioners (although we know of no studies that verify this assumption). The burden therefore falls upon universities and technical communication programs to recruit from a more diverse student population to support appropriate diversity in professional workplace hiring. Our programs seem an especially obvious site for action when we can look around our own universities and see greater student diversity in other programs than in our own or in technical communication practice generally. Even in English departments, which house most technical communication programs (Yeats & Thompson, 2010), we suspect that student and faculty diversity is higher in other areas of English—for example, English education, creative writing, TESOL, and literary studies—than in technical communication. What is it about technical communication that fails to attract (or admit?) racially or ethnically underrepresented student groups or students with disabilities? This question is begged by our lack of information about the actual status of diversity in our field.

It is important to point out that diversity has not been ignored in technical communication scholarship, teaching, and practices. Significant work has been accomplished, for example, in studies of disabled and aging technology users (Bayer & Pappas, 2006; Brys & Vanderbauwhede, 2006; Chisnell, Redish, & Lee, 2006; Crow, 2002; Hill, 1995; Mackiewicz, 2006; Palmeri, 2006; Schwender & Kohler, 2006; Theofanos & Redish, 2005; Van der Geest, 2006; Van Der Meij & Gellevij, 2002; Wilson, 2000). The abundance of studies focusing on gender issues in technical communication, as well as technical communication across cultures and languages, is too great to list here—a search using the keywords “technical communication” and “gender,” “sex,” “femini-” or “women” in an EndNote database maintained by one of the authors of this article provided a list of well over 100 publications dating from the late 1980s to 2008. A search using the keywords “technical communication” and “international,” “intercultural,” “cross cultural,” or “multicultural” listed nearly 400 publications dating from the early 1990s to 2008 (by no means representing all relevant publications for that period). Over half were published just since 2000. Nevertheless, the aspect of diversity that seems to trouble our field most—racial and ethnic diversity within the US and Canada—has not yet received much study. The same EndNote database produced only 18 studies making any mention of race, ethnicity, or related topics in a search that combined the keywords “technical communication” and “race,”

“racial,” “African-American,” “African American,” “Black,” “people of color,” “Hispanic,” “Chicano/a,” “Native American,” or “ethnic” (Banks, 2006; Bernhardt, 1992; Boyer & Webb, 1992; Crow, 2002; Frederickson, 2004; Grobman, 1999, 2000; Killingsworth & Palmer, 1992; Kossek & Zonia, 1994; Lunsford, 1999; Rosenbaum, 1999; Ross, 1994; Savage, 2002; Selber, 2004; Selfe, 1999; Strickland, 2001; Zak, 1994). Thus, we believe the field may benefit from more research that might guide action for increased racial or ethnic diversity in technical communication programs. (We do not assume that the 18 sources cited constitute a complete list, but that the relatively small number of studies we found accurately suggests a need for additional studies.)

Fortunately, diversity research is plentiful in the field of higher education studies and such research can inform our thinking and help us to develop knowledge specific to our own field. With such knowledge, we might establish meaningful policies and practices for diversity in technical communication programs. Research from the broader perspective of higher education cannot, of course, answer all questions for specific disciplinary areas. This is particularly true for technical communication where diversity policies and actions should extend beyond the academy to workplaces and the organizational and social contexts in which technical communicators work. Most obviously, studies that are generally relevant across higher education are likely to benefit teachers, curriculum designers, and administrators in technical communication programs. Studies in other applied fields may also be applicable, if not in specific findings, at least in helping to guide the development of research questions and research designs in our own field. In addition, two closely related and emergent areas of scholarship, race and technology studies and critical race theory, should be particularly helpful in heightening our understanding of diversity concerns in technical communication.

Studies of diversity issues in corporate and other nonacademic settings may also be helpful by revealing ways such issues are currently approached in contexts where students are likely to find work after graduation. For example, Kalev et al. (2006) have extensively studied methods for overcoming discriminatory practices in corporate settings. A number of diversity studies in nonacademic settings appear to emphasize business cases rather than social justice rationales. Jeffrey Gandz’s (2007) widely publicized study argued that a “business case for diversity” based on “enhanced corporate profits or greater taxpayer satisfaction with government services” (Gandz, 2007). A similar study reports that “racial diversity is associated with increased sales revenue, more customers, greater market share, and greater relative profits” (Herring, 2006, p. 27). Relying upon such perspectives seems to put social justice reform on a balance sheet, making it subject to the ups and downs of markets and other economic

trends. Economics and political issues will, however, inevitably influence the ways we are likely to be able to plan and implement diversity policies. Marlene Fine (1996) has suggested that workplace diversity has value more far-reaching than achieving corporate profits. She argued that it “will also reinvigorate our public discourses and political institutions, strengthening our social, political, and economic well-being” (Fine, 1996, p. 499). Lamin Sanneh (2005) pointed out, however, that following 9/11 “a new urgency has gripped the public about turning the University into a national security enterprise” and that “difference, diversity and pluralism are seen as an obstacle, and sometimes as a threat to be overcome” (Sanneh, 2005). Nevertheless, we hope that research prompted by concerns for social justice in technical communication may result in overcoming anxieties about difference and result in positive change.

As we explored the extensive literature concerning diversity in higher education institutions, we looked for ways to organize the issues we saw being addressed. The first concern for achieving diversity in technical communication, of course, seems to be the need to diversify student enrollment. In our program, in an English department, this need is almost always the dilemma we discuss when the question of diversity arises. This focus is imposed upon us, as well, by the university administration and external reviews. However, a nearly equal concern is with faculty diversity, again an issue that arises in faculty meetings, university policy, and external reviews. Two additional areas of diversity concern relate closely to student and faculty diversity: how diversity is addressed in curricula and specific course offerings, and university policies and support for diversity at the department and program level. These four concerns have guided our study. In the following four sections, we review some key studies that focus on each of the following areas: 1) enrollment and retention of students; 2) recruitment and retention of faculty from underrepresented populations; 3) diversity in curriculum; and 4) support for diversity action by higher administration in the institution. The interrelationship among these areas, however, makes some overlap in our discussion of each one inevitable.

Enrollment and Retention of Students from Underrepresented Populations

From the perspective of technical communication programs, the chief hope for achieving diversity in technical communication practice is to increase the diversity of students enrolled in and graduating from our programs. Indeed, we might well argue that student diversity is ultimately the best hope for faculty diversity because our programs should produce not only practitioners but also the future scholars and teachers of technical communication. (We will argue in

the discussion of faculty diversity, however, that this idea must be approached with caution in order to avoid essentializing approaches to diversity.)

Enrolling and retaining underrepresented students—primarily racial and ethnic minorities within the US—are goals and concerns for virtually all higher education programs—indeed, even for historically Black, Hispanic, and tribal colleges and universities. Assuming such goals by most higher education institutions are sincere, why does the situation not seem to improve—indeed, why has it actually grown worse in recent years? Not surprisingly, a number of studies suggest the problem begins much earlier than the point at which students begin applying for college admission.

Daria Roithmayr (2006) discussed the challenges faced by universities attempting to increase diversity in student enrollments, owing to “persistent racial and economic inequalities in K–12 education, together with the increasing costs of higher education” (Roithmayer, 2006). Thus, factors outside the academic domain influence enrollment of racial minorities, including legislation at state and national levels and enforcement of existing laws. Macki Sissoko and Liang-Rong Shiau (2005) observed, for example, that, “Historically, Republicans have maintained weaker federal desegregation law enforcement policies than Democrats have” (Sissoko & Shiau, 2005, p. 203). Socioeconomic factors specific to minority populations may also work against efforts to improve college enrollments from these groups, as Pamela Bennett and Yu Xie (2003) pointed out:

After all, many studies, including our own, clearly show that racial disparities in the *precollege* experiences of black and white youth are responsible for blacks’ overall lower rates of college attendance than whites’ rates. That is, the persistent *total* gap favoring whites is indicative of blacks’ continued disadvantage in exactly the factors that predict college attendance: Blacks are concentrated in the lowest socioeconomic strata and academic performance quintiles, are concentrated in public and Southern schools, and have more siblings than whites. (p. 579)

Nevertheless, a study of student equity in US flagship universities sponsored by the Education Trust argued that higher education could improve in the areas of minority and lower income student enrollments and success. It also shows that as a category of higher educational institutions, flagship universities perform worse in terms of student equity than other US universities. The report indicates that flagship university presidents often point to obstacles outside of and prior to the university as the real source of the problem. “Like many presidents in other colleges, they would like Americans to believe that we have a high school problem, not a college problem” (Gerald & Haycock, 2006, p. 15).

The report's critique may also be applicable to most higher education institutions. Although not denying such external factors, the report states,

There is no way that achievement patterns in our high schools over the past two decades—which show vastly higher college prep course completion rates, stronger achievement in mathematics, and higher SAT and ACT scores for low-income and minority students—could possibly fully explain the poor and mostly worsening performance of our flagship universities. (p. 15)

We implied previously that despite official policies in support of diversity, higher education institutions may in some instances not be sincere or may not be effective in efforts to increase minority student enrollment. Institutional commitment to diversity may be revealed in the ways diversity action plans and policies are conceptualized and implemented. In a study using critical race theory (CRT), Susan VanDeventer Iverson (2007) found that such policies often invoke, albeit inadvertently, a standard of whiteness for assessing minority student preparedness and progress. Iverson examined the rhetoric of diversity policies and questioned assumptions implicit in such policies, asking, for example, who gets to define diversity action requirements and determine standards for equity. Iverson pointed out that “Diversity action plans typically describe people of color as outsiders to the university, disadvantaged and at risk before and after entering higher education” (p. 588). Such discourse contradicts the stated purposes of diversity plans and reinforces the status quo. She urged administrators to make use of CRT analysis to disrupt unconsciously racist discourses and to facilitate the speaking of other voices, to hear the “counterstories” of minority experience and to validate “additional sources of knowledge” about racism and how to end it in their institutions (p. 604).

Recruitment and Retention of Faculty from Underrepresented Populations

Other studies point to the importance of faculty engagement with minority students both in class and out of class as a critical factor in these students' academic performance, their integration with the broader campus population outside their own minority group, and their retention until degree. Darnell Cole (2007) found that teachers significantly influence racial minority students' “intellectual self-concept” through such interactions:

The diverse college context requires greater institutional planning and forethought, which should specifically involve faculty inside and outside of the classroom. As key institutional agents, faculty

must become more aware of the types of interactions they have with students and the subsequent impact on students' intellectual self-concept. Whether the contexts of these interactions occur in or out of the classroom, students' intellectual self-concept will likely be enhanced if a socially complex and an active learning environment exists. (p. 277)

Similarly, mentoring of minority graduate students by senior scholars contributes significantly to minority graduate students' success in becoming successful participants in their disciplines and leads also to increased advocacy by others on behalf of minorities:

Even when mentoring and networking do not in themselves eliminate an adverse academic environment, these strategies hold great promise in assisting young scholars to develop resiliency for overcoming challenges and succeeding in academia" (Espinoza-Herold & Gonzalez, 2007, p. 333). Gail Y. Okawa (2002) saw mentoring of minority graduate students preparing for careers in writing studies as a vital and complex task because of "the conflicts, sacrifices, and contributions that append to becoming a teacher and scholar in this field so fraught with colonial practices and relationships. With such understanding, mentoring can take on a new role and significance in changing the staffing and nature of our profession. (p. 529)

It is not surprising, as a number of studies find, that increasing faculty diversity can enhance student—and faculty—tolerance of difference and may improve learning because of effective pedagogies that many minority faculty bring to their classrooms—pedagogies less likely to be employed by white faculty.:

In general, on campuses with diversity that more closely matches the diversity of American society, faculty employ a broader range of instructional techniques. Faculty on diverse campuses are more likely than faculty on racially homogenous campuses to emphasize higher order cognitive activities and diversity in their instruction. The structural diversity of faculty has an effect on instruction at an institution regardless of the individual race/ethnicity of a faculty member. In other words, a white member of a very diverse faculty is more likely than a white peer at a homogenous institution to emphasize higher order cognitive activities and use diversity in their instruction. It would seem the diversity of faculty acts [as]

a symbol of an institution's commitment to diversity; therefore, creating a context or culture where diversity is highly valued. (Umbach, 2006, pp. 337–338).

Unfortunately, as Paul Umbach (2006) and others pointed out, faculty diversity lags behind student diversity in most institutions. Indeed, the AAUP policy document, "How to Diversify the Faculty," states that "higher education faculty remain one of the least integrated professions; only about 5% of faculty are African American, and many of those are at HBCUs" (Springer, 2006, pp. 1–2).

As with student diversity, ineffective institutional policies for minority faculty recruitment may in part account for this problem. Bryan McKinley Jones Brayboy (2003) argued that fundamental structural changes in institutions may be necessary to foster truly favorable environments for diversity:

To advance the agenda of diversity, institutions that truly value diversity must move toward considering wholesale changes in their underlying structures and day-to-day activities, especially if they are truly committed to refocusing the historical legacies of institutional, epistemological, and societal racisms that pervade colleges and universities. Too often, institutions fail to make a wholehearted commitment; instead they hire some faculty of color to implement diversity, and the process stalls. (p. 74)

Faculty diversity is not only a concern in the United States. In both the United Kingdom and Australia, scholars have investigated this issue. Marlene Morrison (2006), reporting a UK study, makes the troubling observation that there is little interest or value placed on diversity in the academic workforce, a problem that points back to administration. For administrators responsible for implementing diversity policies, she says, "in the short and medium term, the emotional as well as economic costs for leaders who pursue diversity for leadership seem likely to outweigh benefits." She concludes that truly committed approaches to diversity in educational leadership "have barely begun to be tackled" (Morrison, 2006, p. 178).

In an Australian study with implications for faculty retention, Ninetta Santoro and Jo-Anne Reid (2006) investigated the experiences of indigenous teachers in Australian public schools (not universities). The need for such teachers is often articulated in terms of teachers with whom indigenous students can identify, who will provide positive role models for those students, and who will be able to serve as "cultural experts" for white faculty in understanding the needs of indigenous children. However, these expectations impose complex burdens on indigenous teachers and put them in positions they may not feel prepared for or willing to accept:

While all of the teachers we interviewed were dedicated to improving education for indigenous students and in many cases, became teachers because they saw themselves as being able to do so, it is clear that many are resentful of the increased workload this entails, the lack of recognition they receive within educational communities and the ways they are constructed first and foremost as 'indigenous teachers' rather than 'teachers'. (Santoro & Reid, 2006, 294)

This concern seems to echo Gayatri Chakravorty Spivak's (1988) critique of the way some "elite subalterns" are engaged as "native informants for first-world intellectuals interested in the voice of the Other" (p. 79).

Brayboy (2003) addressed this issue for US university faculty. His study found that minority faculty hired to meet diversity hire commitments are too often burdened with the whole responsibility for fulfilling that commitment. This imposes unfair service burdens that in some instances adversely affect the minority faculty members' progress toward tenure and/or promotion. Even more insidiously, such approaches to diversity can have the opposite effect to what the official policy expresses—diversity may be confined to the activities of particular faculty members while the program and indeed the university as a whole are able to carry on as they always have. This is a form of tokenism and only reinscribes racism: "Bodies of brown faculty do not constitute the implementation of diversity; rather, their presence without a firm commitment by the institution to change the day-to-day activities and underlying structures may, in fact, reinforce the marginal status of junior scholars of color" (Brayboy, 2003, p. 85). Brayboy does not oppose hiring minority faculty, but argues that the commitment to such hires must include more systemic commitment to diversity. As he, and the minority faculty he interviewed pointed out, other faculty can, and indeed must, embrace diversity in their teaching, scholarship, and service. This point is supported in the AAUP's report cited previously. "Just as professors don't need to be white to teach Shakespeare, neither do they need to be black to teach African American studies" (p. 17).

In terms of program design and development, these issues have implications for and are implicated in issues of curricular diversity. We will turn to that dimension of programmatic diversity now.

Diversity in Curriculum

We believe that curricular change needs to accompany student and faculty diversification in technical communication programs. It entails considerably more than adding a few courses in international or intercultural technical communication, translation and localization, Global English, and the like. Such

courses are, of course, important, and a number of programs now offer courses like these. However, we believe the addition of courses that address international and intercultural issues in technical communication cannot themselves adequately address diversity goals.

Curricular diversity generally looks in two directions. It looks inward to the students who inhabit the curriculum, getting them to critically examine their culturally-situated preconceptions, values, and behaviors. Curricular diversity also looks outward, not only to the audiences and users directly impacted by students' future professional work, but also to people and communities indirectly affected by the decisions and actions of these audiences and users—for example, decisions and actions concerning the social deployment of the technologies and practices such documentation represents or interprets.

Curricular diversity should increase student tolerance, curiosity, and ability to interact appropriately with people whom they perceive as different from themselves. These purposes are not uncommon and are surely addressed in diversity-focused courses. However, an additional and more complex goal would have at least three parts: 1) to attract students not part of the typical student demographic for technical communication programs, 2) to increase such students' access to these programs, and 3) to enhance these students' sense that the program recognizes and values minority students' cultural identities in the program.

Student recruitment and access are commonly addressed by minority scholarships, recruitment activities targeting high schools and community colleges, and minority-focused open houses held by university programs and campuses. Although such measures are important and necessary, they have not been resoundingly successful, as enrollment data for US colleges and universities indicates. For example, regarding Black male enrollment in higher education, the 2006 National Black Male Achievement Study reveals that "Literally, no progress has been made in increasing participation rates among this population in over a quarter of a century. Moreover, 67.6% of Black male undergraduates who start college never finish, which is the worst college completion rate among both sexes and all racial and ethnic groups in higher education" (Harper, 2006, p. 14). Before such efforts can be truly successful, we believe it is essential to address more than demographics of minority absences in student enrollments. We may need, as well, to better understand the complex histories, ideological barriers, and institutional obstacles ranging from admission policies to classroom practices that enforce—and continue to enforce—the exclusion of minority populations from student rosters.

Stephen John Quaye and Shaun Harper (2007) cited a number of studies that confirm the effectiveness of incorporating multicultural perspectives in

course content. They reported, however, “Despite the abundance of evidence showing the positive effects of diversity on student learning, most college and university instructors continue to teach in culturally neutral ways” (Quaye & Harper, 2007, p. 36). They supported the view of Brayboy and other scholars that adding a multicultural course here and there in the curriculum does not fulfill this purpose because such approaches tend to isolate and marginalize the very concept of multicultural understanding. Instead, programs and individual faculty members (not just faculty members who are members of underrepresented minority groups) should seek ways to include underrepresented cultural viewpoints, sources, practices, and so on in each course.

Adam Banks (2006) discussed these issues primarily as they concern African Americans, beginning with the problem of access to contemporary technologies and extending to issues of language and culture as well. He acknowledged how complex the issue is, ideologically, politically, economically; and he made clear the virtual certainty that if and when real change comes in the academy, that change will “reshape the futures of rhetoric/composition, technical communication, and African American rhetorics” (Banks, 2006, p. 14). Although many of us abstractly understand the notion that all knowledge is historically and socially situated, we tend to teach the fundamental principles underlying science and technology as objective and value-neutral, perhaps because most textbooks in our field reflect such perspectives and because such ideas pervade the cultures of the industry settings in which students are likely to find jobs. As Kathleen Welch (2005) argued,

The *topos* of machine neutrality is another default position for many of our digital composing students. The long history of the neutral machine and the idea of neutrality itself causes this default position (and is another reason that many folks in our field advocate teaching historicizing in every writing class). Whereas most of our composing students can see the nonneutrality of a great deal of televisual material, many of them—in, for example, beginning technical writing courses at the advanced undergraduate level—benefit from time spent on interrogating the screens that dominate the computer classroom, the ethical structures that lie behind them, and the ways that visual culture transmits whatever was there in previous technologies. Default whiteness is part of this transmission. (Kennedy, et al., 2005, p. 375).

A recent report by Natalya Matveeva and Jerry Savage (2009) investigated curricular goals and course offerings in all historically Black colleges and universities (HBCUs) and all tribal colleges and universities (TCUs) in the United States.

A key finding in that study, primarily in regard to TCUs, is that most such schools place strong emphasis on *indigenous knowledge*, the knowledge and systems of knowledge unique to specific cultural contexts. Most tribal colleges consider equally important preparing students for skilled trades and professions in mainstream society:

They want their people to be educated as teachers, social workers, healthcare workers, business professionals, and environmental and agricultural scientists. But they believe that these professions can be practiced in ways that are consistent with and in support of their tribal values and world view. (Savage & Matveeva, 2009, p. 7)

These goals are not obviously compatible and, as Wade Cole (2006) pointed out, often conflict with each other as well as with the need for the institutional legitimacy that is defined in terms of external accreditation agencies (W. M. Cole, 2006).

In most TCUs, technical communication courses appear to be taught the same as in mainstream university programs. And in all of the TCUs, courses such as computer science, accounting, chemistry, and physics appear to be identical to those in nontribal schools. On the other hand, a number of TCUs offer courses in various indigenous technologies, taught by tribal experts in these practices. Moreover, courses such as biology, environmental science, anthropology, astronomy, geology, business management, social work, and public health are taught from dual perspectives. Courses in science-related fields may have parallel offerings, with one course presenting mainstream scientific concepts and methods and the corresponding course presenting indigenous concepts and perspectives. Applied courses—business, social work, public health, and the like—appear to be hybrids, incorporating mainstream concepts with tribal community applications and contexts. The culture-centered approach of TCU programs makes it impossible for students to be blind to the cultural nature of both indigenous knowledge and mainstream—presumably “neutral”—Western knowledge. Such approaches might be adapted for curricula and pedagogies in technical and professional communication programs in mainstream universities.

If students are to be prepared to communicate effectively and appropriately with people of other cultures, they will need to understand the ways in which multiple systems of knowledge may operate at the same time, although often in tension. Such understanding can make clear the issues of dominance, and the risks and trade-offs, whether intentional or not, that necessarily accompany any imposition of a system of knowledge on identities rooted in different cultural experiences and histories. The need for our programs and for the field of technical communication to address such issues with all their contradictions

and complexities now seems inescapable. To reiterate Adam Banks' prediction, responding effectively to this need will reshape the future of technical communication programs.

Methodological Rationale

Although the studies discussed previously provide many insights into the current issues and perspectives relating to diversity in higher education, a number of colleagues pointed out in discussions during conference sessions and personal conversations that our field has only anecdotal information about the status of diversity in technical communication programs. Such observations led us to design a survey of technical communication program administrators in the US and Canada. The irony of such a research approach does not escape us, rooted as it is in modernist social scientific methods. Before turning to a discussion of our research design, therefore, let us briefly discuss the potential contradictions in our method as well as our rationale for employing it. Among the insidious functions of a term like *diversity* is its use as a term to encompass whatever suits the user. It is likely to incorporate and reify the particular categories it includes without further analysis. Thus, in our well-intentioned zeal, we may accept as irreducible realities the notions of gender, race, age, physical or cognitive ability, class, sexuality, ethnicity, and so on as "underrepresented" or "marginalized" groups without examining the ways individual people may be included, excluded, assigned, or exempted from such categories. It is often difficult to recognize how our situated perspective can make such terms seem obvious. Moreover, we may often tend to overlook the widely varying discourses within which each of these categories is defined and positioned. We may not examine the political and economic interests involved in constructing and sustaining these categories. This point is eloquently expressed by Michael Christie (2005), a scholar who specializes in indigenous education in northern Australia. He explained that the problematic idea of "remote education," a standard term used in his field:

We do well to start with a close examination of the notion of 'remote'. People from the bush, quite naturally and appropriately, often problematise the notion of remote. Pat Dodson used to refer to 'that remote city of Canberra'. Remoteness depends on your point of view, the particular frame that you use. If you live on an island in the Arafura Sea, clearly you wake up each morning in the centre of the universe. It is Darwin and Canberra which are remote. Using a deconstructive process the term remote automatically seems to position us as the second term in a binary, the first term of which

hardly exists. When we are remote we are not remote from a single, unified centre. Our remoteness is a function of power located in many different faraway contexts. (p. 5)

For the present study, we have largely adopted the racial and ethnic categories of the US Census Bureau, and in distributing the survey we developed, we did not attempt to problematize these categories by any kind of metanarrative or critical review of the historical, social, or economic processes involved in their construction. We chose this approach not for convenience, but because these categories are those that our programs and institutions are, for the most part, required to use in assessing the status of diversity in student and faculty populations.

The focus of this study is primarily race and ethnicity because those categories of diversity were identified in our survey as leading concerns to be addressed in technical communication programs. We recognize the complexities and contradictions involved in deploying such terms. Race is generally recognized "as a social, rather than a biological, construct" (Clary-Lemon, 2009), and more specifically as a political construct. Jennifer Ramirez Johnson, Octavio Pimentel, and Charise Pimentel (2008) discussed the extent to which race can be a shifting political and ideological category:

We see race as being inscribed on different bodies at different times in history in the struggle to gain cultural, political, social, and material capital. Irish Americans, for example, considered to be members of an inferior nonwhite race when they initially immigrated to this country, eventually gained social and economic power and thus the status of being white (Ignatiev, 1996; Roediger, 2005; Takaki, 1993). In contrast, Mexicans, once considered white in this country, eventually became defined as members of a racial minority. (p. 214)

Vershawn Ashanti Young (2004) saw race, gender, and class as inseparable, at least for African Americans, while both resisting and acknowledging the idea that language is a racializing factor. Indeed, the meaning of a term like "race" may vary and contrast in material ways from one racial group to another because of the different histories within which their cultural identities are constituted. Whereas African American scholars and activists may challenge the use of essentialist beliefs about body image and biology as ways of defining a person in racial terms, American Indians may actually seek genealogical proofs for their racial and tribal identity (Bizzaro, 2004; Cushman, 2008; Haas, 2008). Such differences may seem to impose impossibly contradictory demands on those of us who want to work for diversity justice. But it may be useful to remember

that regardless of the contradictions, it has largely been the same dominant society—white, male, and Euro-American—that imposed the conditions leading to our contemporary dilemma.

For this study, we chose a survey methodology recognizing that the diversity categories we use are largely constructed as real and obvious in the dominant discourses of contemporary, mainstream, North American, and indeed, Western, society. We might argue that, in a postmodern sense, such categories in fact do constitute aspects of our social reality. They are certainly concepts we have to address in our communities, in our institutional policies, in the standards that regulate everything from college admissions to the production of technologies we use and teach with and about. Even as we resist and critique social categories that maintain unequal access to human rights and material needs, we must acknowledge the compromises implied when we say that we often have little choice about working within the realities such terms represent. Our study is intended as a first step toward understanding how diversity issues are perceived by the program administrators who may be closest to the institutional structures and policies that call for diversity action and at the same time often constrain meaningful action.

Survey Design

Seeking information on various aspects of diversity in technical communication programs in the US and Canada, we compiled a list of 144 technical communication programs in the US and Canada based on program lists on the ATTW, CPTSC, and STC websites. After developing a draft of the survey, we asked three CPTSC Diversity Committee members to review the questions, and we revised the questions based on their advice.

Our university's Institutional Review Board (IRB) informed us that, because the survey only asks questions that involve public information about programs and institutions, we would not need IRB approval. Nevertheless, we promised respondents that all information would be confidential. The final question asks respondents to provide name and contact information if they were willing to be contacted in case we had additional questions. Eighteen respondents provided contact information, however only in one case we did try to associate names and institutions with responses. In that instance, we did contact the respondent, but the information from that communication was not used in this study.

The 11-question survey was then entered in *SelectSurvey.Net* by *ClassApps*. In May 2008 we emailed our survey link to a total of 144 department chairs or technical communication program directors in the US and Canada. Of the individuals contacted, 36 completed the survey for a response rate of 25%. All

responses were received by the end of July 2008. We did not have access to the name of the persons or institutions from which survey responses originated unless the respondent provided contact information.

The first nine questions pertained to diversity in the four areas we had identified for programmatic concern: 1) diversity among students in technical communication programs, 2) diversity among faculty in technical communication programs, 3) diversity as reflected in specific courses and curricula, and 4) diversity as represented in institutional goals and policies.

Question 10 invited comment on aspects of diversity not addressed in other areas of the survey. Question 11 invited respondents to provide contact information if interested in participating in a follow-up interview by telephone or email.

The survey used demographic categories adapted from the US Census Bureau as a way to discuss diversity in technical communication programs in the United States. Terminologies used in Canadian census surveys make more distinctions than does the US Census Bureau in the categories of African American and Native American.³ To avoid confusion that could result from combining a multitude of US and Canadian terms, we chose terms we believed would be meaningful to respondents from both countries without trying to provide all possible terms.

Survey Results and Discussion

In reporting survey results related to particular groups, we provide tables in the Appendix that include the entire set of results. Our analysis and discussion focuses primarily on the top five demographic groups as indicated by respondents to Questions 1–6. (In cases where groups are “tied” for one of the top five selected, they are ranked together.) These six questions seek information about diversity goals related to specific groups of students and faculty. Doing so provides a starting point from which to discuss diversity as perceived by technical communication program administrators in the US and Canada.

Diversity among Students

Survey Questions 1, 2, and 5 focused on student diversity in technical communication programs. This section summarizes the findings for these three questions.

Question 1 asked: “Is your program seeking to increase enrollment of *students* from any of the following groups? (Check all that apply).” Table 1 (Appendix) shows the full data set in response to this question. The top five selections of 28 respondents are as follows:

³ See the American Anthropological Association website <http://www.understandingrace.org/lived/global_census.html> for the range of terms used in census surveys by nine countries, including the US and Canada.

Perceptions of Racial and Ethnic Diversity in Technical Communication Programs

1. African Americans/Black Canadians/African Canadians: 20 respondents (71%)
2. Latinos/Latinas: 19 respondents (68%)
3. First Peoples of the US and Canada/American Indians/Native Americans/Indians of Canada: 13 respondents (46%)
4. People with disabilities: 11 respondents (39%)
5. Asian Americans/Asian Canadians: 11 respondents (39%)

Question 2 asked: "List the three groups for which your program is most interested in increasing diversity representation among *students*. (Please answer this only if you checked more than three categories in Question 1.)" The top five selections of 17 respondents are as follows:

1. African Americans/Black Canadians/African Canadians: 10 entries
2. Latinos/Latinas: 9 entries
3. First Peoples of the US and Canada/American Indians/Native Americans/Indians of Canada: 6 entries
4. Asian Americans/Asian Canadians: 3 entries
5. Persons with disabilities: 2 entries; Men: 2 entries

Question 5 asked: "To your knowledge, are any of the following groups probably underrepresented among technical communication *students* across your nation (Canada or the United States)?" Table 2 (Appendix) shows the full data set in response to this question. The top five selections of 32 respondents are as follows:

1. African Americans/Black Canadians/African Canadians: 28 respondents (87%)
2. First Peoples of the US and Canada/American Indians/Native Americans/Indians of Canada: 25 respondents, (78%)
3. Latinos/Latinas: 23 respondents (72%)
4. People with disabilities: 13 (41%)
5. Asian Americans/Asian Canadians: 11 (35%)

It is probably no surprise that the minority groups most respondents seek to recruit as students are African Americans, Latinos/Latinas, Native Americans, people with disabilities, and Asian Americans. The same groups appear among the top five minority groups for Question 5, which asks respondents' sense of underrepresented minority students for the field as a whole. It appears that international status is not a high priority of diversity. This finding may also be a consequence of arguments, which we consider generally valid, that diversity policies and goals cannot be appropriately met in US contexts by increasing international enrollments, even in cases involving international students whose race or ethnicity might commonly be considered the same as the US domestic minority (for example, see Race, Ethnicity, and Genetics Working Group, 2005;

Kennedy et al., 2005; American Association of Physical Anthropologists, 1996). Thus, for example, it is usually not considered appropriate to count enrollment of Black students from Africa as fulfilling institutional diversity goals for enrollment of African American students.

Diversity among Faculty

Survey Questions 3, 4, and 6 focused on faculty diversity in technical communication programs. This section summarizes the findings for these three questions.

Question 3 asked: "Is your program seeking to increase *faculty* from any of the following groups (check all that apply)." Table 3 (Appendix) shows the full data set in response to this question. The top five selections of 27 respondents are as follows:

1. African Americans/Black Canadians/African Canadians: 22 respondents (81%)
2. Latinos/Latinas: 17 respondents (63%)
3. First Peoples of the US and Canada/American Indians/Native Americans/Indians of Canada: 11 (41%)
4. Asian Americans/Asian Canadians: 10 respondents (37%)
5. Women: 8 respondents (30%)

Question 4 asked: "For what groups is your program especially interested in increasing diversity representation among *faculty*? (Please answer this question only if you checked more than three categories in Question 3.)" There were only 16 respondents to this question (those who selected more than three categories in the previous question). The total number of groups they listed is only seven. The top five rankings include all seven groups identified because three groups were equally ranked:

1. African Americans/Black Canadians/African Canadians: 12 entries
2. Latinos/Latinas: 8 entries
3. First Peoples of the US and Canada/American Indians/Native Americans/Indians of Canada: 4 entries
4. Men: 2 entries
5. Asian Americans/Asian Canadians: 1 entry; Middle Easterners: 1 entry; Africans: 1 entry

Question 6 asked: "To your knowledge, are any of the following groups probably underrepresented among technical communication *faculty* across your nation (Canada or the United States)." Table 4 (Appendix) shows the full data set for responses to this question. The top five selections of 32 respondents are as follows:

1. African Americans/Black Canadians/African Canadians: 29 (91%)
2. Latinos/Latinas: 24 (75%)

3. First Peoples of the US and Canada/American Indians/Native Americans/Indians of Canada: 21 (66%)
4. People with disabilities: 17 (53%)
5. Asian Americans/Asian Canadians: 15 (47%)

Of the top five groups that respondents indicated as preferred for faculty recruitment, the top three were the same as for students: African Americans, Latinos/Latinas, and Native Americans. Fourth and fifth-ranked were Asian Americans and women. Our study gathered no data to explain the higher ranking of women for faculty recruitment as compared with women as a student minority category. We believe, however, that it may indicate a sense that women are not in numerical minority among students, whereas among technical communication faculty, there may continue to be more men than women. As with student results, international minority faculty are not considered a high priority compared with domestic minority faculty.

Curricular Focus on Diversity

Question 7 asked, "Please list all courses in your curriculum that are specifically designed for and dedicated to the study of diversity-related issues as your program defines diversity. Of the courses you list, please indicate which ones are required by preceding the course title with R- (for example: R-Intercultural Technical Communication)." Twenty-eight respondents answered Question 7. Of these, 19 respondents listed 48 courses representing a wide variety of topics. The remaining 9 respondents either reported no courses on diversity topics or reported that most or all of their courses included diversity topics but were not specifically designed to address those topics.

The 48 courses are distributed among the 28 programs as follows:

- 5 programs reported 0 courses.
- 7 programs reported 1 course.
- 7 programs reported 2 courses.
- 3 programs reported 3 courses.
- 1 program reported 7 courses.
- 1 program reported 11 courses.
- 4 programs reported that most or all of their courses included issues of diversity, but no courses were specifically dedicated and designed for issues of diversity.

We sorted the courses into six categories as follows:

- Miscellaneous Topics: 4 courses
- Culture & Ethnicity: 9 courses
- Gender: 4 courses

Rhetoric & Writing: 27 courses

Language & Linguistics: 4 courses

None or Not Designed to Address Diversity: 9 courses

Only four courses were identified as required courses. All required courses were in the Rhetoric & Writing category. Table 5 (Appendix) shows the full data set for responses to Question 7.

It appears that a number of respondents listed courses probably offered outside the technical communication major curriculum, including literature courses with specific diversity focus (nine mentioned) and linguistics courses (four mentioned). Such courses contribute in important ways to diversity awareness and understanding. Indeed, we believe issues of culture and diversity need to be understood in broad social and cultural terms. However, courses taught in these broader contexts may not specifically address the challenges of understanding the ways diversity issues may influence and be influenced by technologies and technical communication practices. Therefore, it is encouraging to see that 15 (31%) of the courses listed appear to be technical, business, or professional communication courses. Of these courses, all but one are listed in the category Rhetoric & Writing. Titles include Proposal Writing (two courses), Online Documentation (one course), Technical Communication (two courses), International/Intercultural Technical and Business Communication (nine courses), and Usability (one course, listed in the Miscellaneous Topics category). Nevertheless, this means that at least two thirds of the responding programs do not have any courses designed to specifically address diversity issues in technical communication.

This critique reaches beyond what we usually mean by technical communication and extends to the technologies technical communicators document. Perhaps the most deeply rooted assumptions we work with involve assumptions of the value-neutral, objective nature of technology and science. Much of the current work in technical communication, even communication that recognizes cultural differences among users, presumes it is necessary for users to move toward the technology. The supposed logic and objectivity of technologies are regarded as obvious. It is often presumed that if users are going to access and use modern technologies, they must adapt to the logic, the standards, and the knowledge conventions that have governed the development of those tools. Studies such as Huatong Sun's (2006; 2009) recent work on technology localization challenged this powerful myth in the field of technical communication. Likewise, bio-ethicists Bryn Williams-Jones and Janice E. Graham's (2003) study of the social networks within which commercial genetic testing is developed showed that "genetic tests do not exist apart from the social world but are

developed and accessed for a variety of complex personal and social reasons” (p. 290). Arturo Escobar (2001), whose work transcends anthropological and geographic studies, examined the ways that politics, economics, technologies, and knowledge systems intersect locally in theorizing the idea of “place.” He said,

It will be necessary, however, to expand the inquiry into place to consider broader questions, such as the relation of places to regional and transnational economies; place and social relations; place and identity; place, boundaries and border crossings; place and alternative modernities; and the impact of digital technology, particularly the internet, on places. What changes do occur in particular places as a result of globalization? Conversely, what new ways of thinking about the world emerge from places as a result of such an encounter? (Escobar, 2001, p. 157)

Such issues must occupy more of our research and pedagogy in technical communication, and consequently begin to influence the ways we conceptualize our programs if we are to take the implications of diversity seriously. Indeed, the conventional “truths” on which the standards and the very knowledge of our field have relied through much of the past half-century may no longer monolithically define technical communication. But to maintain our relevance in such a world, it may be necessary to seek new kinds of scholars and teachers who ask new questions and draw upon theories and methodologies that may seem utterly foreign to many of us. How, for example, might critical race theory, whiteness studies, postcolonial and decolonial theories of translation and economics, post-development studies, critical contrastive rhetoric, and cultural rhetoric inform our thinking and practice regarding technology, science, and communication? We are at present unlikely to find many new scholars with such research and teaching backgrounds coming out of doctoral programs in technical communication. We can only hope that our doctoral programs would welcome such scholars. But until that is the case, it is questionable how many scholars who could help shape our programs and prepare students for work informed by such perspectives would be interested in joining us to advance that work.

Obstacles to Programmatic Diversity Goals

Question 8 asked, “What obstacles to your diversity goals do you consider especially challenging?” There were 30 respondents for Question 8. Because this question called for narrative responses, it was difficult to group them into clear, distinct categories. In some cases, responses identified two or more obstacles that were systematically related; we chose to list these as a single obstacle. We

sorted obstacles into the four categories of programmatic diversity concerns that we have used to structure our study: students, faculty, program/curriculum, and institution. For each category, respondents identified specific kinds of obstacles. One response indicated without elaboration that the program had no obstacles to its diversity goals.

Table 6 (Appendix) shows responses for Question 8 for each programmatic diversity category. Note that the total number of responses shown in the table is more than the total number of responses actually received for the question. Because the question called for narrative responses, a number of responses were phrased in ways that addressed two or more of the four programmatic diversity categories we used and therefore we counted such responses in as many of the categories as they seemed to address.

The quantitative representation of the responses does not reflect the real variety of concerns expressed by respondents. Neither does it indicate the range of perspectives on the issue of diversity that many respondents expressed. Therefore, in our discussion below we also quote some of the more extensive responses.

Obstacles to Student Diversity

The highest number of responses concerned obstacles to achieving student diversity. The most frequent issues concerned the perceived inadequacy of skills, prior education, and literacies of potential minority students; inadequate financial resources for recruiting and support of minority students; and inadequacy of other efforts for recruitment of minority students. Regarding the issue of skills and preparedness of minority individuals for student recruitment, one comment indicated, "Poor secondary school preparation in writing detracts from students' abilities to succeed." Another respondent noted the challenge of awakening interest in the field of technical communication among minority students "and lack of role models/socialization factors."

The most extensive response addressed the issue of attitudes and assumptions about racial and ethnic minorities:

How to deal with the presumption, which seems to be currently held by both faculty and employers, that mastery of standard American English must necessarily be the standard for technical communicators.... We've pretty much always worked on the assumption that students coming into the program, whether they are L1 or L2 speakers of English, would need to have close to fluency in standard written and spoken American English in order to benefit from the program.

Some respondents discussed the challenge of recruiting and retaining specific minorities: "Our program is in a Hispanic-serving, open admission university, which is great, but the problem is that attrition at the undergraduate level is high." Another respondent discussed similar concerns for retention of African American students:

As a primarily regional university, we serve a heavily African-American student population, many of whom come from the city school system and lower socio-economic strata. Lagging literacy, familiarity with academic culture and opportunity to take advantage of internships are, in approximate order, problems with our Af-Am students doing as well as other groups. This is not always the case, of course, as some of our best students are Af-Am. However, other subtle problems of teaching and mentoring students of color, often appear, typically in arguments over quality and standards.

Respondents identified obstacles to programmatic diversity goals that were consistent with our expectations and with the findings of prior studies of diversity issues in higher education. For student diversity, the three major concerns were 1) inadequate preparation in secondary education for some minorities, 2) lack of success in recruiting minority students, and 3) lack of financial resources to support minority students, and possibly also to support recruitment efforts.

Regarding minority faculty, the recruitment difficulties appear to be a concern equal to the difficulties of recruiting minority students. Contrary to prior studies' findings, retention of minority students and faculty was not listed as a major concern. This finding may indicate an assumption that if underrepresented minorities cannot be recruited, retention is not yet a problem.

Only a few respondents expressed concern about obstacles to curricular diversity goals. This result may reflect the relatively high number of nontechnical communication courses listed that respondents consider relevant to the diversity concerns of technical communication. Thus, many respondents may consider that by encouraging students to take diversity-focused, nontechnical communication courses, their program is adequately addressing the need. Indeed, for the program that listed the highest number of diversity-focused courses (eleven), all of the courses listed were literature, rhetoric, and linguistic courses, not technical communication courses.

Of the respondents who did describe obstacles to curricular diversity goals, one mentioned the lack of diversity research in the field. Another mentioned lack of resources without elaborating what was meant, but in this case, "resources" could well refer to the lack of research that could inform technical

communication instruction relating to diversity concerns. We suspect that the number of diversity-focused, nontechnical communication courses listed by respondents does indeed reflect the lack of diversity-related research in our field. As mentioned earlier, diversity research in technical communication has addressed issues of gender, disabilities, and age (although by acknowledging such research we do not mean to suggest that sufficient research has been conducted on those topics, particularly as they may be complicated by issues of culture and race). Attention to international aspects of culture and language is growing, although we believe a great deal more work is needed. However, almost entirely lacking is research addressing the ways that technical communication may be implicated in practices that disregard social justice, racist and colonial histories, and the related political, economic, and ideological arrangements within which technologies and technical communication are developed. Some of the few noteworthy exceptions to this lack are (Crow, 2002; Johnson, et al., 2008; Kossek & Zonia, 1994). Without such research, it will be difficult to design technical communication curricula that can effectively address these issues. We commend, therefore, the programs that recommend nontechnical communication courses to increase students' understanding of social justice and diversity issues as a way of meeting this need until our field more fully addresses it through research.

It was not surprising that the geographic location of the institution and lack of financial support were identified as important obstacles for diversity goals. Our university is about 140 miles from a major city, where relatively large African American and Hispanic communities are located. We have often heard the argument that it is difficult to attract minority students from such urban communities if the university does not have a large local community of those racial or ethnic groups. Belonging to a community helps sustain cultural identity and provide security through close-knit family and social groups. Consequently, potential minority students may be unwilling to travel far from their home communities for education in settings where there are few people with whom they share common cultural bonds. A number of survey respondents expressed the view that most racial and ethnic minorities tend to live in concentrated communities in urban areas. A number of studies have indicated that underrepresented minorities are more likely to choose nearby community colleges, at least to begin postsecondary education. For example, in Illinois in 2007, minority students "accounted for over one-third (35.4%) of the individuals enrolled in credit coursework at Illinois community colleges whose ethnicity was known" (*Illinois Community College System Selected Programs and Services for Underrepresented Groups*, 2009, p. 4). In that year, according to US Census data, Illinois' minority population represented 27% of the state's total population. Thus, minority enrollment in community

colleges was proportionally higher than for the state. According to these studies, the reasons for such choices are mainly pragmatic, most often involving financial limitations and family responsibilities (Florida, 2004; Greene, 2008; Szelenyi, 2001). Also, some students' preparation may not be sufficient to enable them to gain admission to a four-year university directly from high school.

We suggest that many technical communication programs might increase underrepresented minority student enrollment over time by developing cooperative relationships with community colleges. Such cooperations could involve helping to develop learning communities, tutoring and mentoring programs, technology training, and faculty development programs. Such programs could also provide opportunities for graduate students and advanced undergraduates to become tutors, mentors, and technology specialists through assistantships and internships. Grant funding could support collaborative research among university and community college faculty in areas of mutual concern, especially relating to issues such as curricular continuity between cooperating institutions and other aspects of program design and pedagogy. All these efforts could cultivate program visibility and good will, identify promising students, and lead ultimately to increased minority student recruitment and retention.

Obstacles to Faculty Diversity

The highest number of responses in the faculty category concerned the issues of recruiting minority faculty and of training (or qualifications) of current faculty for teaching about diversity issues. This second concern was also related to recruiting minority faculty because of the difficulty of finding minority scholars qualified to teach in a technical communication program. As one respondent commented, "It is challenging to identify individuals from underrepresented groups and to encourage them to apply. Once they have applied and been accepted, it is challenging to ensure that they are successful as both teachers and researchers." Another response related the difficulty in recruiting minority faculty to the demographics of the institution's region:

Although we have a substantial number of minority students from large urban areas in the state, our school is located in a somewhat rural, largely white area of the state... Frankly, I think if we could get minority faculty or faculty with disabilities to our campus... they'd be impressed with our diverse student body and how supportive our campus is.

One respondent expressed concern not just about English language competencies of students but about the challenge of finding international faculty "who can teach Standard Written English."

It seems the most intractable obstacle for programmatic diversity goals may be faculty recruitment. The lack of minority students in the field might be seen as an important reason for the lack of minority faculty candidates. As the respondent quoted above suggests, minority faculty may feel greater isolation in a nonurban university if there are few students of their own ethnicity, or even of any minority, enrolled in the program or institution. In the same way, minority students may be unwilling to attend a university where there are no faculty members like themselves whom they can look to as models and mentors. In the longer view, if programs are not attracting minority students who may eventually earn doctoral degrees in technical communication, where else can we expect minority faculty to come from? It appears to be a classic Catch 22.

Obstacles to Program and Curricular Diversity

In the program and curriculum category, although five concerns were expressed, none of them received a significant number of responses. Nevertheless, some of the responses in this category were significant. One pointed to a lack of diversity goals for the program: "I don't believe we have official diversity goals for our 'program.' We work with students as they come, regardless of ethnicity. The university has diversity goals but not our program specifically." Another respondent, apparently speaking to the issue of curricular diversity, said, "The greatest problem is the scarcity of research on diversity in the field, including diversity in practice/industry."

The remarkable lack of perceived curricular obstacles to program diversity may be explained in several overlapping ways. First, as responses to Question 7 suggested, our field may already have a good sense of the direction it needs to go in terms of curricular focus on diversity issues. Although only a few programs among respondents presently seem to have strong diversity-focused curricula, the existence of such programs may provide models for other programs so they don't have to invent an appropriate model on their own. On the other hand, it is apparent that a number of programs have little or no diversity focus. Some admit to having never considered it before responding to our survey.

The lack of perceived obstacles may also indicate that many respondents consider the real problem to be faculty recruitment. That is, they may suppose that if more culturally or racially diverse faculty could be hired, those new hires would be able to develop the needed curricular diversity. This may well be correct, although it overlooks the point made by studies in higher education, indicating that some minority faculty may become unfairly burdened with the whole task of teaching diversity perspectives, leaving the mainstream faculty to carry on as usual. Perhaps a combination of both goals would be the best solution.

Institutional Obstacles to Diversity

In the institutions category, the highest number of responses concerned financial support for diversity policies and initiatives by the institution. The second highest concern was the geographic location of the institution. Consistent with a number of studies of institutional diversity policies and initiatives, much of the concern from our survey respondents was focused on a lack of material support for diversity measures, such as financial support for recruiting, scholarships, and other forms of assistance to minority students. A particularly sharp criticism focused on the difference between having a diversity policy and real support for the policy:

The administration talks about diversity and says it is a priority but then they don't really back it up (e.g., The university diversity coordinator is applying for another job because his position will be discontinued next year). When my department tried to organize [diversity] training for the department we were denied. We want to begin actively recruiting students but we have no funding to do so.

A common obstacle identified by respondents was the geographic location of their universities. Institutions in nonurban areas or in areas without diverse populations are perceived to be unappealing to ethnic and racial minorities. In addition, two responses pointed to the disciplinary focus or culture of their institutions as obstacles. One said, "Both the technical culture of our institution and its remote, rural geographical location restrict the sort of diverse student population that more urban, more comprehensive institutions may experience."

These concerns can be more fully discussed in relation to results for Question 9, to which we now turn.

University Support for Program Diversity Goals

Question 9 asked, "In what ways does your university support your program's diversity goals?" Previous studies have shown the importance of institutional commitment to diversity in order to achieve diversity goals at all structural levels and for the various populations within the institution. Question 9 probes further into the issue of institutional support for diversity goals as experienced by technical communication program directors.

For this question, there were 30 responses. As with Question 8, we sorted responses to Question 9 into the four categories of programmatic diversity concern that we have used to structure our study: students, faculty, program/curriculum, and institution. Some responses encompassed two or more of these categories. Although it seems redundant to include the category of "Institution"

as a focus for institutional support, we found that some institutional policies and practices named by respondents could not be clearly linked to support for student or faculty diversity at the programmatic level, or for attention to diversity in curricular areas. In most cases, although meaningful institutional support for diversity was evident, it was not focused at the level of programmatic goals or needs. In these instances, we counted the response only under the institutional category. Table 7 (Appendix) shows responses for Question 9 for each programmatic diversity category.

As with Question 8, a quantitative representation of the responses to Question 9 does not reflect the variety of institutional support identified by respondents. Therefore, in the discussion below, we also quote some of the more extensive responses.

Institutional Support for Student Diversity in Technical Communication Programs

Institutions provide more support to programs for goals of student diversity than for faculty or curricular diversity goals. This difference may be explained in part by the fact that recruitment of students is usually regarded as an institutional responsibility, not primarily a department responsibility. Support for student diversity is in the form of direct aid to students, for example, scholarships and other financial aid and for recruitment of minority students. One university is especially supportive of increasing graduate student diversity: "In some cases, enhanced financial aid has been provided for students from underrepresented groups."

Institutional Support for Faculty Diversity in Technical Communication Programs

Least supported in terms of specific programmatic goals is support for faculty diversity, possibly because faculty recruitment is considered a department responsibility, not a university responsibility. Only one respondent indicated the program had received support for a diversity hire, specifically, for an international scholar: "Our university is sponsoring a new faculty member that is not a U.S. citizen; she not only brings a global perspective to our program but is a scholar of intercultural communication."

Another respondent said the university was providing "funding for co-teaching with community partners." Although this point was not elaborated, it appears the university either provides opportunities for faculty to teach in minority community settings or to co-teach with minority colleagues from outside the institutional setting.

Institutional Support for Technical Communication Programmatic/Curricular Diversity

The most extensive institutional support for technical communication program goals regarding diversity appears to be in the form of broad support for any diversity initiative the department considers important. We presume that such support may include such issues as minority student or faculty recruitment as well as curricular initiatives that address diversity. One respondent said the university had “funded a usability lab, in which we teach web accessibility issues.”

General Institutional Support for Diversity Not Specific to Technical Communication Programs Goals

By far the greatest number of responses described general institutional support for diversity in terms of student and faculty recruiting, as well as some broader support in other areas of diversity concerns. However, these responses did not indicate that such support was focused on specific departmental initiatives or goals.

Some respondents were clearly dissatisfied with institutional support for diversity. As one respondent wrote:

I wish they did more. Their main effort is participation in a yearly recruiting event that brings current seniors, primarily African-American, to campus to meet faculty, etc., but this is a university-wide initiative and more likely to attract students with interests in engineering, computer science, etc than in tech writing. We used to have diversity scholarship supported by the central administration and administered by the departments, but that is no longer the case. The university says it promotes diversity but doesn't seem willing to put money behind it.

Another observed, “In general, the culture is pro-diversity, but not much actual support specifically for our program, or about increasing diversity.” Similarly, another respondent said, “University supports diversity although I don't know what practical efforts it makes for recruitment.”

Some noted that even where support exists it can be difficult to obtain. For example, “We do have a program for ‘target of opportunity’ hires here, but it's difficult to get one.”

The most critical comment to Question 9 was: “No way. Any effort would be on my own time.”

On the other hand, a number of respondents described substantial institutional support for diversity. One said, “Our college has a large ESL program and a strong Disability Services department both of which do a remarkable

job, despite statewide budget cuts, of supporting all students who need their services.”

Other comments described a variety of ways their institutions work to advance diversity:

The university is hiring a VP of diversity. The international study programs are healthy and well supported. Minorng in a modern language/culture is strongly encouraged.

The University has a strong set of diversity initiatives and a good community of support....Support for international students is strong.

We have a very active diversity office that organizes events and brings speakers to campus that attract white and minority students alike. We also have excellent services for students with disabilities and for non-traditional students. These groups are quite active and visible on campus.

Overall, exactly half (15) of the responses to Question 9 described effective institutional support. The other responses described policies and practices that ranged from ambiguous to little more than lip service to no support at all for diversity. A number of respondents' comments concerning limited financial support were really describing institutions facing general cuts in budgets and funding sources reflecting the widespread problem of statewide economic crises in the United States. Several respondents, however, seemed simply unaware or uncertain of institutional policies and support options for diversity.

Most striking about responses to the question regarding institutional support for diversity goals is how few responses identified ways that their institutions provide support for specific programmatic diversity initiatives. Respondents mentioned only 14 forms of support for student, faculty, and curricular diversity initiatives at the programmatic level combined. For support that functioned at the institutional level, there were 26, nearly twice as many. Other studies indirectly support this finding. That is, if diversity is a real commitment, institutions are most likely to implement their initiatives campus wide. At the same time, however, it seems obvious that such initiatives can ultimately only be meaningful at the departmental or programmatic level. They must result in increased diversity enrollment, increased hiring of diversity faculty to teach, and increased curricular diversity in specific programs. Several respondents observed that institutional support for diversity tends to involve more talk than committing resources or developing initiatives that get real results. This view was also supported by some of the studies we consulted. In such cases, it may

be necessary to seek other sources of support for programmatic diversity goals. Even in a difficult economic climate, grants may be available for innovative proposals. Support may also be provided by corporations or individual donors.

On the other hand, whether institutional support happens at the programmatic level may depend upon how energetic the program-level diversity efforts are. Our survey data does not tell us whether the program directors who reported receiving strong institutional support received that support because they requested it. Neither does the data indicate whether directors who reported they received little or no support had requested support and had been denied or ignored. We would suggest, in any case, that programs may need to submit specific proposals for institutional support of diversity initiatives. It may not be reasonable to expect the institution to identify the diversity needs of specific programs. This expectation would suggest that program directors and faculty need to be more proactive in exploring the possibilities for diversity support from their institutions. For example, they might work closely with university administrators and diversity advocacy offices in developing proposals consistent with institutional goals and commitments. Indeed, it is unlikely that any university, particularly public institutions, would not provide some form of support for increased diversity at the program level.

Program directors might find more support than they had expected if they discuss their diversity concerns and goals with institutional administrators and work with them to devise and implement initiatives that could satisfy mutual concerns. In institutions where diversity is a sincere commitment, diversity offices are staffed by experts who may provide valuable guidance in devising and implementing effective diversity initiatives and avoiding the problems mentioned by one respondent: "However, poor implementations of diversity initiatives can create very negative attitudes towards such efforts." To reiterate what another respondent noted, "The problems of diversity are complicated, obviously. . . . Helping faculty to know how to even broach this topic would be a huge benefit to the discipline." Such problems are often systemic and reach well beyond the circumstances of a specific field. Good institutional support, as well as support from outside the institution, is undoubtedly essential to achieve diversity goals.

Other Perspectives

Recognizing that our survey questions may not have addressed all perspectives or concerns regarding programmatic diversity, additional perspectives were requested in Question 10. This section summarizes the findings for that question.

Question 10 asked, "Please feel free to make additional comments if you have perspectives not addressed in the questions in this survey." There were ten

responses to this question. Six respondents added specific information about their own programs. Two responses constituted what might be described as reflective comments either about the survey or about their own responses to the survey. Two other comments were more broadly philosophical, taking up the issue of programmatic diversity and offering comments on the need for further discussion, exploration, and/or action on the issue.

Comments on Specific Features of Respondents' Programs

Three responses described the kinds of diversity in their programs:

1. About 60% of our graduate students are international students.
2. We have a small diverse faculty, and we have had representatives of most of the groups mentioned except foreign students because we don't have resources for them to attend our campus.
3. We are trying to increase the number of students in our programs (undergrad and grad). We have always had a fair number of African-American females (and one or two males) at the graduate level. We need to work harder at the undergraduate level.

A fourth comment simply notified us that the institution no longer has a technical communication program. The fifth, in a seemingly somewhat discouraged comment, described the difficulties of getting undergraduate technical communication students to go on to graduate school, especially minority students. The sixth response in this group was: "Diversity is not an issue so much as getting [students] to enroll in a difficult program."

Reflective Comments

Both comments in this category seem to suggest that the survey had raised issues the respondents had not previously considered:

1. Most of my responses are simply guesses."
2. The survey has prompted me to realize that no explicit mission related to diversity issues in fact has been articulated for our program. Good food for thought!

Philosophic Comments

The first response in this category called attention to the potential harm that poorly implemented diversity initiatives may do despite good intentions:

I believe that diversity initiatives can benefit everyone if they are properly enacted. Being clear about expectations, being inclusive, building stronger connections, these are things that improve life for everyone. However, poor implementations of diversity initiatives

can create very negative attitudes towards such efforts. I think we have to be more aware of this.

The second philosophic response related the issue of diversity to globalization but also pointed out the challenges in addressing diversity in a professional program like technical communication. The respondent said,

I think this is a crucial issue across the US and, with increasing globalism, in most industrialized nations...The problems of diversity are complicated, obviously, and I find many diversity discussions center around 'standards' and 'quality,' ...Helping faculty to know how to even broach this topic would be a huge benefit to the discipline.

Although responses to the survey confirm a number of common assumptions about programmatic diversity issues, it is clear that a number of responses suggest challenges and complications that have not been widely discussed. On the other hand, some responses suggest there is progress in some programs in relation to some issues of program diversity.

Conclusion

As a number of our survey respondents indicated, directly or implicitly, we need to do a great deal more than most of us have done so far to diversify student and faculty populations in programs and to incorporate diverse cultural perspectives in curricula. Our study findings also suggest that these are immensely complex issues, often to the extent that it is difficult even to articulate appropriate goals. Clearly, not all diversity inequities in our programs are our fault. Unquestionably, we are dependent upon powerful forces beyond our programs that may be indifferent or opposed to diversity concerns, or that may also be thwarted by yet more powerful agencies. But the existence of such external obstacles need not prevent us from persistently questioning and critiquing their indifference or opposition.

We acknowledge that we are recommending political action, yet such action should involve more than talk. Most of all, action needs to be at a level that can be sustained. For example, progress might be made through appropriate kinds of teaching, through participation in local community initiatives for diversity, or through mutually beneficial programmatic collaborations with community colleges. As one survey respondent said, "Engagement is a strong component of many of our courses and so service-learning projects often have students working with under-represented groups in the area." Further research in issues of programmatic diversity and diversity in sites of professional practice is essential to expand our base of knowledge concerning the current status of diversity in our field and concerning specific ways and contexts for taking action.

If our study encourages other scholars to further explore diversity issues in the technical communication field, we will consider the present work worthwhile. We undertook this study in order to establish a baseline of information about diversity in technical communication programs. We hoped to gain some understanding of what diversity means in our field and for the field. At best, we believe we have provided a start toward that kind of understanding. Perhaps primarily we have confirmed what many who have given thought to these issues had already suspected.

We hope this study will encourage innovative, hopeful, and determined efforts to overcome the disadvantages that result for all when any are denied equal access to education, economic opportunities, needed tools, or human rights. Technical communication programs should not be the last to seek solutions to these problems.

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Authors’ Note

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Appendix

Table 1 Programmatic Goals for Student Diversity

Full Dataset in Response to Question 1: Is your program seeking to increase enrollment of *students* from any of the following groups? (Check all that apply).
28 responses

Group identity	Number of respondents selecting	Percentage of respondents selecting
African Americans/Black Canadians/African Canadians	20	71%
Latinos/Latinas	19	68%
First Peoples of the US and Canada/American Indians/Native Americans/Indians of Canada	13	46%
People with disabilities	11	39%
Asian Americans/Asian Canadians	11	39%
Gay, Lesbian, Bisexual/transsexual people	10	36%
Men	10	36%
Latin Americans	9	32%
Asian and Pacific Islanders	9	32%
Africans	8	29%
Women	7	25%
Other groups (specify)	6	21%
Australians and/or New Zealanders	6	21%
Eastern Europeans	5	18%
Western Europeans	5	18%

Table 2 Perception of Student Diversity in Technical Communication Programs Nationally

Full Dataset in Response to Question 5: To your knowledge, are any of the following groups probably underrepresented among technical communication students across your nation (Canada or the United States). 32 responses

Group identity	Number of respondents selecting	Percentage of respondents selecting
African Americans/Black Canadians/African Canadians	28	87%
First Peoples of the US and Canada/American Indians/Native Americans/Indians of Canada	25	78%
Latinos/Latinas	23	72%
People with disabilities	13	41%
Asian Americans/Asian Canadians	11	34%
Africans	10	31%
Asian and Pacific Islanders	9	28%
Gay, Lesbian, Bisexual, and Transgender/transsexual people	8	25%
Latin Americans	8	25%
Eastern Europeans	6	19%
Australians and/or New Zealanders	6	19%
Men	6	19%
Women	2	6%
Western Europeans	2	6%
Other groups (specify)	0	0%

Table 3 Programmatic Goals for Faculty Diversity

Full Dataset in Response to Question 3: Is your program seeking to increase *faculty* from any of the following groups (check all that apply). 27 responses

Group identity	Number of respondents selecting	Percentage of respondents selecting
African Americans/Black Canadians/African Canadians	22	81%
Latinos/Latinas	17	63%
First Peoples of the US and Canada/American Indians/ Native Americans/Indians of Canada	11	41%
Asian Americans/Asian Canadians	10	37%
Women	8	30%
People with disabilities	7	26%
Gay, Lesbian, Bisexual/transsexual people	6	22%
Men	5	18%
Latin Americans	4	15%
Other groups (specify)	4	15%
Africans	3	11%
Asian and Pacific Islanders	3	11%
Eastern Europeans	3	11%
Western Europeans	3	11%
Australians and/or New Zealanders	2	7%

Table 4 Perception of Faculty Diversity in Technical Communication Programs Nationally

Full Dataset in Response to Question 6: To your knowledge, are any of the following groups probably underrepresented among technical communication *faculty* across your nation (Canada or the United States). 32 respondents

Group identity	Number of respondents selecting	Percentage of respondents selecting
African Americans/Black Canadians/African Canadians	29	91%
Latinos/Latinas	24	75%
First Peoples of the US and Canada/American Indians/ Native Americans/Indians of Canada	21	66%
People with disabilities	17	53%
Asian Americans/Asian Canadians	15	47%
Gay, Lesbian, Bisexual/transsexual people	11	34%
Africans	11	34%
Latin Americans	8	25%
Asian and Pacific Islanders	8	25%
Australians and/or New Zealanders	8	25%
Eastern Europeans	7	22%
Western Europeans	4	12%
Women	3	9%
Men	2	6%
Other groups (specify)	1	3%

Table 5 Courses* Sorted by Categories Relating to Diversity Topics

Full Dataset in Response to Question 7: Please list all courses in your curriculum that are specifically designed for and dedicated to the study of diversity-related issues as your program defines diversity. Of the courses you list, please indicate which ones are required by preceding the course title with R- (for example: R-Intercultural Technical Communication). 28 respondents

Miscellaneous Topics (n=4)	Culture & Ethnicity (n=9)	Gender (n=4)	Rhetoric & Writing (n=27)	Language & Linguistics (n=4)	Other Responses (n=9)
Identity & Values Usability Dialog & Change Postcolonial Lit	R-Cultural Diversity Visual Culture Lit & Amer Cultures (2) Afr Amer Lit (3) Native Amer Lit (2)	Gender Studies Gender & Culture Women's Lit GLBT Lit	Cultural Studies & Writing Public Rhetorics Rhet in Context Proposal Writing (2) (R=1) Tech Comm (2) Online Documentation Internat/Intercult Tech/Business Comm (8) (R=1) R-Intercult Comm (4) (R=2) Rhet of Difference Comm & Gender Business Writing for International Students Gender & Rhetoric Minority Rhetorics ESL Writing Rhetoric & Human Rights	Language & Culture (2) Sociolinguistics Language & Society	No courses specifically focusing on diversity issues but many courses in program include diversity topics (4 responses) No diversity-related courses (5 responses)

*Course titles have been altered to protect confidentiality of programs

Table 6 Obstacles to Diversity Goals for Four Programmatic Categories of Concern

Full Dataset in Response to Question 8: What obstacles to your diversity goals do you consider especially challenging? 30 respondents

Obstacles	Students	Faculty	Program/ Curriculum	Institution
Skills/Education/Literacy/Training	5	3		
Job Mkt	2			
Financial	4	2		7
Recruitment	5	5		
Retention	1	1		
Teaching Load		1	1	
Materials/ Resources			1	
Lack of Diversity			2	1
Lack of Diversity Research in Field			1	
Location				5
Type of Institution				2
Commitment/ Support for Diversity				1
No Diversity Goals			1	
Total	17	12	6	16

Table 7 Institutional Support for Programmatic Goals in Four Categories of Concern

Full Dataset in Response to Question 9: In what ways does your university support your program's diversity goals? 30 respondents

Students	Faculty	Program/ Curriculum	Institution
Scholarships/financial aid (3 responses)	Support for International Hiring (1 response)	General Support for Dept diversity initiatives (3 responses)	Equal Opp/ Aff Action (1 response)
Recruitment (4 responses)	Community co-teaching support (1 response)	Facility (usability lab for diversity research) (1 response)	Courses for minority needs (2 responses)
		No departmental diversity goals (1 response)	Services (3 responses)
			General openness (2 responses)
			Minority hiring policy (3 responses)
			Diversity initiatives & events (6 responses)
			Student recruitment (1 response)
			Diversity research grants (2 responses)
			Diversity training (2 responses)
			Diversity talk only (3 responses)
			Location (1 response)
Total 7	2	5	26

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Toward Racial and Ethnic Diversity in Technical Communication Programs

A Study of Technical Communication in Historically Black Colleges and Universities and Tribal Colleges and Universities in the United States

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Abstract. This article presents the results of an exploratory study of the available technical communication programs in 135 Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs) in the United States. We investigated how and when the HBCUs and TCUs were established, specifically social, political, and economic factors that influenced curriculum development in these institutions of higher education. To determine the number and the nature of the available technical communication programs, we closely examined the websites and course catalogues and descriptions of the colleges and universities. We also looked at their mission statements to obtain a better understanding of whether a technical communication degree would align with the goals and objectives of the selected institutions. The broader purpose of our investigation was to improve understanding of the status of diversity in our field and to start a dialog on how to increase diversity among technical communication students and faculty.

Keywords. culture, curriculum, diversity, ethnicity, HBCUs and TCUs, program design, race, recruitment

This article responds to a growing concern in technical communication programs and in the field's professional organizations for the lack of racial and ethnic diversity among technical communication students, faculty, and practitioners. As members of CPTSC's Diversity Committee, the authors launched a study of the current status of professional, technical and scientific communication programs in Historically Black Colleges and Universities (HBCUs) and Tribal Colleges and Universities (TCUs) in the United States. This study

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is important to the programmatic focus of United States technical communication programs in several ways: at present no HBCU faculty or program administrators participate in CPTSC and possibly not in other technical communication organizations either.

Participation by these schools may not only be critical to achieving the diversity goals of organizations, such as CPTSC and ATTW, but may also benefit programs in historically black and tribal institutions of higher education. Participation by these institutions should begin to increase diversity in our membership. (Note, however, that faculty in HBCUs and TCUs are not necessarily African American or Native American). In addition, we would likely be able to begin a much needed dialog about ways to effectively recruit ethnic and racial minorities as students and faculty, design curricula, and facilitate transition to professional practice for underrepresented groups in the field of technical communication in the United States. To better understand the current status of diversity in technical communication programs and the potential for increasing diversity, we surveyed the websites of 103 HBCUs and 32 TCUs in the United States.

Through our investigation, we have determined that basic technical writing courses are taught in 73% of HBCUs. Thirteen of these institutions offer a major, minor, or certificate in technical communication. In the case of tribal colleges, 90% offer technical communication or similar courses. None of the 32 TCUs surveyed offer technical communication majors, minors, or certificates. However, approximately one fourth of TCUs could offer either a major or a minor in technical communication simply by combining courses already offered, although in most cases their courses are distributed among several departments. Typically such courses are taught in departments of English, business, and computer science.

We see great potential for technical communication programs in HBCUs and TCUs and for increasing participation of such programs and their faculty and students in organizations such as CPTSC, ATTW, and STC. However, we also understand the cultural, political, legal, and economic circumstances in which these colleges and universities have arisen and currently operate. These circumstances are extraordinarily complex, and although some similarities exist between the two categories, there are also great differences between HBCUs and TCUs as well as differences among the institutions within each group. This study offers some basic data regarding the teaching of technical communication in these institutions. We also provide an overview of the historic contexts and contemporary issues that define the educational missions, practices, and facilities of these schools.

Not only is our field faced with a lack of diversity in practitioners and scholars, but it has also lacked research regarding issues of diversity. The notion of diversity is itself controversial and broad. It encompasses issues of race, ethnicity,

religion, nationality, gender, sexual orientation, class, age, disability, and other socioeconomic categories. There has been no lack of discussion and research in other fields concerning issues of diversity. Composition and communication studies—even business communication—have addressed diversity concerns relating to academic programs, the workplace, and society. Currently, an ongoing series of guest-written blogs is being hosted by CCCC, titled “CCCC Conversations on Diversity.”¹ The writers in this series have raised important issues concerning the definition of diversity and appropriate ways to address problems relating to the subject in composition pedagogy, research, and direct social action.

However, none of the blogs have specifically addressed issues of technology or technical communication in any detail. Technical communication research itself has remained largely silent on issues of diversity, especially as they pertain to race and ethnicity of technical communication practitioners, students, faculty, and academic programs in the United States (see Boyer & Webb, 1992, for a relatively early exception).

International diversity is a dimension of diversity sometimes celebrated by programs, departments, and institutions, especially for international minorities of the same races underrepresented among US residents. However, increasingly, institutional diversity policies prohibit counting such international students and faculty to fulfill diversity enrollment or recruitment goals. The field of technical communication seems, appropriately, to welcome international minority involvement in our organizations, academic programs, and practice. Nevertheless, the authors do not consider the growing participation of international students, teachers, and practitioners to be an adequate answer to the lack of diversity in the technical communication field. Neither do we believe international minorities fulfill the goals articulated in the 2004 CPTSC Diversity Report, a document that laid a foundation for the work of the CPTSC Committee for Diversity.

A few voices have spoken out about the lack of scholarly attention to these concerns for over a decade. A perception has existed, undoubtedly justifiable, that real risks may be involved in exploring such issues, perhaps especially as they concern issues such as race in the United States. Laurie Grobman wrote in 2000, “Clearly, how we deal with cultural diversity within the United States in our professional communication classrooms is vitally important and potentially explosive” (Grobman, 2000, p. 96). She cites Marlene G. Fine (1996), a business communication scholar, who said,

Politically, the study of international differences is safer than the study of racial and ethnic differences in the U.S. The social sciences

1 See <http://cccc-blog.blogspot.com/search/label/Conversations%20on%20Diversity%20%231>.

in the U.S., for the most part, are grounded in assumptions of objectivity and neutrality. Studies of domestic racial and ethnic differences, whether intended or not, carry political overtones and are subject to suspicions at both ends of the political spectrum—they are “too politically correct” for those on the right and “insufficiently politically correct” for those on the left. (p. 492)

Our study responds specifically to one of the goals articulated in the 2004 CPTSC Committee for Diversity Report. That report emerged from the business meeting at the 2003 annual conference held at Clarkson University. In that meeting, Cynthia Selfe proposed the formation of a committee to promote increased diversity in the membership of CPTSC and in the field of technical communication. A number of members present in the business meeting volunteered to serve on an ad hoc committee chaired by Selfe. The group met online later that fall and formulated a set of goals and proposals, which were reported to the 2004 conference. The goal to which our study responds is “to gather information on the current demographics of race within the profession: in the workplace and in the academy” (Selfe, 2004, p. 1).

Only a few months before the 2004 CPTSC diversity report was presented to the annual meeting, Stuart Selber observed, “despite an emphasis on the social in technical communication, we have basically ignored race and class issues. This is indeed a shameful fact, one that in certain ways positions the field as more traditional than many of the other academic areas we like to dismiss as irrelevant in this day and age” (p. 149).

We hope the present study will contribute to a foundation of knowledge that will help programs begin to develop relationships and create opportunities for cooperation and collaboration across cultural, racial, and ethnic boundaries for program and curricular development. Our intent is not only to contribute to CPTSC’s diversity goals but also equally to help meet specific goals of all collaborating partners for technical communication and practice. This article will provide an overview of some recent arguments concerning the need for attention to culture, race, and ethnicity in technical communication programs. We will then briefly review the history of the establishment and the current status of HBCUs and TCUs, discuss cultural and political forces that formed their curricula, and offer the results of our survey of the available professional, technical, and scientific communication programs in these institutions.

Culture, Race, and Technical Communication Programs

It is our contention that, although we do not assume there has been intentional bias, our field as a whole must acknowledge and confront the effects of neglect

or structural exclusion by our institutions and programs in regard to minority groups. A few recent perspectives in our field have examined the significance of diversity concerns in technical communication education. Not surprisingly, it was Cynthia Selfe (1999) who called attention to embedded racism and classism in literacy education relating to technology in all educational institutions at all levels, from kindergarten to higher education. Referring to the Clinton administration's Technology Literacy Challenge, Selfe wrote, "the project to expand technological literacy implicates literacy and illiteracy—in their officially defined forms—in the continued reproduction of poverty and racism. And it implicates teachers as well, despite our best intentions" (p. 7). Samantha Blackmon's keynote presentation to the 2004 CPTSC meeting also addressed this issue:

In the same way that we have come to realize that racial history and attitudes affect acceptance of cultural and linguistic differences, the study of minority rhetorics can help us to discover how these things can affect any number of things, from the more traditional classroom dynamics and pedagogical practices to the way that minorities interact with technology, and the ways that they find themselves represented online, in video games, in films, and elsewhere. (pp. 1–2)

Among the first to extensively investigate both the silence and the responsibility of communication fields in terms of race and technology is Adam Banks. Banks (2006) points out that technical communication programs, along with rhetoric and composition,

have been staggeringly silent about the problematic relationship between race and technology access that became crystallized in the term "Digital Divide."... This silence is even more stark if one really considers technology access to be a rhetorical problem, because if it is, technical communication and rhetoric and composition more broadly are the intellectual spaces within English Studies, and maybe even the university as a whole that have the potential to do the most to address it. (p. 14)

Susan Popham brought the lack of diversity in technical communication programs to our attention again in 2007, saying, "Across the nation, the lack of African-American participation in technical writing programs is a serious issue, suggesting a field with narrow interests and a career path that may overlook the interests of the African-American community. Moreover, published research about African-American participation in technical writing programs is near

non-existence” (p. 4). Popham goes on to point out that some programs, including hers at the University of Memphis, “have larger than average enrollment of African-American students” (p. 4). Further, she calls for studies to investigate “the current lack of African-American participation and explore possible ways in which programs may be marketed, revised, and shaped to meet the expectations and needs of possible African-American students” (p. 4).

Popham’s study involved interviews with five African American women enrolled in the University of Memphis program. Our study takes a national perspective, examining the number and nature of technical communication courses and programs in HBCUs and TCUs. A key issue for this study was to begin to understand the influence of culture on such courses and programs. In other words, although culture has for some time been recognized as a factor in addressing audiences of technical documentation and has therefore been a part of teaching about context and audience, we have paid little attention to the cultural nature of technical communication pedagogies, principles, and practices in themselves. We have, it seems, been blind to our own culturally defined assumptions, beliefs, and values in the work we do. Thus, an aspect of our study was to identify cultural influences in diverse programmatic and curricular contexts such as we might expect to encounter in HBCU and TCU programs with institutional histories and cultures that are considerably different from those of mainstream institutions.

Such differences are suggested in the work of technical communication scholar Angela Haas. Working from a decolonial and American Indian Studies theoretical perspective, Haas (2008) sought ways “for resisting the over-reliance on and reproduction of dominant Western domains of thought and knowledge-power structures in rhetoric, computers and writing and technical communication inquiry and explore... how American Indian identities have been constructed (by Natives and non-Natives) in relation to technology” (p. 2).

A Brief History and Current Status of HBCUs and TCUs

Early technical communication programs appeared in the late 1950s and 1960s. The first graduate degree was offered in 1958 at Rensselaer Polytechnic Institute (Connors, 2004, p. 90). Currently, the database of the Society for Technical Communication lists approximately 130 universities and colleges that offer various technical communication programs in the United States, including 70 bachelor programs (STC Academic Database, 2010). However, this list includes no programs that exist in historically black or Native American tribal colleges or universities. In our research, we wanted to find out if such degree programs were available at HBCUs and TCUs.

HBCUs and TCUs are unique institutions and their rise, cultural impact, and curricula were shaped by various political events of the late nineteenth and twentieth centuries. These institutions are “on one hand, ... firmly rooted in the distinctive historical and cultural legacies of the particular minority groups they serve; on the other hand, ... [they] confront the same political, institutional, and social forces that operate to produce isomorphism in the field of higher education at large” (DiMaggio & Powell, 1983; quoted from Cole, p. 356). These complexities have revealed themselves in the role that professional, technical, and scientific communication programs play in the minority serving institutions.

HBCUs

HBCUs appeared in the mid and late nineteenth century during a time when white colleges and universities were closed for African Americans. Most of the institutions “were located in small towns and rural areas of the South and were affiliated with religious denominations” (Clayton, 1979; quoted from Zamani, p. 11). The Second Morrill Act of 1890 enforced state support of the x colleges. Much later, in 1964, the Civil Rights Act granted equal rights to African Americans to enroll in any institution of higher education.

Although initially the curricular emphasis of HBCUs was mostly vocational, they “evolved to include and promote general education and liberal arts” (Drewry & Doermann, 2001; Gray, 2001; Guyden, 1999; quoted from Zamani, p. 11). With few exceptions, the missions of HBCUs were, “to prepare African-American students for integration into mainstream society and to put them on an equal footing with white students” (Cole, 2006, p. 360). Such goals were loaded with philosophic and political controversy for decades following the Civil War, among Southern whites and among black cultural and educational leaders as well as college students (Jarratt, 2009).

The American cultural heritage of African Americans is primarily one of slavery and over two hundred years of separation from their African cultural roots. Thus, African American educational goals and needs cannot be easily compared with those of Native Americans and tribal colleges except in respect to their experience of oppression and marginalization by dominant American culture. With emancipation following the Civil War, black colleges and their students chose to pursue a Western classical curriculum modeled upon the tradition of higher education in American colleges of the nineteenth century (even as that tradition was already changing to meet the needs and aspirations of mainstream America for the new era of the industrial revolution).

Southern whites, particularly, but many in the North, as well, believed that education for blacks should be strictly vocational to prepare them for lower class jobs in keeping with the unequal status (and indeed, the supposedly inferior

abilities) imagined for them by a dominant culture largely still convinced of its own racial superiority. Blacks fully understood this agenda and believed equality would be unachievable without access to the cultural tradition that enabled educated white people to maintain such convictions (Jarratt, 2009). The complexity of these issues is vital for an understanding of these institutions' curricular structures and missions even today but is beyond the scope of our study. We recommend the 2006 essay by Cole for a comprehensive historical study of curricular rationales in HBCUs and TCUs and Jarratt's 2009 study of the history of classical curricula in HBCUs in the nineteenth century.

Currently, HBCUs constitute 3% of all universities in the United States (Sis-soko and Shiau, 2005, p. 181; Zamani, 2003, p. 11). The overall African American college enrollment rate has experienced major fluctuations because of economic crises and inflation rates and the insufficiency of Pell Grant awards to cover tuition costs in the 1980s; however, enrollment has been on the rise since 2003 (JBHE Foundation, African-American college enrollment, 2004, p. 43). HBCUs are producing "slightly over one-third of African-American degree recipients, more than other institutional types" (Hope, 1996; Wolf-Wendel, 1998; quoted from Zamani, p. 11).

For a prospective student, the choice of a major and an institution will most likely depend on the prospects of future employment and intellectual growth. Although a job applicant with a bachelor's degree has more chances to get a job than an applicant without a degree, if we look at the current unemployment data, the unemployment rate for African Americans with bachelor's degrees and higher tends to be higher than for the white population. For example, in 2009, unemployment was 7.3% for the black or African American population, compared to 4.2% for the white population (Planty, et al., 2009, p. 199).

HBCUs tend to retain and maintain a historical tradition and offer more traditional arts and sciences degrees than, for example, technical institutions or larger universities (Brint, et al., 2005, p. 170). Some HBCUs have built a strong reputation in preferred majors. Students interested in other fields can select universities with strong reputations in the preferred majors. To give an example, for students interested in bachelor's degrees in liberal arts and humanities, it would be advisable to choose universities and colleges that issue a large number of such degrees: St. Phillip's College (21.9% in 2004), Alcorn State University (19.7%), Coppin State University (19.2%), Southern University at Shreveport (15.7%), or Tennessee State University (14.3%) (JBHE Foundation, For Students at Black colleges, p. 42).

Given the comparative employment prospects for African American college graduates and white graduates, it is not surprising that, "business is the most popular major for African-American college students nationwide" (The JBHE Foundation, For students at Black colleges, 2004, p. 41). Approximately

22% of all bachelor's degrees awarded by HBCUs in 2002–2003 were business degrees. A business degree may lead to higher salaries and wider range of employment opportunities. In some HBCUs, as much as 60% of graduates earn business degrees. In popularity, business degrees are followed by education (6.4%), health sciences (5.3%), and social sciences (4.9%) (p. 41). Overall, American higher education has undergone a curricular shift over the past 70 years, with applied majors (including business) constituting more than 80% of all degrees granted in the United States (Brint, et al., 2005, p. 151). Also, it is important to mention that “interdisciplinary majors in the arts and sciences have grown more popular among administrators, sometimes as much for economic as for intellectual reasons” (Brint, 2002; quoted from Brint, et al., p. 172). Technical communication may be such a major.

TCUs

Compared to HBCUs, TCUs have a much shorter history in the US They appeared in the 1960s as a result of the “Red Power movement” and federal government support of “tribal self-determination” (Cole, 2006, p. 358). Native Americans make up less than 1% of the total US population (p. 356), and the number of colleges that serve the population is less than 1% of the total number of the institutions of higher education. TCUs graduate approximately 10% of all American Indian and Alaska Native college students in the United States (p. 359). The primary purpose of TCUs is to “promote academic mobility by awarding credentials that are transferrable to ‘mainstream’ colleges and universities; invigorate reservation economies by offering vocational and technical programs; enhance self-determination by training a new generation of tribal leaders; and revitalize tribal languages, cultures, and traditions” (p. 359).

Such a unique mission was supported by a number of congressional acts passed during the 1970s: the Indian Education Act of 1972, the Indian Education Assistance and Self-determination Act of 1975, and the Tribally Controlled Community College Assistance Act of 1978 (Cole, 2006, p. 359). However, the federal actions that gave rise to indigenously controlled higher education for Native Americans in the past 40 years were preceded by over 300 years of failed, misguided, or abortive efforts by colonial, federal, or religious interests to bring Western education to Native Americans. The lack of success for these efforts is as complex as the history of Native American relations with Euro-Americans since at least the seventeenth century.

Three American colonial colleges, Harvard, William and Mary, and Dartmouth, actually admitted 47 Native American students prior to the American Revolution, although only four of those students graduated. Some blame may belong to the colleges, which may have seen the enrollment of Native Ameri-

cans as an opportunity for fundraising rather than a sincere commitment to the students (McLellan, Fox, & Lowe, 2005). However,

there are several reports of tribal leaders politely declining offers to send Native American young men to colonial institutions of higher education because of the perception that such experiences resulted in a lessening of important traditional skills without a concomitant gain in new skills of value in tribal life. (p. 9)

During what George S. McLellan, Mary Jo Teppeconnic Fox, and Shelly C. Lowe (2005) described as the federal era, the period from the end of the Revolutionary War to the beginning of the "self-determination era," 97 treaties were signed that included provisions for Indian education. Little of lasting importance resulted from these agreements: "Despite the boom in college development in the United States in the late 1800s and early 1900s (including the development of higher education institutions for women and African-Americans), Native American higher education was overlooked" (p. 9). McLellan, Fox, and Lowe concluded,

the federal era is notable for its lack of activity in the area of Native American higher education and the predominant focus on post-secondary vocational education. The education services that the U.S. government provided for Native Americans during the federal era were driven by the same objectives that drove similar efforts in colonial institutions: Christianization, forced acculturation, and assimilation. (p. 10)

During this era, in the 1850s, the Cherokee Nation created two seminaries, one for men and one for women, the first tribally controlled institutions of higher education. However, the Curtis Act of 1898 "abolished tribal governments and led to federal control of the Cherokee Nation's education system" (McLellan, Fox, & Lowe, 2005, p. 11).

Despite efforts in the 1930s to move toward a policy of self-determination for Native Americans and for incorporating indigenous cultural perspectives into Native American education, general antagonism and a lack of concern persisted into the 1960s:

Throughout the 1940s and 1950s, the federal government sought to terminate its trust relationship with Native Americans, relocate Native Americans from reservations by incentive (as contrasted with earlier federal efforts to use force to put Native American people on reservations), and shift responsibility for Native American services to the states. Pursuit of the termination policy had

disastrous consequences for Native American people (Boyer, 1997b). Many tribes were removed from the roll of those recognized by the federal government, and substantial numbers of Native Americans relocated to pan-Native enclaves in urban areas such as Chicago, Cleveland, and Oakland. (Belgarde, 1996; McLellan, Fox, & Lowe, 2005, p. 10)

It is remarkable that Native American tribes have persisted through two centuries of efforts to eradicate their culture, if not, indeed, their human existence, and today have achieved a significant means of restoring the dignity and autonomy of tribal self-determination through the establishment of tribal colleges. McLellan, Fox, and Lowe (2005) cite data indicating “a tremendous level of engagement in and satisfaction with those institutions” (p.12) and that tribal colleges graduate their students at about the same rate as nontribal community colleges.²

Overall, a significant difference between HBCUs and TCUs lies in certain congressional legislation that determined the pathways for the institutions. During the early and mid twentieth century such legislation promoted educational and social segregation of the African American population on one hand; on the other hand, federal legislation and policies enforced assimilation of American Indians into mainstream educational institutions (Cole, 2006, p. 359). After the Civil Rights Act of 1964, the situation was completely reversed: “African Americans are now entitled, even obligated, to attend racially integrated schools; conversely, federal Indian policies support the rights of tribes to establish and control independent schools on reservations” (p. 359). These differences in legislation are reflected in the ways curricula have been developed in HBCUs and TCUs. HBCUs adopted curricula similar to the curricula of the white institutions of higher education, whereas TCUs built their degrees around the preservation of native cultures and languages (p. 360). As a result, TCUs on average offer 19.5% of courses with ethnocentric content, while HBCUs offer only 2.5% (p. 365).

By understanding the historical, political, and cultural forces discussed here, which have shaped curricula in black and tribal institutions, we may better understand what roles professional, technical, and scientific communication programs can play in HBCUs and TCUs and how our professional organizations may better respond to the needs of minority students and their communities.

² It might be argued that community college graduation rates do not provide an impressive comparison considering that, by measures used by the National Center for Education Statistics, community colleges graduate only about 25% of students within three years of enrollment. The measures used, however, have been criticized as flawed and failing to recognize the role of community colleges and their real contributions to postsecondary education (Bailey, Crosta, & Jenkins, 2006).

Inquiry Method

The purpose of our study was to examine 103 HBCUs' and 32 TCUs' websites and university course catalogs to determine the availability of professional, technical, and/or scientific communication degrees. We obtained a list of HBCUs and TCUs and their web addresses through the US Department of Education's website. In most cases, listed university web addresses were current and active. If the addresses were not current, we used a Google search to get to the most updated websites.

In each catalog and website, we searched for specific descriptions of degrees (majors and minors), certificate programs, course listings, and faculty listings.

For the present inquiry, we addressed the following research questions:

- Is there a major or minor in professional, technical, and/or scientific communication at HBCUs and TCUs?
- What courses related to our field are offered in the selected universities?
- Who are the faculty (tenure-track, adjunct, full- or part-time, and their educational background)?

Although many of the sites provided comprehensive information about courses, including complete course catalogs with course descriptions, some did not have such information, and we were not able to find alternate web sources. For the present study, we did not attempt to find the missing information through other sources, such as contacting the institutions directly. Faculty information was particularly difficult to find on most web sites. We have included what little information we were able to find regarding faculty for this study. Our examination of the catalogs and websites has yielded interesting and promising results.

Results and Analysis

Historically Black Colleges and Universities (HBCUs)

Today, most HBCUs continue to be strongly focused on liberal arts, but they also now emphasize professions like, business, teaching, Christian ministries, and law. Technical communication courses are, not surprisingly, a part of business and writing curricula, and in more than 10% of these institutions technical communication curricula have achieved separate degree status. Thirteen four-year institutions offer a major, a minor, or a certificate program in technical, scientific, and professional communication. All of them are BA programs. Unless indicated otherwise, the program offers a major:

- Four private:
 - Allen University
 - Huston-Tillotson University
 - Oakwood University
 - Spelman College
- Nine public:
 - Alcorn State University
 - Bowie State University
 - Fort Valley State University
 - Morgan State University
 - Norfolk State University (certificate)
 - North Carolina A&T State University
 - Tennessee State University
 - Virginia State University
 - West Virginia State University

To sum up, seven programs offer a major concentration in technical or professional communication, five offer a minor, and one university offers a Certificate in E-Technical Writing and a Certificate in Professional Writing (Norfolk State University).

Three out of thirteen degree programs (Oakwood University, Huston-Tillotson University, and Tennessee State University) are truly interdisciplinary and offer courses in other departments (in addition to English), such as communications, information technology, art, business administration, political science, and even chemistry. The rest of the programs offer the majority of their courses in the English departments.

In the examined universities, the degree plans include a variety of undergraduate courses such as Editing, Desktop Publishing, Writing for Electronic Media, Proposals, Writing for Science and Technology, Grammar, Document Design, and Technical and Professional Writing Internship. The number and variety of course offerings vary across the programs and depend on the type of degree the programs are granting (major or minor).

It is important to mention that out of 103 HBCUs, 75 institutions offer the traditional introductory technical or business communication course that usually serves as a general degree requirement for various majors. In most cases, the course is offered by the English departments. A few colleges and universities offer the course through business or communications departments.

According to the 2001 statistics offered by the US Department of Education, black faculty members constituted 58.9% of all teachers at HBCUs. The percentage varies from institution to institution and can be as high as 92% and as low as 21% (JBHE Foundation, *Racially diverse faculties at America's Black colleges*, 2004, p. 76). Based on our preliminary observations and information that is accessible through departmental websites, many full-time professors with PhD degrees teaching technical and scientific communication courses have traditional English degrees. Introductory level courses are frequently taught by adjuncts with master's degrees in English or professional writing. More specific information about faculty members and their background was not available on the web.

In addition to identifying the schools that have technical, scientific, or professional communication degrees, we have also examined curricula of the HBCUs that do not have technical, scientific, or professional writing degrees. We can conclude that 24 out of 90 institutions could develop an interdisciplinary technical communication degree if they should be interested in doing so. They could create new subject areas or specializations by combining existing course offerings from several departments such as communications, mass communication, journalism, and computer sciences. The interdisciplinary professional writing programs at Oakwood University, Huston-Tillotson University, and Tennessee State University can serve as models for such programs that draw upon courses in different departments to create interdisciplinary curricula for professional communication.

A good example of a university with potential for developing a professional writing degree is Grambling State University. Their Mass Communication program offers most of the traditional technical writing courses, such as MS 335 Online Writing and Design, MC 303 Communication Graphics, and MC 404 Publication Design. The English department of the same university offers ENG 207 Introduction to Technical Writing and ENG 305 Advanced Technical Writing. If combined, these courses may serve as core requirements for a professional writing minor or major.

Similar to many universities in the United States, the mission statements of HBCUs emphasize the goal of developing students' skills and knowledge, as well as their abilities to work and live in diverse communities. Allen University, for instance, aims "to provide an environment of academic excellence in order to heighten our students' chances of succeeding in a culturally diverse and economically global world" (Allen University). That same university also states that their curriculum "includes principles and practices of the historical beliefs of the African Methodist Episcopal Church." Such cultural specifics may or may not reveal themselves in the way professional and technical writing courses are

taught. That would be a new, interesting research area to explore in further research. For example, a follow-up to the present study might include interviews with program coordinators for purposes of investigating individual characteristics of HBCUs' professional, scientific, and technical communication programs.

Tribal Colleges and Universities (TCUs)

Most TCUs are located on reservations and seem to be relatively isolated from non-Native American populations. As a result, they are not as extensively racially or ethnically integrated as most HBCUs. TCUs are accredited through the Higher Education Commission for their region of the United States, but in addition, they seek membership in the American Indian Higher Education Consortium, a national organization that advocates for financial support, legislative support, research, and standards consistent with tribal values for member institutions.

TCUs represented in our study are located in 14 US states. They do not fit the public or private institution model of classification but are instead almost always affiliated with specific tribes. Of the 32 TCUs in the United States, all but two are operated by American Indian tribal governments. The two that are not tribal colleges in the sense of being governed by tribes are supported by acts of the US Congress and/or the Bureau of Indian Affairs.³ Only one TCU was established prior to the beginning of the twentieth century. All the others were established after 1960, most of them between 1970 and 1986. The oldest school is 129 years old; the newest appears to have been organized in 2006.

Nearly all Native American colleges or universities (28) are two-year colleges offering associate degrees and certificates. Six offer bachelor degrees as well as associate degrees although a study conducted for the American Indian Higher Education Association reports eight schools that offer bachelor degrees. Two schools offer master's degrees. None offer doctoral degrees.

The curriculum offerings at most TCUs include vocational programs in trades like construction, automotive mechanics, agriculture, and environmental technologies. Most also have professional programs such as teaching, nursing, social work, office professions, computer science, and business. According to the *AIMS Fact Book 2007*, however, liberal arts (23.5%) and business programs (12.1%) have the highest enrollments of all majors in TCUs, followed by vocational and education majors at 10% each (p. 18). Most TCUs also offer programs in American Indian Studies, and most require coursework in American Indian culture regardless of degree choice.

The missions of most TCUs differ significantly from HBCUs and other higher

³ The American Indian Higher Education Consortium's (2009) Report on Tribal Colleges and Universities takes a different perspective, differentiating between schools that are not located on reservations and schools that are. In that perspective, six schools are not located on reservations, including the two we classify as not tribal colleges.

education institutions. Overall, TCUs appear to make a traditional, tribal cultural perspective integral to their entire curriculum. In many cases, this means that students are taught to see virtually every disciplinary area as culturally situated. The only exceptions appear to be disciplines like mathematics, computer science, and the physical sciences like chemistry and physics. However, even for students majoring in these disciplines, a Native American cultural emphasis is usually required in their overall program plan. For example, Turtle Mountain Community College's Department of Science, Math and Engineering describes its program as follows:

The department of Science and Math offers an Associate of Science Degree. The curricular program includes the general education courses, as well as particular emphasis on specific science, Math, computer science and engineering courses. As with the other departments, localization and inclusion of the Indian cultural concerns are the unique curricular thrusts of this department. (*Turtle Mountain Community College 2010–2011 catalog*, p. 52)

Salish Kootenai College offers a course in its Native Studies program titled Introduction to Indigenous Science. According to the course description, the course “provides students with an introduction to how indigenous knowledge is acquired and classified. Students will learn how traditional Salish knowledge and language can be used to describe the modern world. Students will be expected to have good writing skills for this course” (*Salish Kootenai College catalog, 2008–2010*, p. 95). The emphasis on writing noted in the course description is repeated in many of the programs at Salish Kootenai, which offers more writing courses than any other TCU. Although the English curriculum includes only one basic course in “writing for the workplace,” many other disciplinary areas offer courses in writing for their professional field, in some cases two or more courses.

Some other TCUs offer courses designed to present indigenous perspectives on science and knowledge generally—perspectives that both complement and resist Western knowledge by calling attention not only to the cultural nature of all knowledge, including scientific knowledge, but also to the ways knowledge is constructed. Thus, for example, Northwest Indian College includes courses in its Environmental Science and its Native Environmental Science curricula such as ENVS 330 Hydrology: Sacred Waters; ENVS 370 Field Study Methods for Ecology: Ways of Knowing, Gathering Information & Building Knowledge; NESC 310 Native Science; and NESC 315 Traditional Ecological Knowledge. Although most TCU curricula in technologies such as building trades appear identical to those offered in mainstream community and tech-

nical colleges, Sisseton Wahpeton College's General Building Trades Technology curriculum starts with TR 101 Native American Material, Technology and Design, described as a course that "will familiarize students on how cultural regeneration and creativity, is giving Native Americans the ability to express themselves in the buildings they are planning and constructing" (Sisseton Wahpeton College 2009–2011 Catalog, 2009, p. 76).

More broadly, some colleges offer courses in which cultural epistemologies are the focus. The Institute of American Indian Arts offers an online course, IDST 202 Indigenous Perspectives on Knowledge, in which "students learn how ways of knowing relate to cultural values and social power, while they compare indigenous knowledge systems to those of the dominant (European) culture. Students examine the value of indigenous knowledge, particularly its potential contribution to sustainable development, to the alleviation of poverty, and to cultural survival and renewal" (Institute of American Indian Arts Catalog 2009–2010, p. 93).

A number of tribal colleges appear to have clearly defined missions and goals for decolonization and for recovery of traditional values and cultural identity. There is often a strong sense of deracination despite the fact that most (but not all) of the tribal groups still live in or near locations to which they are indigenous. Thus, they appear to take a stance of resistance to the dominant culture that they believe has deprived generations of their tribes, of their language and cultural identity, and of the resources traditionally associated with the land on which they live. Many TCU curricula emphasize degree programs in fields for which the tribes need particular expertise in economic development and environmental restoration. A paragraph on the history of the college in Fort Belknap College's catalog is especially poignant:

The Gros Ventre and Assiniboine now live near the center of their historic homeland, their original land base was whittled bit by bit—mountain and forest, prairie and stream—until very little economic potential remained. The Tribes were left with scant timber and constricted range scoured by winds with gusts that exceed 75 miles per hour. A mountain of gold harvested in 1895 had produced annually \$80 million—for others. The cyanide leech open mining pits have recently closed, leaving the sacred mountains violated and scarred beyond repair. The open mining pits border the Southern edge of the Fort Belknap Reservation resulting in environmental damage that threatens human and animal existence. Such desecration cannot be returned to life. (Fort Belknap College Catalog 2009–2011, 2009, p. 6)

A number of tribal colleges offer business courses focusing on American

Indian business contexts and values, or even a specific tribe's approaches to various business practices. The same is true for programs in health sciences, elementary education, social work, biology, and environmental science—the needs, cultural perspectives, or tribal contexts are typically emphasized in these programs. On the other hand, technical and business communication courses taught in most TCUs appear to be about the same as those one would see in any university. Insofar as catalog descriptions reveal course content, technical communication appears to be construed as an objective, value-neutral approach to communication.

Some schools have writing courses or writing-intensive courses designed to meet needs specific to the tribal context: Nebraska Indian Community College has a Native American Studies course titled Grant Writing in Tribal Development; Northwest Indian College in Washington, in addition to a 100-level course in business communication and a 200-level course in technical report writing, has a 300 level course titled Technical Writing for Tribal Leaders. Sinte Gleska University's catalog lists programs in chemical dependency issues, criminal justice, psychology, and rehabilitation, each involving five 400-level courses, as well as six upper division courses in various other areas of social and applied social sciences, all of which include the statement, "This is a WC class; advanced writing component required. Will incorporate Lakota culture and reservation/rural perspectives" (see, for example, Sinte Gleska University general catalog 2010–2012, p. 101). Sitting Bull College offers five business or applied writing courses, including a proposal writing course emphasizing "the needs of Native Americans" (Sitting Bull College course descriptions, p. 13).

Where one might encounter a culturally situated approach to technical information is in programs or curricula with such names as American Indian Studies, Tribal Studies, Indigenous Studies, Native American Studies, or Indian Studies. In addition to courses in tribal languages, Native American history, and Native American arts, some programs offer courses in indigenous technologies. For example, Northwest Indian College has a course in traditional tool making, described as "making, sharpening and maintaining carving tools used in Northwest Coast style carving, including straight knives, crooked knives, D-adzes and elbow adzes. Also covers bending, hardening and tempering of tool steel blades" (Northwest Indian College 2009–2011 Catalog, 2009, p. 67). Salish Kootenai College offers courses in tool making, tipi construction and setup, and hide tanning. Stone Child College has similar courses, as well as a course that "provides the opportunity to use plants in a traditional way with adherence to cultural protocol. Fieldwork and lectures will be combined to blend the cultural and scientific perspectives" (Stone Child College Course Descriptions, 2009, p. 32).

Our survey of 32 US tribal college and university webpages revealed the following data regarding the teaching of technical communication:

- Twenty-nine schools offer at least one course in technical or business communication.
- Eleven offer only one course.
- Eight offer two courses.
- Five offer three courses.
- Three offer four courses.
- One offers five courses.
- One offers sixteen courses.
- None of the degrees offered in TCUs can be earned in technical communication or a closely related field.

Several TCUs, more than two thirds of which are two-year colleges, have enough technical communication-related courses, almost always spread around in different departments (English, business, and IT/computer science most commonly), that could be combined into at least a technical communication minor. Nearly all these institutions were established within the past 50 years and most have struggled financially throughout their history because of disproportionately slight support from federal and state funds compared with other US colleges and universities that receive public funding. Moreover, the communities in which many TCUs are located have high unemployment and few employers. These conditions have undoubtedly slowed or prevented progress toward offering graduate degrees.

Considering what we know about TCUs, can we now recommend calling up 29 tribal colleges and universities and inviting them to join CPTSC and the world of technical communication? The issue is not straightforward but exciting, with potential to partner with tribal colleges and universities for mutual help in program development, innovative educational experiences for students, and new research opportunities. With four technical communication courses (one course in the Speech Department, one in the English Department, and two in the Business Department), Sitting Bull College is one of six tribal colleges with immediate potential to develop minors or majors in technical communication. Sitting Bull College is operated by the Standing Rock Reservation of the Sioux Nation. The reservation spans the borders of North Dakota and South Dakota with the college located in North Dakota.

The challenges we face in negotiating program partnerships may be inferred from the language of the Sitting Bull College statement of vision, mission, philosophy, and student outcomes, a typical but particularly eloquent statement (See Figure 1).

Figure 1. Sitting Bull College Vision, Mission, Philosophy, Student Outcomes

VISION

Catching the spirit to fulfill a dream through culture, academics, technical training, and responsible behavior for now and the future.

MISSION

Sitting Bull College is an academic and technical institution committed to improving the levels of education and training, economic and social development of the people it serves while promoting responsible behavior consistent with the Lakota/Dakota culture and language.

PHILOSOPHY

All people grow to their full potential by knowing and understanding their beautiful and profound cultural heritage; therefore, Dakota/Lakota culture will permeate a holistic educational process, which will permit all people to develop in balance from the elders' teachings to live in the present world.

STUDENT OUTCOMES (GOALS)

1. Students will be able to communicate effectively, both orally and in writing, synthesizing critical thinking skills.
2. Students will develop their own leadership and community building skills.
3. Students will value and develop a balanced physical (body), intellectual (mind), social (heart), and spiritual (soul) lifestyle.
4. Students will be able to work effectively with others in a cooperative manner.
5. Students will study Native American Indian culture.
6. Students will be able to function in a technological world.
7. Students will become respectful citizens of the Earth.

Source: Sitting Bull College "Vision" website, <<http://www.sittingbull.edu/aboutus/vision/>>. Used by permission of Sitting Bull College. Retrieved October 21, 2010.

Several key principles, which distinguish this institution from public mainstream colleges and universities, are expressed in the statement. The statement repeatedly emphasizes cultural education, specifically Lakota/Dakota culture. As Wade M. Cole (2006) pointed out, this emphasis is different from the growing emphasis in mainstream institutions on multicultural perspectives. For Sitting Bull College and most other TCUs, the cultural emphasis is "ethnocentric":

Multiculturalism celebrates diversity, whereas ethnocentrism privileges one racial, ethnic, or cultural group to the exclusion of others. Multicultural curricula...are reformist, inclusionary, multivocal, and pluralist; conversely, ethnocentric curricula—which focus on only one minority group—are revolutionary, exclusionary, univocal, and separatist. (p. 356)

The ability of American Indian tribes to carry out what some describe as a decolonizing agenda may, Cole suggested, seem improbable:

As an impoverished minority group amounting to less than 1 percent of the U.S. population, American Indians are, by most accounts, powerless to effect changes in deeply entrenched curricular models. Moreover, colleges and universities that serve African-

Americans—a much larger, geographically concentrated, and hence more powerful constituency by conventional standards—incorporate ethnocentric subject matter much less extensively than tribal colleges do. To understand why, we must recognize that American Indians (or, more precisely, Indian tribes) wield much more political clout than their demographic characteristics would imply. (p. 356)

Cole called attention to the political role that ethnocentrism plays in the efforts of American Indian tribes to maintain their “quasi-sovereign status” as nations within a nation. This status, buttressed by various legislative initiatives and acts that appeared in the 1970s, expanded tribal participation and control over education (p. 359). We have mentioned several of the acts when discussing the history of TCUs. With such authority, “TCUs provide Indians with the tools that are necessary for shaping their independent political, cultural, and economic destinies” (p. 359).

These tools include what Sitting Bull College refers to as “a holistic educational process” in which education for material and economic advancement of individuals and communities is integrated, or “balanced” by such strategies as required courses in Native American Studies (for most majors, Sitting Bull College requires only one course in Lakota language), including indigenous perspectives in many other courses. Judging from course titles alone, some courses may appear identical to courses in any mainstream university curriculum. However, an example of the importance of indigenous knowledge in Sitting Bull College’s curriculum is signaled by language in the philosophy statement, “to develop in balance from the elders’ teachings to live in the present world.”⁴

For virtually all tribal colleges and universities, respect and stewardship for the environment (or the earth) is a fundamental value, tied to spiritual values, tribal history, and place. It is expressed in terms such as “responsibility,” “spirit,” “balance,” “holistic,” “citizenship of the earth,” and “community building.” It is strongly reflected in the curriculum in such majors as Environmental Science, Natural Resources Management, and Applied Science Energy Technician, and courses such as Ethnobotany, and Birds and Culture.

Stewardship for the human community is even more strongly emphasized in TCU philosophies and curricula. Again, the language of “responsible behavior,” “community building,” as well as “economic and social development of the people,” and the concept of balancing the “social (heart)” with mind, body, and spirit reflect this commitment and a frequently expressed belief in understanding and practicing balanced relationships with every aspect of life and

⁴ See <<http://www.sittingbull.edu/aboutus/vision/>>, retrieved October 21, 2010.

the world. This emphasis also reflects some of the sad realities of many Native American communities—the social consequences and challenges resulting from unemployment and other forms of economic hardship, poor healthcare, and the social effects of racism both historically and in the present. Thus, all students at Sitting Bull College are required to take a sociology course titled Chemical Dependency I, a psychology course titled Psychology of Student Success, and many majors are required to take Job Seeking Skills.

We wish to emphasize, however, that the ethnocentrism of many TCUs described by Cole (2006) is not, in our view, characterized by intolerance toward other ethnic or racial groups. Even as they insist upon their right to teach and live according to their own cultural values and knowledges, Sitting Bull College and most other TCUs are explicit in emphasizing the importance of tolerance, harmony, respect, cooperation, and responsibility toward all the people with whom they share the earth.

Prospects for Technical Communication Program Involvement with TCUs

For HBCUs and TCUs, education is well understood to be historically and culturally shaped in processes of political and ideological struggle. It is tied up with issues of material survival, social and economic equality, freedom, and identity. Most of these institutions have struggled for decades for financial support, accreditation, and even legal status. Most of them receive some state and federal support, yet many remain underfunded. Both African Americans and Native Americans have experienced racism and violence; on the other hand, because Black colleges and tribal colleges arose from very different historical conditions, it is not possible to entirely understand them in the same terms.

Today, public HBCUs as state institutions are required to integrate, and many of them are integrated. TCUs are not public institutions in the same sense as HBCUs because of the nation status of American Indian tribes. Even though most of them are open to non-Indian students, most of their missions focus on tribal needs and priorities. Many of these institutions work with mainstream colleges and universities for faculty and student exchanges, inter program cooperation, and collaborative research. It is reasonable to assume, therefore, that similar forms of exchange, cooperation, and collaboration might be developed for technical communication programs. For example, we need to understand more about the ways in which not only communication practices but also technologies are historically and culturally shaped and about the situated effects of such cultural forces every time a technology and discourse concerning that technology are deployed. We could learn a great deal about such issues from tribal college teachers and scholars.

Some likely places to learn about such cultural approaches may not be in English departments but in American Indian Studies programs, which teach traditional skills such as sewing and tool-making, and which emphasize not simply the cultural nature of the product but the traditional processes/methodologies. The same possibilities may be found in their education programs that teach traditional ways of teaching; in social work programs that teach traditional ways of child care; in nursing and public health programs that teach traditional approaches to health care. What is interesting about such programs is simply that they recognize that such methodologies, which are so widely regarded as being based on objective sciences and technologies, are in fact always culturally situated and defined.

In conducting this study, we have had to look at a great deal more than technical communication course titles and descriptions. We have studied HBCU and TCU academic offerings as a whole, as well as their institutional histories, policies, missions, values, and strategic plans so far as such information was available. There is of course considerable variety and difference from one institution to another, not only between HBCUs and TCUs, but also within each of these institutional categories. Histories and missions influence programs just as material resources do. Among tribal colleges, differences may be even sharper because each one represents a different Native American nation. They speak different languages, relate to different geographies and ecological settings, different economic realities, and have different histories in relation to other Native American groups as well as to white communities, from local to national.

But HBCUs and TCUs also have a number of things in common. Although details of their histories are different, nearly all of them have common experiences of oppression, exploitation, and cultural degradation. They share some common goals to recover their cultural heritage—in tribal cases—even their language—and to be able to participate in contemporary global society on an equal footing. They recognize the need for students to be educated in the disciplines and skills of mainstream society. For many tribal schools this need is balanced by a determination to maintain the validity and authority of their indigenous knowledges.

As we examined their course offerings and course descriptions in multiple disciplinary areas, it became apparent how systematically and consistently HBCUs and TCUs structure their curricula to meet the goals of their mission statement. They want the minority students they represent to be educated for contemporary professions and to compete in the mainstream economy. But they believe that these professions can be practiced in ways consistent with and in support of those people whose identities have been and continue to be shaped by histories and cultures that have often been denied and suppressed.

Black colleges appear to have the goal of preparing students to enter mainstream society on an equal footing with professionals from other schools. Tribal colleges want their students to gain professional skills and to be able to enter the professional or trade-skilled workforce on equal footing with graduates of other programs, but they also consider it important that students return to their home communities and contribute to the economic and cultural development or recuperation of their tribal nation.

This article, at best, provides a broad map of an area in which a great deal of valuable research can still be done. At the same time, we believe some programmatic relationships across institutions may be possible. We encourage contacting and forming research, teaching, and service partnerships with faculty, students, and programs of HBCUs and TCUs. We urge that collaborations should involve participatory action research to avoid the appearance or actuality of exploitation. Teaching partnerships should also involve participatory action, seeking opportunities for all partners to learn from each other and students.

For this article, we have looked at the courses and programs offered in HBCUs and TCUs only from the “outside,” that is, from course descriptions, college catalogs, and websites. We know nothing of the perspectives of teachers, students, or administrators. Further studies may also target specific factors that have led or could lead to the establishment of technical communication degrees through interviews with faculty and administrators. We have not observed classes, read syllabi, or visited institutions and their communities. Case studies focusing on such sites, resources, materials, and/or practices could greatly enhance our understanding of issues and prospects for participatory relationships among programs.

As mentioned previously, a number of HBCUs and TCUs welcome inter-institutional partnerships for such arrangements as joint degrees and shared research projects and facilities. In fact, entire colleges and universities have for a long time worked together with black and tribal schools, cooperating for program accreditation, sharing of facilities and faculty exchanges. Although we do not know of such relationships with technical communication programs, some institutions represented in CPTSC may already have such relationships with HBCUs and TCUs that we could be looking to for ways to partner in our field. We encourage exploration of existing partnerships that our institutions may have with such minority institutions. It is likely such connections could open up additional partnering for technical communication programs.

At the same time, we urge caution. HBCUs and TCUs exist because of social and cultural realities with deep roots in histories of colonization, slavery, and genocide. They have achieved a great deal largely on their own, despite

mainstream societal indifference, resistance, and ongoing exploitation. We urge research approaches based on the ethical standards of participatory action research methodologies. These same approaches can and should be applied in program partnerships.

As a first step of engagement with programs in HBCUs and TCUs, we might invite program directors and/or faculty members to participate in technical communication organizations, particularly in CPTSC. Despite the differences of these institutions from mainstream colleges and universities, it is likely their technical communication faculty and program directors have many concerns and interests in common with the rest of us. Indeed, to the extent that we could find information about faculty demographics, we have learned that HBCU faculty members are not necessarily African American and TCU faculty members are not necessarily Native American. Such characteristics may well, in themselves, entail complexities for all stakeholders in these minority institutions.

Even as CPTSC and other professional organizations may have much to offer people who work in HBCUs and TCUs, those professionals almost certainly have much they can teach those of us who work in mainstream institutions. We believe that “the answers” are not exclusive to any one perspective. Indeed, we wish to continue to argue that programmatic diversity is not simply a matter of achieving equitable demographic ratios based on bringing more under-represented minorities into our programs and organizations. It is just as much a matter of transforming our values, our knowledge conventions, our ways of understanding the world, and our practices.

We must not presume that diversifying our programs by hiring minority faculty and enrolling minority students involves helping them become just like us. Let us avoid missionary zealotry! Our pedagogies, our course designs, our curricula, our knowledge, even, perhaps our educational facilities and our institutional structures may well change if we are to genuinely embrace diversity. Indeed, programmatic diversity may and possibly should mean that diversity will become increasingly complex and complicating for programs. Such changes are very likely to involve costs. However, failing to change is likely to involve much greater cost.

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Scrapbooking the Apocalypse

Introduction to Judith Ramey's keynote at the 2010 CPTSC Annual Meeting

Michael J. Salvo

Purdue University

Judith Ramey is well known to this gathering of technical and scientific writing program administrators. Tonight, we gather to hear about change at the University of Washington over a quarter of a century: What she has named "Outpost and Evolution."

When I was asked to introduce Judy, I began asking long-time CPTSC attendees, Judy's friends and colleagues, for stories. All offered wonderful, heartwarming stories of her service, teaching and scholarship. Her awards are many, and include the Jay R. Gould Award, NCTE Best Collection in Scientific and Technical Communication, and ATTW Fellow. Her accomplishments are distinguished, her students awed and reverential, her colleagues respectful and indebted. We come to expect these things from CPTSC colleagues. Important, and revealing, these stories were incredibly consistent. But I persisted. I wanted something...else.

I asked Patricia Sullivan, my colleague and friend from Purdue, who asked me to send her warm regards to Judy and to you all here this evening. At first, Pat demurred, repeating the same consistent, warm descriptions of Judy. I persisted, clearly trying Pat's patience, until she told me this story.

Apparently, Judy was doing research on documentation at nuclear power plants: high stakes documentation, where a mistake can cost not just lives, but entire communities, entire ecosystems. Indeed, in the wake of Three-mile Island and Chernobyl—and more recently, the Gulf Oil Spill—we know just how high the stakes can be.

Central to the research were these thick binders of instructions—emergency instructions—hundreds upon hundreds of pages of how-to instructions for the moment an emergency required instant action.

Wait. What was that again?

"Hundreds of pages of how-to instructions for the moment an emergency required instant action."

Clearly, the interface for these emergency instructions was insufficient for the task at hand. And so these plant operators had taken it upon themselves to go through hundreds upon hundreds of pages of emergency procedures, whittling them down to their essence. They were scrapbook versions of nuclear procedures. We might call them Scrapbooks of the Apocalypse.

As I introduce Judy to you tonight where she is going to talk about change over 25 years, I like this example because of its enduring elements. Research revealed how these human beings in high stress, high stake, high-tech situations were dealing with inhumane demands: these scrapbooks provided comforting contrast for human beings subject to a system that resisted recognizing them as human beings. So as we hear about the changes that lead up to establishing the department of human-centered design and engineering, I am reminded of the long process it has taken to realize this change: not change that has happened to us and our professional field, but change guided by research findings that began in the horrible, terrifying, enlightening moments when we recognize home-grown responses to humanize our relationships with our things. Scrapbooking the Apocalypse.

Outpost and Evolution

A Quarter Century (and More) of Change¹

Judith Ramey

University of Washington

This keynote was presented at the 2010 Annual Meeting on September 30, 2010 at Boise State University in Boise, ID. The meeting's theme was Programmatic Trends in Times of Change.

This is the story of just one program, offered as part of the ongoing conversation about our field and its place in the broader intellectual and programmatic landscape.

We have had many discussions of these issues over the years, most recently in the Bruce Maylath, Jeff Grabill, and Laura Gurak June 2010 special issue of *Technical Communication Quarterly* and in their article "Intellectual Fit and Programmatic Power: Organizational Profiles of Four Professional/Technical/Scientific Communication Programs." Related issues have appeared recently on the ATTW listserv, and they will be explored in some of the sessions here over the next couple of days.

Let me start with a bit of personal history, because we each experience a story a bit differently. I came to the University of Washington in 1983 with a PhD in English and Medieval Studies from the University of Texas and a background in technical writing, including stints as an editorial assistant at a nonfiction publisher, as a TA in technical writing at UT, and most recently, as a technical writer for Texas Instruments. At UW, I joined the Program in Scientific and Technical Communication (the STC Program) in the College of Engineering (COE). The faculty consisted mainly of program founders Mike White and Jim Souther, Mary Coney, Jan Spyridakis, and Tom Williams. Dave Farkas joined the same year I did. We all had backgrounds in English with the exception of Tom, who came from Communications and was Publications Director for the College.

¹ As I presented this talk, I projected a series of images of the HCDE faculty and labs. To get approximately the same information in a different format, go to <http://www.hcde.washington.edu/navresearch>.

The STC Program existed because a century earlier the College of Engineering decided to hire staff from the Department of English to teach Engineering students how to write reports and other workplace documents. Since then, but long before I arrived in 1983, two major phases of evolution had taken place.

First, the constructive phase: in the 1960s, Engineering created the Humanistic Social Studies Department (HSS) to offer courses that applied humanistic and social-scientific insights to engineering issues. And, in 1974, in response to emerging demand in industry, the College created the STC Program as a part of HSS. This new program grew directly out of the engineering-writing program, and the program's faculty continued to teach a hefty number of sections of technical writing courses for engineering students, but in addition offered a handful of courses for students who wanted to be professional scientific and technical communicators. (These students were not STC majors; most got General Studies degrees through the College of Arts & Sciences.) Typically, students went to work for Boeing or one of the other local industries.

But then, destruction! In the economic downturn of 1981–1982, the HSS department was killed off, leaving the STC Program alive but untethered to any other unit.

Before HSS faded from memory, one of its faculty, my colleague and friend, Dell Skeels (a medievalist and folklorist), unwittingly gave me the theme for this talk today by describing us, in our existence in the College of Engineering, as occupying a distant outpost, "reviled by the home church and in danger of being eaten by the natives."

So, what has evolved in that distant outpost over the last almost 30 years? Do we cling to a home church, or have we altogether disappeared among the natives? Our history as a unit will, I think, illuminate many of the challenges and opportunities that so many technical communication programs confront.

The fact that Dave Farkas and I were both hired in the same year, into tenure-track lines, indicates that the program had the support of the then-dean of Engineering, and we have been very fortunate over the years in having continuing support from our upper administration. I believe this was absolutely critical for success or even survival. In fact, the same dean supported our effort to launch a master's program in STC, which we did in 1986.

The creation of this master's program was the first of four major defining steps in our continuing evolution. Shortly after that, in 1991, we took the second major step that would shape our future: under the leadership of my colleague Mark Haselkorn, we became a formal degree-granting department within the College of Engineering: the Department of Technical Communication (UWTC).

It took us a while to understand all the implications of these two moves; I'll mention just a few. First, because our new undergraduate degree was granted by the College of Engineering, undergraduate students were now expected to take the same engineering fundamentals as students in the other departments—and in fact, many *came* from the other departments. Second, master's students also came from diverse backgrounds, many from the sciences and engineering, and often wrote theses based on empirical research of their own design. Third, with the addition of the master's program, we found ourselves as faculty in the role of directing someone else's research rather than doing just our own. And finally, faculty were now, even more emphatically, expected to seek external funding for their research and publish in formats and at levels of productivity valued in Engineering.

But we now had graduate students! This meant that we had TAs to staff the technical writing courses, freeing us up to flesh out our new undergraduate department major and expand our research. And, we had RAs with whom we co-published, thus increasing our research productivity. Taken together, these changes represented a major paradigm shift away from the English-department toward the Engineering model. In fact, during this period, two faculty members (Jan Spyridakis and Tom Williams) went on to get doctoral degrees—not in English or Communication, but in Education, with emphases on educational psychology, assessment, research design, and statistics. (I think it is fair to say that these technical competencies were a better fit in Engineering than my work on the twelfth-century troubadours or Dave's work on Renaissance literature.)

Also, the second major event, achieving departmental status, had some additional collateral benefits that we can fully appreciate only now in hindsight. Entrepreneurial moves like the creation of certificate programs and self-sustaining degree programs became easier to bring off now that we were a stand-alone department. That is, we may have had to negotiate within the institution to do these things, but the internal, departmental politics were relatively easy in contrast to some programs that must compete for resources with other programs in the same department. Over the years, we have created several such programs: a Certificate in Technical Writing and Editing, an evening MS program, a Certificate in User-Centered Design, and most recently, a Certificate in Global Technology and Communication. In the current harsh economic times, our fee-based programs have given us much-needed flexibility and resources.

I mentioned four watershed events after the initial creation of the program, but so far I have discussed only two—creating the MS program and becoming a COE department. The third event was creating our PhD program, which we launched in 2002. This was (at least) our third try to do so; we had attempted twice before to define interdisciplinary PhD programs with Communications

and the Library School (now School of Information). Although we were disheartened when those earlier efforts failed, we ultimately have been much better served by having our own disciplinary degree. Now, with the degree in place, we can better hold our own when compared to the other departments in Engineering and compete for resources on a more nearly level playing field. I don't think we would have survived in the College of Engineering if we had not succeeded in putting the doctoral program in place.

Over these years, the character of faculty members has continued to change. Dave, Mark Haselkorn, and I, hired in the 1980s, can be viewed as the "first wave" of new faculty; we all three had (essentially) English degrees, though we also had technical interests and taught somewhat technical courses. The second wave of new faculty, starting in the late 1990s, brought in three new colleagues: Beth Kolko (also with an English degree) and Mark Zachry (the *one* faculty member to this day with a technical communication degree, in Rhetoric and Professional Communication), but also Jennifer Turns, with a degree in Industrial and Systems Engineering. Jennifer's main interest is in engineering education, and, more generally, in design education.

UWTC may have been from some perspectives an outpost in the early years after our founding, but by this time we had evolved into quite a bustling busy citizen of the rapidly growing technical communication community. To mention only a few of our contributions and recognitions, we have hosted or been active partners in hosting a number of national conventions, from the 1981 CPTSC meeting to the STC Conference in 2005 to the IPCC in 2007. Considering individual faculty, Mary Coney's scholarship and service resulted in her being named an ATTW Fellow and receiving the CPTSC Service Award. Mark Haselkorn served as president of IEEE PCS and has been very active in that society. Dave Farkas, an STC Jay R. Gould award winner, has published several popular texts as well as an extensive list of award-winning articles. Jan Spyridakis may have set a record for awards for Best Journal Article from STC, and she and I (I'm honored to say) have both been recognized with the STC Jay R. Gould Award and Ken Rainey Research Award. Beth Kolko is a Faculty Associate at the Berkman Center for Internet & Society at Harvard University. Mark Zachry served as Editor for the journal *Technical Communication Quarterly*. Jennifer Turns was the first technical communication professor ever, as far as I know, to win a National Science Foundation CAREER Award. The department's Laboratory for Usability Testing and Evaluation (LUTE) won the Diana Award from ACM SIGDOC for contributions to communication design. In 2005 our Engineering Communication Program won a Conference on College Composition and Communication award for excellence. We added an international dimension in 1997 by building a partnership with the University of Twente in The Netherlands, which is still

flourishing today. These connections with the national and international networks of the broader technical communication community, as represented by its main professional societies, and the concrete markers of success and esteem represented by these awards, greatly enhanced our standing and reputation within our local setting.

These concrete indicators of excellence were a great help when, with the arrival of a new dean in 2006, we faced our direst existential threat. During his job interview he had stated unequivocally that the College did not need a department of Technical Communication. I was chair at the time, and we spent a huge amount of energy educating him about who we were and what we did, especially in the areas of human-computer interaction, user-centered design processes and methodologies, new media, etc. His response was “well, you have the wrong name!” But at the same time, he became a great supporter and funded the most recent expansion of our faculty.

Of our five new additions to our professorial ranks in the last two years, none has an English or Communication degree. Sarah Perez-Kriz has degrees in linguistics and cognitive psychology; Charlotte Lee has degrees in sociology and information studies; and Julie Kientz and Cecilia Aragon have degrees in computer science. Charlotte and Julie won NSF CAREER Awards and Cecilia won a National Science Foundation PECASE Award. Cindy Atman, who as a full professor moved to HCDE from UW’s Department of Industrial and Systems Engineering and whose interests are in engineering education and design thinking, is Director of the Center for Engineering Learning and Teaching. She holds an endowed chair and is an American Association for the Advancement of Science Fellow. We continue to be the home of the Engineering Communication Program that was our original *raison d’etre*, and we also just hired Kerrie Kephart to manage that program. Kerrie’s degree is in Education (Curriculum & Instruction). Thus, as of now, of our total 15 faculty members (14 FTE), five have English degrees (I’m including Mark Zachry’s technical communication degree here) and *ten* do not.

This leads me to the fourth and final watershed event that I mentioned earlier: in 2009, we changed the department’s name from Technical Communication to Human Centered Design and Engineering.

Was this the final erasure of our disciplinary identity? Not at all, in my view. Many of the new faculty have interests that revolve around communication: computer-supported cooperative work, scientific visualization, human-computer and human-robot interaction, and user-centered design. We have added important new concerns, like a focus on design and design processes, but again a communication perspective can and does inform and illuminate these concerns. At our annual faculty retreat last Monday, the faculty as a

whole concurred that technical communication would continue to be one central intellectual focus for the department. Some of the PhD graduates want to pursue academic careers in technical communication; so far, two PhD graduates have successfully pursued this option and we have students graduating soon who will be applying for such positions.

But the change reflected in the change of name is real and substantive, and I do have questions about the academic community of which we will be a part over the next five to ten years. The new faculty are coming in with healthy start-up packages that include personal lab space. They all have already won substantial external funding to support doctoral students on their projects. They are highly entrepreneurial and expect and intend to build up large, ongoing independent research programs. This is really the full flowering of the phase of our evolution that began when we launched the graduate programs and adopted the engineering/sciences model of conducting research. But what journals will these new faculty publish in? What conferences will they attend? I have mentioned that the department has over the years drawn much of its identity and validation from its interactions with and recognition by our main professional societies. In fact, these societies to a large degree legitimize the discipline and provide forums for us collectively to negotiate our intellectual space. So it is not an idle question to ask where our new colleagues will publish!

Also, from where will they recruit their doctoral students, and where will they hope to place them as they graduate? This is another source of disciplinary cohesion, one that the technical communication field is now becoming robust enough to fully exploit. In my department we have recruited some of our most exciting students because a professor in another program in a different institution recommended us to the student, facilitated a visit, or otherwise knitted us into a relationship—and we have done the same for UW students going out into the technical communication world. This web of relationships and mentoring is, again, the mark of a mature discipline. But as a unit becomes more radically interdisciplinary, this web of relationships can become thin or even nonexistent. We as a department have embraced the emerging interdisciplinary domain that we can refer to in shorthand as human-computer interaction or user-centered design. But will technical communication, taken as a discipline, also embrace this domain and be an active member of this community? Will other technical communication departments send us UW's students, recruit HCDE students to their graduate programs, and hire UW's graduates? Or will we align more closely with programs and departments focused, like us, on human-centered design? In short, what will be our home church, and what will become our outposts?

I have taken a while to talk about our history; I hope I've also connected to some of your issues and concerns. I'd like now to summarize a few points that seem to me important dimensions of this history, and voice a few questions that seem to me relevant when thinking about the future directions of our programs:

1. To begin by thinking about community formation, to make ourselves relevant in our setting in a College of Engineering, we have had to take many of the steps I've described. What are the forces (of conformity, community, shared values, and so on) at play in your setting? What impact are they having on your program's health and identity?
2. Early on in HCDE's department history, we had a shared *disciplinary background* that gave us stability; later, we drew new people from different backgrounds, but hiring was infrequent enough that we developed a shared *history* from which we derived stability. Now, after six additions to the faculty in two years, where are we developing our new base? At this point, are we still an outpost planted on "alien" engineering soil, or is this outpost evolving into a new engineering civilization? Are other technical communication units around the country and the world undergoing similar evolutions? Are we arriving at a shared new ground?
3. Turning now to consider our administrative structure and placement, at UW we are evolving into a radically interdisciplinary unit. Other technical communication programs also live in interdisciplinary units. Is this a sustainable posture? What is lost when you try to do this? What is gained?
4. I have said that becoming a department was a watershed event for us, and other technical communication programs also have departmental status or have considered seeking it. What impact is your current administrative location having on your effectiveness? What if anything would departmental status do for your unit?
5. Turning finally to questions regarding our disciplinary identity, in technical communication, we study forms of communication that aren't necessarily valorized in another field (the email thread, say, as opposed to the novel). Concerning our "signature" objects of study, do we have a disciplinary "home church?" If so, what is it? Writing? New media?
6. A discipline is usually thought to have some kind of ground truth that is held in common. Do we in technical communication have a shared disciplinary "creed"? For me, two of our powerful ideas are audience analysis and the analysis of the ways that

power is enacted and mediated through communication. Do you agree? What other ideas would you add? Or do you question the usefulness of attempting to explicate a technical communication perspective and body of knowledge?

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If You Build It They Will Come

Establishing a Research Group at New Mexico Tech to Increase Campus Visibility of the Technical Communication Program

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Abstract. This article presents a model for increasing the visibility of technical communication programs through establishing research groups. By describing the process we went through at New Mexico Tech to create such a group and sharing details about past and current projects, we offer insight about the benefits and the challenges of facilitating applied research projects across a university.

Keywords. applied communication, applied projects, real-world projects, research groups, technical communication practice

In the winter of 2008, we devoted our weekly Wednesday morning coffee breaks to brainstorming ways to increase the visibility of our undergraduate Technical Communication program on the New Mexico Tech (NMT) campus. With a solid reputation and a history as one of the longest standing BS in Technical Communication programs in the country, it may seem surprising that we were concerned about visibility. However, because our program is housed in the Humanities department (we are currently the only degree the Humanities department offers) at an institution where science and engineering are king, no matter how well designed our curricula is or how well prepared and successful graduates are (they often have multiple job offers, and employers relay to us how pleased they are with our students' skills and knowledge), we still suffered some second class status woes.

At university-wide monthly faculty senate meetings, we heard about the many grants our colleagues in other departments secured, bringing in millions of research dollars to the university. On the homepage of our institution's

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website we read news stories about internationally recognized projects involving researchers from our scientific and engineering departments. And we often gazed longingly at the new equipment, state-of-the-art facilities, and new tenure-track lines created for our colleagues' science and engineering programs. But these achievements, we understood, were not a result of some naturally-granted higher status. Instead, they were all gained by the research, and subsequent grant money, attained by and through these programs. Then there was our program. And, unfortunately, even after nearly thirty years of existence, we still had to explain to others at our university what our Technical Communication program is (and what it *is not*—to those who envisioned only red-penned grammar checkers helping out in the final stages of scientific and technical processes).

We know a thing or two about the importance of visibility. After all, from the introductory-level technical communication classes all the way to the senior capstone course, we instill in students the importance of educating the engineers and scientists they will someday work with and the roles technical communicators can play. Repeatedly, we remind students that they will likely have to market themselves within their workplace context and not take for granted that their coworkers will realize the many ways that technical communicators can contribute to scientific and technical projects, from the initial stages all the way through completion. But perhaps we've said it so many times that we forgot the true value of the lesson we were imparting. Perhaps it was time for us to practice it for ourselves. After all, the challenge we had, of not being visible enough across campus, was really a problem of education and marketing. And as technical communication professionals, we certainly possessed the skills to solve those issues. It was time for some marketing of our own so that we could educate the rest of campus about the multiple ways we could participate and add value to the scientific and technical projects happening all around us.

And believe us, those projects were (and still are) happening in abundance. New Mexico Tech has been jokingly called a research institution that happens to have a university. That statement is not too far off the mark, as our institution has more than a dozen research divisions with strong ties to government agencies and private industry. Fortunately, most of these research divisions provide valuable educational opportunities for both graduate and undergraduate students. Through these research divisions, ground-breaking work occurs on our campus involving faculty, staff, and students. Because all of these projects require communication that is strategic, effective, clear, consistent, and well designed—whether in the form of internal documentation, messages to the public, or external media, we saw increasing the involvement of our Technical Communication program as an easy argument to make.

This article describes the way we, the Technical Communication faculty at New Mexico Tech, chose to solve this visibility and value problem. We provide details about the steps we went through to establish ourselves as valuable and willing participants to the research endeavors surrounding us on campus. We share information about the past and current research projects we have been involved with as a result of our efforts, and we offer insight regarding the benefits we have experienced and the challenges we have faced.

Step One: Look to Existing Models

We decided early on that to maintain ethos with our engineering and scientific colleagues, we needed to create a research group that took an applied approach. As curricula in the humanities is often wrongly viewed as ungrounded in useful practice and lacking any “real” research initiatives by those in the sciences and engineering, it was important for us to create for ourselves a new identity to quickly overcome this view. So we began to research how to best become accepted as fellow researchers.

As we were conceptualizing a research group, two existing models, The Center for Research on Communication and Technology at Colorado State University (CSU) and the Center for Study of Rhetoric and Applied Communication (CSRAC) at the University of Memphis, provided excellent examples of research groups taking applied approaches to work on a range of projects for both on and off-campus clients.

The Center for Research on Communication and Technology may be the longest standing communication research center, with a history at least 16-years old. This center, which is recognized as a Program of Research and Scholarly Excellence at CSU, was founded as a collaborative effort primarily between the English and Journalism and Technical Communication departments. According to co-founder and primary lead for the Center, Don Zimmerman of the Journalism and Technical Communication department, the creation of the Center stemmed from a proposal responding to the CSU President’s interest in “encouraging faculty to seek outside funding to support faculty with seed grants for developing [external] proposals to outside agencies” (personal communication, January 6, 2010). With modest annual mini grants from the Vice President, the Center had the funds to

encourage faculty to write proposals for [external] funding for their research...One of the keys to obtaining extramural funding has been to tie proposals to subject matters relevant to CSU’s Land Grant University mission and crossing academic disciplines, when possible, in writing proposals...The Center’s mission focuses on

conducting research that investigates the production, processing, and effects of communication in instructional, professional, and public settings. Such research investigates the production, transmission, uses, and effects of new communication technologies and traditional media for instruction and professional communication. (Zimmerman, & Palmquist, 2007, p.1)

Since 2003, faculty associated with the Center have been awarded more than \$7.5 million in extramural funding on projects for Centers for Disease Control and Prevention, National Cancer Institute, USDA Forest Service, U.S. Department of Education, and the National Institute of Occupational Safety and Health to name just a few. The Center has also received almost \$200,000 in internal funding from Colorado State University's Infectious Disease Supercluster, College of Animal Sciences, College of Veterinary Medicine and Biomedical Sciences, Morgan Library, and College of Liberal Arts (Zimmerman, & Palmquist, 2007, p. 2).

The Center for Research on Communication and Technology participates in diverse activities including support for faculty members, particularly junior faculty members, in researching, writing, and submitting proposals to external funding sources. The Center also provides workshops and seminars both at CSU and externally on topics such as teaching communication classes, reporting research results, and "providing research methodology instruction" (Zimmerman, & Palmquist, 2007, p. 7).

Founded in 2004, the Center for the Study of Rhetoric and Applied Communication (CSRAC) is a joint initiative between the departments of Communication and English at the University of Memphis. According to the Memphis English Department Gradbook, it is an "interdisciplinary endeavor involving faculty and students across departments...who work with theorists, teachers, practitioners, and researchers from many different institutions in the Memphis area" (University of Memphis English Department, 2007, p. 10).

CSRAC represents the only research group housed—at least partially—within the Department of English, and thus has become a critical outlet for scholars conducting practical or applied research. One of its foremost collaborations is with the Center for Multimedia Arts (CMA), another research center located at the University of Memphis. Together, CSRAC and CMA have worked collaboratively on a series of grant-funded research projects for St. Jude Children's Research Hospital in Memphis, TN. One project in particular enlisted graphic designers, computer programmers, psychologists, oncologists, and professional communication faculty to create an ethical, electronic mechanism for providing informed consent to terminally ill patients. Such projects enable

scholars to pursue not only worthwhile, applied projects, but also to conduct important, novel research.

In addition to their applied or funded research activities, CSRAC hosts annual conferences and presentations focusing on rhetoric and communication. These activities vary widely and appeal to the different interests of both Professional Writing and Communication faculty. Topics concerning traditional rhetorical considerations may be replaced the next year by topics focusing on human-computer interaction.

After conducting research and springboarding from existing models to a vision for what would work best on our campus, we brainstormed names and eventually settled on the Applied Communication Research Group (ACRG), a moniker that emphasized our interest in becoming involved with applied projects.

Step Two: Be in the Right Place at the Right Time (Alternatively, Seize the Opportunity that Falls in Your Lap)

Our plan was to launch a marketing campaign across campus to inform the research divisions and researchers from multiple disciplines of our presence, expertise, and potential contributions. Services we initially hoped to provide through the ACRG included internal training and workshops in topics such as intercultural communication, risk communication, procedure writing, and document analysis and review, areas both of us had prior experience in through previous training positions and research projects. We knew that one of the research divisions affiliated with our institution currently spent over a million dollars per year in outsourcing documentation, and that exemplified one project we had the expertise to contribute to, generating funds for our center and saving that research division a substantial amount of money.

Our plan was to first collaborate with existing research projects on campus to generate start-up funds that would later buy us the time and resources to pursue independent funding. While we envisioned maintaining collaboration with other groups on our campus to provide solutions to their applied communication problems, we also envisioned ourselves creating a self-sustaining research group.

But our plan and what actually happened are two very different things. While we were planning and creating our new research center, NMT established a committee to plan the redesign of the university's website. They requested Clinton sit on the committee and provide input about the proposed redesign.

The existing website of the university was very dated with no consistent structure or design from page to page. Further, the website was hosted on four

different servers, making information difficult for site visitors to find. Thus, the redesign would require extensive, ground-up creation that could support distributed authorship. It was the responsibility of the website redesign committee to define goals and objectives for a new site, create a request for bidders to design and build the new site, and then screen bidding consulting companies and finally recommend the award.

The objectives and goals of the site were extensive, and included items like integrating new and dynamic media into the site, utilizing targeted or focused messages to appeal to specific audiences, and enhancing the look of the institution through engaging and prolific images. Other, more standard and technical issues were also considered, such as creating a consistent presentation across all pages, locating all content on one server/domain, and allowing university-offices to contribute their own content.

As a preliminary step to the bid process, the redesign committee began “testing the waters” to get a general idea of the prices charged by the consulting companies that had already approached the university. The estimated bids were quite high, ranging from \$350,000–\$500,000 to complete our desired project. As an alternative to using an outside company, Clinton was asked to also provide a bid for designing and creating a new website. His bid, which included funding to purchase technology in support of the project, funding to employ students to assist with the project, funding for recurring and unforeseen costs, a course release, and a stipend, came to almost \$110,000—much lower than competitive outside consulting companies.

Clinton was subsequently awarded the project and responsibility of redesigning the university’s website and creating a brand new, up-to-date, usable web presence.

Step Three: Welcome Changes in Direction if They Provide Programmatic Benefits

The website redesign project was the manifestation of exactly what we were looking for to create our research group. While initially hoping to raise our profile and begin working on research, we were specifically looking for applied research projects that would not only allow us to exercise our skills as technical and professional communicators, but that would also provide funding, scholarship opportunities, and real-world work experience for students.

The website redesign was first and foremost a springboard to creating a “legitimate” space for our research group. To carry out the project, the school funded a fully-equipped development lab with workstations, the latest software, a development server and peripheral components such as a production

printer and a 42" monitor for presentations. Recurring costs such as internet access for the multiple workstations and phone lines were also covered, as were office equipment and furniture.

Additionally, Clinton was released from half of his course-load (three courses) and he was able to fund 5–7 student employees for the duration of the project to assist in creating NMT's new website.

In the first four months of the project, Julie was able to contribute by carrying out focus group research with multiple sets of users to determine audience preferences for both the design and content of the site. Because a university's website has multiple users—faculty, staff, students (both current and prospective), and alumni—who have very specific (and varying) purposes for using the website, the information gained through these focus group sessions helped the lead developers revise their design prototype and understand the ways in which to organize information to meet the needs of these multiple sets of users. In addition, through these focus groups, members of the campus community had the chance to voice their preferences and opinions, making them feel more connected and invested in the website's revision.

In addition to conducting the focus groups, Julie involved a class of senior-level Technical Communication students in creating documentation to help support the website revision. Through both print documentation and screen-casting, students provided instructions to educate staff members on how to contribute and edit pages using the content management system connected with the new website.

The project lasted nine months and resulted in an overwhelming success with the June 2009 deployment of a new content management system serving as the school's website. The system supports almost 50 distributed authors, includes a multitude of multimedia mechanisms, such as video dynamic graphics. What's more, the project continued past the date of deployment. Because of a state-wide hiring freeze, but also because of the task they successfully accomplished, the ACRG—specifically Clinton and 1–2 of his student developers—was asked to continue in their role of directing the school's site. They now encompass tasks including content selection for news items on the site, video production of monthly student interviews, routine maintenance and support such as training school web editors, and e-marketing tasks such as analyzing site traffic.

Step Four: If You Build It, They Will Come

Two and a half years after those Wednesday morning caffeine-charged brainstorming sessions, we have the delightful problem of having more project offers than we can currently handle. The high-profile website redesign project

caused several members of our campus community to recognize our program and the capabilities of faculty and students. We have a queue of requests for involvement on projects that leave us excited, overwhelmed, and wondering how (or if) we will meet them all.

The New Mexico Center for Energy Policy

We were approached in early 2009 and asked to redesign and maintain the website for the New Mexico Center for Energy Policy (NMCEP), a NMT-affiliated research center founded to discuss energy policy in rural areas. Not only did we redesign and create a multimedia-rich site, but we also produced a streaming broadcast of their premier energy conference. The NMCEP continues to use our research group as the primary resource for their web communications.

Mount Erebus Volcano Observatory

In late 2009 we were approached by another NMT-affiliated research group, the Mount Erebus Volcano Observatory (MEVO) Research Project, which has an observatory at the Mount Erebus Volcano in Antarctica. Their globally-visited website had been hacked the year before, and they wanted us to build a secure and dynamic site. At the time, we had no qualified student employees to use because they were already working on the larger, NMT project. So we took on the redesign as a class project instead and used a larger team of students to build a truly powerful and notable new website integrating multimedia and social media mechanisms. While the MEVO group gained a competitive website, students received valuable lessons and many are now qualified to work on funded projects.

NMT Social Media Mechanisms

Yet more work was thrown our way in late 2009 when the NMT Website Development Team, which oversaw the NMT website, became responsible for coordinating and utilizing the school's social media mechanisms: Facebook, Twitter, YouTube and Flickr. These mechanisms are used to engage current and potential students to create a sense of community, to interact with alumni to maintain identification with NMT, and to increase enrollment by demonstrating lively, dynamic discussions.

Procedures for Administration and Finance

Through the website redesign project, our program got on the radar of the Vice President for Administration and Finance, one of the members of the website redesign committee. He requested involvement of students in revising and editing the university's internal finance procedures. While his initial request was to hire one student as an intern to undertake this project, after further discussion we

agreed that the project's scope went beyond that of an internship for a single student. We were encouraged to map out a proposal detailing a more appropriate length of time and number of students and resources needed for the project. As a result, we were awarded the terms of our proposal, which include a two-year-long project that employs two students per semester, a stipend for the Technical Communication faculty member overseeing those students, and computer resources for all involved.

Proposal Center

We are currently discussing with the Director of Special Projects for our institution's Research and Economic Development division the possibility of creating a proposal writing center at NMT, which would help NMT and affiliated researchers plan, coordinate, and compose large-scale research and grant proposals. The role of this research group would be to conduct classes and seminars, to help edit and review proposals before they are sent, and to provide ground-level and continuing support throughout the grant-writing process. The idea has been formally put into a proposal and has been presented to university administration.

Reflections on Benefits and Challenges

One goal of creating the research group was to provide additional opportunities for students to work on real projects for real clients. Like most undergraduate programs in technical communication, ours strongly emphasizes actual workplace experience as part of the curriculum, requiring a professional internship and integrating real-world client-based projects in the classroom. While students receive valuable professional experience through the internship requirement, we are always looking for more projects in which to involve students, particularly when those projects are conveniently located on the NMT campus.

The initial website redesign project provided ample opportunities for students. In addition to the employment of two upper-level majors as lead web designers, the project provided part-time jobs for five more students. Those students were involved in tasks such as writing, visual design, editing, and training. These students could also receive course credit for the experience, with the option of enrolling in Directed Study that would yield between one and three credits, depending on the amount of hours worked.

Beyond those students who were employed to work on the project, there was also a valuable opportunity to link the project to an upper-level documentation course. Students in that course worked half of a semester creating both hard copy and electronic documentation to support the new website. Reading

John M. Carroll's texts on minimalism (*The Nurnberg Funnel* and *Minimalism Beyond the Nurnberg Funnel*) and several supplementary articles on documentation and minimalism, the students moved from discussing theories of documentation to the actual practice of drafting collaborative documents, working with subject matter experts, and participating in usability tests. The final products were professional quality and actually used by the web redesign team in helping to train end-users. In the end-of-semester evaluations for that course, students commented on how challenging, yet useful the project was, including feedback such as, "The fact that these instructions were going to actually be used by someone made it stressful to work on but also rewarding. I'm proud to include this work in my portfolio."

In the future we plan to offer an upper-level elective Technical Communication course in technical marketing. Through this course we will involve students in helping to carry out our long-term plan, which is to extend our center's aims to attract projects from beyond our campus community. With student participation in developing a PR campaign and media kit, we can move closer to our eventual goal of securing external projects. Ultimately, we hope to bring recognition to our program and our institution through such external projects.

Before we can meet that goal, we must overcome our largest challenge—lack of faculty. With only two of us classified as Technical Communication faculty, obviously we cannot continue to teach, advise, and fulfill other service obligations in addition to engaging fully in multiple research projects. Because the current economic situation has resulted in a university-wide hiring freeze, we, like many of our technical communication colleagues at institutions across the country, have open tenure-track positions that at the present time we cannot fill. While we are optimistic that the climate will improve in the next couple of years, in the meantime we are looking to other solutions.

One of these solutions was to begin conversations with faculty members in our department who are not classified as Technical Communication faculty, but who have ancillary interests and experience in professional communication. Some of these faculty members are already teaching courses in our program and have an interest in identifying ways in which their own research agendas may intersect with potential ACRG projects.

Although faced with this challenge, our experience so far has been very rewarding. We continue to see students excited as they complete real-world work. For our part, we are thrilled to apply so many of the aspects we teach, to help our campus and colleagues by completing important projects, and to increase the awareness and visibility of the Technical Communication program.

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A Tribute to Janice Tovey

Michelle F. Eble

East Carolina University

Since Jan's death last June, I have given two tributes to her—one at the Fall 2010 annual conference of the Council for Programs in Technical and Scientific Communication and another at ECU's Department of English Homecoming Reception this past fall. What follows are excerpts from both.

For months after her death, I jotted down notes and memories, reviewed Jan's scholarly work and administrative experiences, and thought about what to share in a written piece. After all, I wouldn't want to disappoint my audience. As a result, this tribute is in three parts: her contributions to CPTSC and the field of professional and technical communication, her influence on her students, colleagues, and ECU, and some thoughts and principles I believe she lived by and if given more time, she might have shared these with us herself.

Contributions to CPTSC

Jan was serving as president of CPTSC, her favorite professional organization, when she died in June, and she served as vice-president from 2006–2008. Jan was so full of life that it was contagious with her sincere, friendly smile and sense of humor. She always brought a warm hug, a great laugh, and words of wisdom. Jan was known at the annual CPTSC and ATTW meetings and at ECU, including the department and the greater university, for making anyone she met feel welcome, whether to a department, to a program, to a course, to a university, to a conference, or to an organization.

For Jan and me, our relationship solidified on a CPTSC trip back in 2003 when we drove to Raleigh at some ungodly hour, flew to Canada, rented a car, and drove to Clarkston University in Potsdam, NY, where Donna Kain, currently an ECU colleague, had organized the conference that year. We must have made quite an impression, because the following year, Donna joined us at ECU. Again, Jan and I flew to Lubbock in 2005, and it was there the president, Jeff Grabill, suggested ECU host CPTSC, and Jan looked at me and said, "You want to?" And my answer to Jan over the years was, "Sure, yes, no problem." About 125 people

traveled to ECU for CPTSC 2007, and Jan was so excited to show off Greenville, NC, and ECU to so many people who had become such a part of her professional life.

And even though she was fighting melanoma for a majority of the time she was president of CPTSC, she was behind the scenes making sure things were getting done. Last spring, while she was going through chemotherapy,



Jan Tovey

she was concerned about the slate of officers for the CPTSC election. She wanted to know when I was going to take my turn and serve CPTSC. I explained that I was doing too many other things to give CPTSC its due at the moment, but that I would continue to be active and promised her she could nominate me in the future. She begrudgingly said, "Ok, Michelle, but you should really tell someone else no and not me, but at least you've learned how to say no after all these years. I guess you have to start somewhere." Both Donna Kain and Kirk St. Amant, colleagues from the ECU department, serve as officers in CPTSC.

In fact, the last time I talked to Jan (although at the time I didn't realize it would be the last time), we were making plans for her to get better so we could make it to CPTSC in Boise, Idaho. When I arrived at the Greenville, NC airport back in October, I half expected to see Jan waiting to catch our flight so we could make our annual trek to another CPTSC conference. As Pat Sullivan (Purdue University) wrote to me back in June, "Jan Tovey is difficult to move to the past tense."

Jan knew it was important for the vitality of CPTSC, the profession, our department, the university, and its future to welcome new members and get as many people involved as possible. She reminded us of the influence we have on those new to our profession and professional organizations as well as our departments and universities, and we have a duty to welcome them into these communities. Jan wouldn't have it any other way.

Contributions to TPC and ECU

Jan's contributions to her ECU colleagues and students are numerous. She helped build a successful online MA program and served as Director of Graduate Studies in the early years of ECU's growing PhD program. During her 17 years at ECU, she held the following leadership roles: Director of the Writing Center, Internship Coordinator, Coordinator of the Outreach Network in ECU's Office of Economic Development and Community Engagement, Director of

Composition, Director of Graduate Studies, Faculty Senator since 2002, and Chair of the ECU Faculty.

A generation of students and researchers has learned from her work on the rhetoric of visual design; the influence of computers in professional writing; intercultural communication; and internship programs and outreach efforts and their significance to student learning. At a time when computers were making their way into the classroom and the internet was beginning to make its way into our homes, as well as offices, in the mid 1990s, Jan was already discussing visual rhetoric as it applied to desktop publishing, which was one of the early explorations of how technology was influencing literacy and its rhetorical elements.

Her career in teaching and mentoring took many forms over the past 17 years. She taught undergraduate and graduate courses in technical and professional writing to a wide variety of students during that time. Some of her favorite courses to teach included Document Design, Technical Writing, Ethics in Professional Communication, and Grant Writing. Under her guidance in face-to-face classrooms (including computer classrooms) and later in digital environments, her students learned to write for a wide variety of audiences and purposes in academic, governmental, non-profit, technology, and health-related organizations. She supported and mentored her students by providing them an engaging environment where she expected them to succeed and meet the course outcomes. She challenged her students to be effective writers and successful teachers of writing. Students loved her, but they also knew she expected them to do their best work. Because Jan believed in them, students who didn't think they could complete their degree, change careers, or go to graduate school successfully accomplished their goals. She mentored her students and junior colleagues by example—collaborating with them for publications for the department and at conferences. She believed in active learning and community-based projects early on and encouraged her students to complete internships so they would have some experience once they graduated.

In her work with the ECU Outreach Network, she supervised numerous graduate assistants from the technical and professional communication and public administration graduate programs. Jan guided the graduate students to prepare and help non-profit organizations and small towns in Eastern North Carolina in writing and obtaining grants. These students received valuable experiences that often led to new opportunities and even careers.

She related quite well with students, especially those coming back to finish degrees after a hiatus, wanting to pursue a graduate degree to change careers, or very recently, those wanting to pursue a doctoral program but not exactly convinced they could be successful. Jan made time for these students and an-

swered all their questions, and before they left, she convinced them they could complete a graduate program. Because Jan received her degree later in life, she was just the person to be discussing the possibility of completing a PhD.

Jan will continue to live on in the students who have become editors, grant writers, technical writers, and professional communicators who communicate important messages on a daily basis, as well as the MA and PhD students who are currently working to complete their degrees. Given Jan's contributions and service to her field and the academic community here at ECU, the faculty in technical and professional communication at ECU, along with Jan's husband, Don Buck, are finalizing plans for the creation of the Jan Tovey Memorial Award. This award will be given to a graduating MA student in technical and professional communication who most typifies Jan's spirit of outreach, engagement, and professionalism. In this small way, we will be reminded of her substantial contributions to the department, university, profession, and most importantly, her students.

For me personally and many of us who knew her, Jan was our friend, colleague, and mentor, and she did all the things we strive to do professionally: to be a supportive colleague and friend, an engaged scholar, a dynamic teacher, and a diplomatic administrator and leader. Well, perhaps not all these things at the same time, but you get my point.

What I realized in Jan's death was that she lived with very few regrets. We are left with the loss of a vibrant member of our community, but in this absence, I can't help but be thankful for the way she lived her life and the things she taught us while she was here. Jan never had the opportunity to give a last lecture of sorts or say good-bye. Because I feel quite strongly she would want us to celebrate and laugh while remembering her, these are the things, in my own mind, she might have communicated to us if she had the chance.

“The Last Lecture,” if Jan Tovey had written it ...

Don't make things more complicated than they need to be. Be practical.

Live on the water; it allows you to keep things in perspective.

Don't center text in the middle of a page. Use the white space and the borders of the page.

Have a life outside of academia and spend time with family.

Always root for the Chicago Bears and the Chicago Cubs unless of course the New Orleans Saints are playing and then you have to root for Drew Brees, the former Purdue Boilermaker.

Build a network of people in the profession (by welcoming new members), in

the department (by asking about your colleague's classes and their research and their writing), and the university (by serving and getting involved).

Celebrate birthdays, new school years, weddings, births, graduations, anniversaries, and the opening of football season.

Never miss the Purdue party at the Conference of College Composition and Communication, AKA 4Cs. Work the network!

Travel with loved ones.

When you receive shocking news, be reflective, practical—and make a plan.

Spend time sailing.

Be respectful of students and treat them as the learners they are.

Face disagreement and adversity with strong reason and a gentle spirit. People are more likely to listen.

Stand for something, have integrity, but be willing to work towards compromise.

Be generous with your time and listen.

Expect more from your students.

Share stories—they build relationships between people who may not have all that much in common.

Wear purple on Fridays in the fall and root for the ECU Pirates.

And one last thing you might not have known about Jan: she loved Shakespeare and so I end with a quote from him:

*Tomorrow, and tomorrow, and tomorrow
Creeps in this petty pace from day to day
To the last syllable of recorded time;
And all our yesterdays have lighted fools
The way to dusty death. Out, out, brief candle!
Life's but a walking shadow, a poor player
That struts and frets his hour upon the stage,
And then is heard no more.
(Macbeth, p. 104)*

Author Information

Michelle F. Eble serves as Director of Undergraduate Studies at East Carolina University. She teaches undergraduate and graduate courses in professional and technical communication. Her current project provides a heuristic for digital delivery of information in online environments using rhetorical theory and content management systems. Her research interests include professional writing theory and practice, especially as it relates to rhetorical engagement and technology; organizational cultures and writing practices especially in medical, non-profit, governmental, and academic settings; and professional development and mentoring. Her previous articles have appeared in *Computers and Composition*, *Technical Communication*, and *Technical Communication Quarterly*.