

Sam Benson
WRIT 671
Literature Review

Creativity in Three Technical Communication Contexts: Text, Classroom, and Workplace

Introduction and Context

Creativity is immensely important in technical communication, and has been talked about in many articles over the last three decades. This emphasis came from the significant shift in thinking that technical communication was objective, with only one proper way to phrase things, to subjective, where a technical writer was given more freedom. Taken together, the discussion on the topic does not amount to whether or not creativity is important to the field, but in what ways it is valued. The references below examine three key areas: in text, in the classroom, and in the workplace. Some areas have been given more focus than others, as plenty has been said on the value of teaching creativity in the technical communication classroom, but research gaps still exist despite the amount of it already done. Though there are points of agreement, not everyone draws the same conclusions. Technical communication literature calls out in different ways that the academy and the technical communication workplace need to be better connected, and studies of workplace creativity have yet to significantly take off even now. In regards to creativity, it would be a mistake to assume that everything worth saying has already been said. However, looking at what writers have been saying will lay a path forward for the future of creativity studies in technical communication. What follows is a review of some of this literature, divided into how creativity is valued in technical communication texts, classrooms, and workplaces; the gaps in such research; and what sorts of studies can follow from what has already been written on the subject.

Creativity in Technical Texts

The foundation of the focus on creativity in technical communication was the shift in thinking that the field is subjective, where a technical writer was given more creative freedom in text. Positivism, writing what was scientifically verifiable, began to give way to constructivism, where writers created their reality from their perspective, meaning they were not absent authors. Jerome Bump (1985) wrote about how scientific writers like Charles Darwin and George Wald used techniques like imagery, analogy, and metaphor to put themselves into their work: “Wald finds beauty in cartilage and muscle tissue patterns, while Darwin expresses ‘unbounded astonishment’ at lagoon islands” (Bump, 1985, 445). Although Bump’s focus on metaphors will not always be useful in technical communication texts, his use of beautifully-written quotes showed that even scientists creatively constructed their writing and put themselves in it. They were not forced to write only the objective truth. Similarly, technical communicators did not have to be constrained to only one way to state something. They had options. Technical communicators also did not have to be absent from their writing.

Compared to Bump, Russell Rutter (1991) presented a much more in-depth review of technical communication’s rhetorical tradition from the classical period to the nineteenth century, in order to shape the present. He cautioned relying on formulaic rigidity over creativity, writing that “the synthesizing powers of imagination...are just those powers that enable a writer to create usable documents” (Rutter, 1991, 29). This explicitly said that creativity, not an adherence to objective truth, was what helped technical communicators do their jobs and create

usable documents for their users. Even though other technical communicators were writing about creativity and subjectivity earlier, Rutter's article contextualizes previous research and represents a key moment in the shift away from positivism. Shaping a text is a key part of the technical communicator's job, and creativity was a crucial ingredient to that.

When technical communication was seen as objective, technical communicators had no creative power. The turn to constructivism also allowed for a shift in how meaning was constructed. Michael Hughes (2002) asserted that the idea of the technical communicator as an information packager was limited, arguing instead that the technical communicator was a creator of knowledge. When one accepted a more constructivist worldview of technical communication, "Technical communicators negotiate meaning within development communities and between those communities and user contexts" (Hughes, 2002, 278). Instead of just transmitting information from sender (subject-matter-expert) to receiver (user), technical communicators were valuable to both users and organizations because they created knowledge and meaning in text. For readers, Hughes introduces the contrasts between positivism and constructivism, and then digs deeper for a practical look at the value of constructivism for technical communicators. His careful structure allows for readers to clearly follow his argument. This helpful examination of the technical communicator's value to organizations will be revisited later on.

Jennifer Slack, David Miller, and Jeffrey Doak also focused on how technical communicators created meaning in their 1993 article, "The Technical Communicator as Author: Meaning, Power, Authority." Like Hughes, the three were concerned with how technical communicators were limited by the transmission view of communication, but they focused far more heavily on authority and authorship. Only the articulation view of communication—where any identity or element is culturally agreed on or struggled over through disarticulation and re-articulation—explicitly gave technical communicators the power to articulate meaning and author documents (Slack, Miller, & Doak, 1993, 169). Although some technical communicators may be hesitant with being called authors, to Slack, Miller, and Doak, being an author was unavoidable: "Technical communicators *are* authors, even when they comply with the rules of discourse that deny them that recognition" (172, emphasis original). Readers may be similarly hesitant to accept their argument, for authorship places significant responsibility in their hands. For example, Jessica Reyman's 2008 article, "Rethinking Plagiarism for Technical Communication," detailed cases where technical writers were being accused of plagiarism, one potential consequence of such responsibility. Whether technical communicators are authors is another debate, but the literature is clear that technical communicators put themselves in their writing and construct meaning. When they construct texts, they are not absent from them. Creativity is an important and necessary tool that allows this to flourish.

Creativity in Technical Communication Classrooms

Can creativity be taught in the classroom? Donald Treffinger, Scott Isaksen, and Brian Stead-Dorval thought as much in their 2005 book, *Creative Problem Solving: An Introduction*. Asserting that it was a myth that creativity was too mysterious to be taught, they wrote that "[m]any methods and techniques for enhancing creative productivity are rational, powerful, and accessible to anyone who desires to learn and use them" (Treffinger, Isaksen, & Stead-Dorval, 2005, 5). However, such a general stance is limited in figuring out how creativity is valued in technical communication classrooms.

In his work on creativity studies and forensics education, Todd Holm (2016) connected creativity and problem-solving together: "'Little c' creativity is that which is demonstrated

through everyday problem-solving by relatively normal people” (Holm, 2016, 15). More authors mentioned or implied creativity when they specifically brought up technical communication students’ problem-solving. Bump mentioned that correlation when he wrote that teaching students metaphors could “initiate breakthroughs in problem-solving” (451). Brian Ballentine (2015) advocated that study abroad opportunities would improve a technical communication student’s creative problem-solving abilities (Ballentine, 2015, 291). Linn Bekins and Sean Williams equated the creative work of technical communication to communicating and solving problems (Bekins & Williams, 2006, 291). Although Patrick Moore’s (1997) belief that rhetoric was not relevant teaching technical communication was a stark contrast to writers like Bump and Rutter, he still highlighted the importance of problem-solving skills and creativity in the classroom. writing, “[I]nstrumental discourse...emphasizes...developing one’s critical thinking; refining one’s judgment; developing one’s general knowledge to ensure flexibility; and developing one’s ability to learn, which helps a person deal productively and *creatively*” (Moore, 1997, 172, emphasis mine). While never explicitly mentioning creativity, Aimee Whiteside (2003) directed that students should focus on problem-solving skills to understand how a product works “in order to articulate its functions to the user,” harkening back to technical communicators finding ways to construct useable documents creatively (Whiteside, 2003, 314). These articles show a pattern of definitions.

Marc Santos and Megan McIntyre (2005) took a different approach, focusing on technical communication classes and “attending to the conditions in which we believe creativity can best be ‘cultivated’” (Santos & McIntyre, 2006, para. 9). Their conception of what cultivates creative thinking in the classroom was grounded in post-pedagogy, a rejection of authoritative models of teaching (not a rejection of pedagogy in general). The disequilibrium that resulted from this rejection would be destabilizing and confusing for students at first, but would be crucial to cultivate creativity. The post-pedagogical class model Santos and McIntyre used showed that students were initially uneasy with vague project assignments, but they became more comfortable being creative and talking about how they were creative (paras. 26-28). The authors do not dismiss just how painful such an anxiety-ridden beginning was for their students, and not every student recommended their class by the end of it. Such an approach, while increasing students’ freedom, does have its uncomfortable drawbacks, and the small sample size of thirty students is not wholly conclusive on its effectiveness.

One line connects Santos and McIntyre’s article with other work on creativity in the classroom: “In short, any program that seeks to prepare students to be creative and innovative members of the workforce can and should incorporate disequilibrium into their curriculum” (para. 7). This notion of preparing technical communication students in the classroom in order to be creative for the workplace is a sentiment shared in other articles.

Reyman, for instance, discussed changing technical communication classroom standards in the wake of plagiarism accusations partially on the basis of creativity. Her stance was that the collaborative, creative work technical communicators did in the workplace as part of a team put itself at odds with the academy’s treatment of plagiarism (Reyman, 2008, 66). Authorship was being perceived differently in classroom and workplace contexts, so she called for schools to consider “reviewing existing plagiarism policies or drafting new policies that explicitly address the conflicts between academic and workplace contexts” (66). Reyman’s article is somewhat limited in this discussion because of her focus on plagiarism, and plagiarism itself is a topic not very well-researched in technical communication, but her view that collaborative creation in the workplace might not be acceptable practice in technical communication classrooms should not

be dismissed. Through the lens of creativity, she at least touched on the problem that the gap between academy and industry represents.

The gap between the academy and the industry was the main subject in Whiteside's article on the skills technical communicators need based on what recent graduates and managers thought. However, creativity was not a factor she heavily considered. Although problem-solving skills, connected to technical communication creativity, was one of the areas Whiteside claimed her study revealed both recent graduates and managers agreed technical communicators needed more preparation in, she never once mentioned the word "creativity" (313). Furthermore, her data did not quite match that finding. 57 percent of managers believed that technical communicators did not have sufficient problem-solving skills, while only 21 percent of recent graduates believed so (313). While Whiteside called for more research to be done in all those problematic areas, she did not see a crucial discrepancy: recent graduates thought they had the problem-solving skills they needed to succeed, while the majority of managers did not believe so. Whitehouse's article could have been more effective had she looked at her data on the gaps between the academy and the industry more through the lens of creativity. Perhaps more specific recommendations could have been suggested.

Using Whiteside's work, Ballentine offered a specific recommendation in the form of study-abroad opportunities. According to him, technical communicators were symbolic-analytic workers, which he likened to creative, problem-solving workers (292). Because studying abroad exposed technical communication students to different cultures and worldviews, it offered to "advance their creative thinking and problem-solving skills—the skills valued by their future employers" (294). Ballentine's study-abroad focus also paralleled Reyman's approach in that the goal was to make students somewhat uncomfortable, to prevent them from defaulting back to their "comfortable and dominant mono-cultural perspectives" (295). While Ballentine's general points drew on previous literature to offer one way to bridge the gap between technical communication academy and the industry, his focus on his own study-abroad program lost this focus somewhat. Too much time was spent describing how his class came to be at an administrative level, but he did eventually get to how his West Virginia University students became more comfortable in Porto, Portugal. One limitation to study-abroad opportunities is that not every school offers them, and Ballentine even mentions how they are no small task (304). Study-abroad programs help cultivate up-and-coming technical communicators' creativity for the workplace, but they are not the only way to do it.

After he traced a lengthy history of rhetoric, Rutter then argued that a collaborative liberal arts education focusing on rhetoric and creativity would allow technical communicators to do their jobs better. Communication was not a closed, positivistic system; it was open because it involved people (28). Rutter's observations were valuable to the technical communication workplace because technical communicators needed to be collaborative and creative at work (30). Writing fifteen years later, Bekins and Williams argued from that same rhetorical standpoint, writing, "Specifically, if we recall that creative work revolves around identifying problems and then communicating about those problems, rhetorical training is—and should be—a large part of the equation" (291). Bekins and Williams also stressed that having a broad base of knowledge, building relationships with business schools, psychology departments, and industrial engineering departments, would assist collaboration (292). This is a more accessible bridging of the gap between the academy and the workplace than study-abroad opportunities because students can build a broad base of knowledge in different ways. However, these classes might not sufficiently prepare students for the workplace, as Greg Wilson and Julie Ford's 2003 article

“The Big Chill: Seven Technical Communicators Talk Ten Years After Their Master’s Program” brought up. In that article, one technical communicator said, “Other than internships, I’m not sure how one would incorporate [other training in tech writing programs] into a program” (Wilson & Ford, 2003, 149). Despite this limitation, cross-discipline training represents yet another way the technical communication classroom could prepare students for the workplace.

The Extent of Creativity in Technical Communication Workplaces

Authors had different ideas on how to cultivate creativity in the classroom, but a common link was the value it had to the technical communication workplace students enter into. Creative work allows technical communicators to make usable documents, effectively solve problems, and help users. Hughes highlighted more ways creative technical communicators were useful for organizations: they help experts make their tacit knowledge explicit, they help design teams arrive at consensus about what a product does, and they transform tacit knowledge into explicit artifacts so others in the organization can access it (280). Creativity is, undoubtedly, valued in technical communication work. However, to try and find out the extent technical communicators are free to exercise that creativity in the workplace, we must look at the literature that examines technical communication workplace contexts.

In 2015, Yuejiao Zhang and Karla Saari Kitalong conducted a study with fourteen technical communicators in various fields, looking for how these workers were creative and the motivations and constraints that factored into that creativity. While what creativity meant differed depending on the worker, Zhang and Saari Kitalong found common intrinsic motivations and external constraints regarding creativity. Workers generally were intrinsically motivated to be creative because they were sympathetic to their users’ plights and driven by a personal curiosity, while they were sometimes creatively constrained by the people they worked with, project budgets, and time pressure (Zhang & Saari Kitalong, 2015, 208-210). The authors’ use of direct quotes give readers valuable insight on what creativity means to technical communicators in the workplace. Also, Zhang and Saari Kitalong were able to find some common creative themes with their study’s participants, but their work is unfortunately rather small in scope. Their conclusions are rather obvious, and the sample size of fourteen limits the value of their study. However, their study does suggest that the workplace indeed constrains a technical communicator’s creativity, as valuable and needed that skill is.

Zhang and Saari Kitalong called for more research to be done on the forces that constrained creativity in the workplace, but some of that work already existed at that point. Wilson and Ford’s article was written twelve years before Zhang and Saari Kitalong’s study was published. Their paper was an edited transcript of an online conversation between seven technical communicators on the strengths and weaknesses in their training, their jobs, and the field overall. Creativity was one topic discussed. One participant said, “I suppose I was more idealistic...I expected there to be a lot more creativity in a tech writing job...I think I had some bad luck; there are much better tech writer jobs out there where you are respected in a truly collaborative environment” (147). Not every participant had that same experience, but multiple participants reported feeling dissatisfied with their work after some time in the industry. This was due somewhat for reasons akin to those Zhang and Saari Kitalong found in their later article, like unappreciative coworkers, office politics, and work hours, but the main reason for this dissatisfaction was one that was absent from the 2015 study: burnout (150). Another participant went into how he experienced burnout by saying, “When the time came that I felt I was no

longer making a difference, I began to feel the burn...I left while I still had some feeling of accomplishment” (150).

Looking at the 2003 and 2015 articles together, people, money, and time constraints negatively affect people’s creativity in the workplace. While technical communicators can persevere and thrive under these conditions, sometimes the battle under adverse workplace conditions becomes too much, and they burn out. While these studies only survey around twenty technical communicators between them, they do not disprove that the industry values creativity in its workers. Rather, factors also exist in the workplace that inhibit workers from being as creative as they could be, or prepared for in the classroom.

Gaps and Further Research

Much has been written about creativity and technical communication. The articles reviewed above, written between 1985 and 2016, represent only a handful—but an important handful—of the work done on the subject. That work highlights the value creativity has in texts, in the classroom, and in the workplace. In texts, technical communicators can be creative with word choice. The creative classroom presents an important step towards the technical communication workplace, even though there is not a consensus on the best way to prepare students for it. And managers cite the importance of problem-solving skills in their technical communicator employees, while creativity can also assist collaboration in organizations.

Still, this look has revealed some gaps in the literature. While indeed a lot has been written about creativity and technical communication, and especially creativity in the classroom as it relates to the workplace, less has been written about creativity in the workplace. The conclusion to Zhang and Kitalong’s article suggested that their work should serve as a “starting point” for studying technical communicators’ creativity in the workplace, and more research should indeed be done (212).

Focusing on the creative cultures of specific workplaces over a period of time, instead of surveying accounts from multiple workers from many different fields, would be one way I would move forward. Such a study would not be an easy undertaking, but I believe both workers and workplaces would ultimately benefit from that focus. Workers would be able to address workplace elements stifling their creativity, and creativity still remains an element technical communication organizations want to foster, as time and money permit. I would also get more substantial conclusions, and be able to brainstorm potential ways to cultivate creativity in that workplace.

If that cannot be accomplished, conducting a study with a larger sample size would be another priority. Zhang and Saari Kitalong’s research was hampered primarily by that small sample size. Conducting a study focused on the motivational factors of creativity with a larger sample size would serve as a true starting point for this type of literature. Its conclusions would be more specific, more interesting, and more impactful.

There are plenty of technical communication articles trying to bridge the gap between the academy and the industry regarding creativity. However, there are no clear answers beyond focusing on rhetoric. What kinds of classes would be best for cross-discipline training? Are internships and study-abroad opportunities really necessary? How do these classes influence a student’s creativity out of the classroom, and after they graduate? More research answering some of these specific questions would also be helpful.

References

- Ballentine, B. D. (2015). Creativity Counts: Why Study Abroad Matters to Technical and Professional Communication. *Technical Communication Quarterly*, 24(4), 291–305.
- Bekins, L. K., & Williams, S. D. (2006). Positioning technical communication for the creative economy. *Technical Communication*, 53(3), 287-295.
- Bump, J. (1985). Metaphor, Creativity, and Technical Writing. *College Composition and Communication*, 36(4), 444-453.
- Holm, T. T. (2016). The Teaching of Creativity: Process, Product, Environment, and Assessment. *National Forensic Journal*, 34(1), 14–33.
- Hughes, M. (2002). Moving from information transfer to knowledge creation: A new value proposition for technical communicators. *Technical Communication*, 49(3), 275-285.
- Moore, P. (1997). Rhetorical vs. Instrumental Approaches to Teaching Technical Communication. *Technical Communication*, 44(2), 163-173.
- Reyman, J. (2008). Rethinking plagiarism for technical communication. *Technical Communication*, 55(1), 61-67.
- Rutter, R. (1991). History, Rhetoric, and Humanism: Toward a More Comprehensive Definition of Technical Communication. *Journal of Technical Writing and Communication*, 21(2), 133-153.
- Santos, M. C., & McIntyre, M. M. (2016). Toward a technical communication made whole: Disequilibrium, creativity, and postpedagogy. *Composition Forum*, 33.
- Slack, J. D., Miller, D. J., & Doak, J. (1993). The technical communicator as author: Meaning, power, authority. *Journal of Business and Technical Communication*, 7(1), 12-36.
- Treffinger, D., Isaksen, K., & Stead-Dorval, D. (2005). *Creative Problem Solving: An Introduction*. Waco: Prufrock.
- Whiteside, A. L. (2003). The Skills That Technical Communicators Need: An Investigation of Technical Communication Graduates, Managers, and Curricula. *Journal of Technical Writing & Communication*, 33(4), 303–318.
- Wilson, G., & Ford, J. D. (2003). The big chill: Seven technical communicators talk ten years after their master's program. *Technical Communication*, 50(2), 145-159.
- Zhang, Y., & Saari Kitalong, K. (2015). Influences on Creativity in Technical Communication: Invention, Motivation, and Constraints. *Technical Communication*

Benson 8

Quarterly, 24(3), 199-216.