5. Collaboration

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Collaboration is an important tool for technical communicators and has been since the early days of the discipline; it will become even more significant in the future as global markets expand. Thus, the topic of collaboration is featured in the articles, books, conferences, and workplaces of the discipline—always in the background and often in the foreground. *One could say that collaboration is part of the foundation of the practice and study of technical communication*. However, practitioners and educators must consider collaboration in ways that they did not several decades or even several years ago. This essay briefly addresses the ***history*** of collaboration in the discipline, shares some common definitions of the term, and then examines several of the most important perspectives on collaboration today, including types of collaboration, ***technology's*** impact on collaboration, and ***information*** development with collaboration.

The history of collaboration in technical communication can be seen in its evolving definitions. The origins of the word are from the Latin *collaborare*, meaning to labor together. Examples in the *Oxford English Dictionary* show *collaboration* used interchangeably with *cooperation* (Oxford University Press, n.d.). Some early technical communication scholarship on collaboration focuses on collaboration as social construction; this scholarship claims that "***knowledge***, reality, and even facts are community generated . . . with knowledge being composed by collaboration" (Hedden, 1992, p. 27).

As collaborators began to increase their use of technology, scholarship on collaboration began to incorporate computer-based collaboration and suggested that it provided a more egalitarian setting (Selfe, 1992). We began to see technology changing the very nature of collaboration, enabling collaborators to question and negotiate meaning more freely (Selfe, 1992). In educational settings, students who may have been marginalized and less inclined to speak in face-to-face collaboration could find a voice in computer-based collaboration (Trimbur, 1983). Increasingly today, educators and employers seek ways to prepare students and employees to take advantage of remote collaboration (Brewer, 2015; Brewer et al., 2015; Mitchell, 2012; Mitchell et al., 2010; Wojahn et al., 2010). They also study the effects of trust and psychological safety on performance (Robinson et al., 2016).

In the workplace, collaboration is an intellectual endeavor that produces intellectual property. Purely theoretical definitions of the term are of limited use. In industry settings, "collaboration may more resemble cooperation in that the team's responsibilities include ensuring coverage, avoiding duplication, creating links, and ensuring consistency of organization" (Hewett et al., 2010, p. 4).

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Workplace definitions of collaboration are based on products and productivity; collaboration is transactional in nature. It is viewed as a tool that helps people conduct business. In her editorial on the professionalization of technical communication, Nancy Coppola (2011) notes that managers expect collaboration among subject-matter experts and coworkers. In fact, the boundaries between terms like *group*, *team*, *collaboration*, and *cooperation* become blurry in current workplace use. Nevertheless, we can find useful definitions of collaboration that are specific to technical communication and writing. Beth L. Hewett and colleagues (2010) write that collaboration "involves strategic and generative interactivity among individuals seeking to achieve a common goal, such as problem solving, knowledge sharing, and advancing discovery" (p. 9). Rebecca Burnett et al. (2013) define collaboration as "an intentional, sustained interaction toward a common goal" (p. 454). Peter S. England and Pam Estes Brewer (2018) write that "true collaboration results in outputs better than what could have been achieved by a single person" (p. 161).

Because the definitions of collaboration are nuanced, there is some debate about what constitutes *effective* collaboration within technical communication and *when* it should take place in the information-development process. There is no shortage of stories about collaboration gone wrong (e.g., Brewer, 2015; Mamishev & Williams, 2010). Barriers to effective collaboration in virtual writing include training and technology, an organization's ability to create a culture for effective collaboration, personality characteristics, and team composition (Carney, 2010). *To be effective, collaboration in technical communication today requires common goals, a focus on the whole rather than the individual, effective use of technology, and sustained communication.* In addition, the types of collaboration must meet the needs of the project.

Technical communicators can choose the best type(s) of collaboration for the context in which they are working. Most types of collaboration can be described based on two characteristics: power structure and synchronicity. Power structure refers to whether the relationships among collaborators are largely horizontal (where all collaborators have a relatively equal voice) or vertical (where one or several of the collaborators have more authority over the collaboration). Synchronicity refers to whether or not collaborators are present together in time.

Alternatively, Hewett et al. (2010) provide a useful schema with three types of collaboration: serial, parallel, and collective. These types are identified in the context of virtual collaborative writing, but they represent well the types of collaboration common in technical communication. Briefly, serial collaborators work one after the other, while parallel collaborators work on different pieces of a project at the same time. Collective collaborators use both serial and parallel collaboration while working on the project as a whole (Hewett et al., 2010). For example, the composition program at Texas Tech University used decentralized grading groups (Carney, 2010) wherein graduate instructors collaborated collectively to improve assessment skills and in parallel to grade student projects. Similar to the

collective model of collaboration identified by Hewett et al. (2010) is the interlaced model of collaboration advocated by Robinson et al. (2016): "[Interlaced collaborative writing] is a distributed practice, predicated on psychological safety that promotes iterative CCK [co-construction of knowledge] by allowing for both parallel and synchronous discussion and production of texts with intense periods of simultaneous production."

In comparison, Scott L. Jones (2007) identifies three primary classifications of collaboration based on a survey of 1,790 members of the Society for Technical Communication: contextual collaboration (using templates, ***genres***, and existing ***documentation***); hierarchical collaboration ("carefully, and often rigidly, structured, driven by highly specific goals, and carried out by people playing clearly defined and delimited roles" [Ede & Lunsford, 1990, p. 133]); and group collaboration ("involv[ing] a collection of people who largely plan, draft, and revise together" [Jones, 2005, p. 454]). Note that Jones (2007) adds a category called "contextual collaboration" wherein communicators collaborate with artifacts produced by others rather than with people directly. In this type of collaboration, communicators work with existing artifacts, such as documentation. Jones' classifications move from what he calls less overt to more overt communication, with contextual collaboration representing the least overt.

Quickly evolving technologies have enabled more and more diverse forms of collaboration than ever before, and the speed of change shows no signs of slowing. Software tools that support collaboration include information communication technologies (ICTs) like web conferencing and email; ***content***, learning, and ***project management*** systems; virtual worlds (e.g., Bosch-Sijtsema & Sivunen, 2013; Brewer et al., 2015); development software; and some ***social media***. Suites of tools support collaboration by enabling conversation, storage, scheduling, and more. With these tools, collaboration today is inter/intraorganizational, inter/intradisciplinary, ***inter/intranational***, and inter/intra-market sector in ways that it was not prior to advances in technology. Technical communicators and their organizations can be attentive to these opportunities or ignore them at the risk of surrendering the benefits to competitors.

In order to develop these collaborative opportunities, one must fit the technologies to the task just as one fits type of collaboration to the task. One of the best ways to do so is to consider the affordances of technologies. The technologies themselves may change, but the affordances that collaborators need remain relatively stable. Hewett et al. (2010) developed a list of four affordances of technology that can be helpful in evaluating technology choices for collaboration:

- Presence awareness is "the degree to which individuals in virtual settings know that others are present or available to communicate."
- Synchronicity is "the length of time it takes for individuals to interact using virtual collaborative technology."

- Hybridity is "the use of tools that combine different elements of communication, such as speech and written language."
- Interactivity is "the extent to which individuals can maintain a dynamic flow of communication across virtual space and interactions made when a tool seems to diminish spatial distance." (p. 12)

For example, when a technical communicator wishes to have a dialog with a colleague, they can choose technology that offers rich or lean communication. Rich media support multiple cues (similar to face-to-face communication). The closer a medium is to face-to-face communication, the richer it is. For example, video conferencing is a rich medium as it offers audio and visual cues in real time; it offers high levels of presence awareness, synchronicity, hybridity, and interactivity. The more ambiguous or complex a task, the more richness is needed for the communication. Lean media support fewer cues—for example, email is a lean medium, as it offers only text with some delay. Lean media can be very effective for communicating concrete information because they decrease unnecessary cues. Technical communicators might use such a list of affordances to guide them in choosing the technology to support the collaboration for a given project.

Technology has not only changed the way that technical communicators collaborate to create content, it has changed their roles and required them to collaborate in higher order tasks, such as information architecture (Jones, 2005), in order to manage the technologies, collaborations, and products. Within the field of technical communication, the primary goal of collaboration is information development. Because information development has become far more complex than it was several decades ago, the collaboration that supports it has also become more complex. As predicted by Brad Mehlenbacher (2013), "Future technical communicators will serve as knowledgeable team members, learning, researching, organizing, and synthesizing the many support materials that are required to mediate between communication design, humans, and complex technological processes and products" (p. 205). Instead of collaboration taking place face-to-face, it often takes place remotely. Instead of products being released as stand-alone versions on individual platforms, they are often released in small updates and for multiple platforms. And an increased collaboration between producers and their users significantly affects ***design***. For reasons like these, information products are most often developed via collaboration of many people, and projects require new roles for technical communicators as information coordinators.

Collaboration in technical communication today is complex, facilitated by many choices in both structure and technology. Effective collaboration requires thought and planning, whether that collaboration takes place face to face or at a distance. As a world market, we will need the many types and tools of collaboration to meet such challenges as protecting the environment (Nidumolu et al., 2014); creating networks among ***science***, education, and business (Basov & Minina, 2018); and addressing global health crises. In fact, the future of technical

communication likely depends on effective collaboration to enable technical communicators to function as a part of the development and innovation process (Giammona, 2004) and to create professional presence in a global market.

References

Basov, N., & Minina, V. (2018). Personal communication ties and organizational collaborations in networks of science, education, and business. Journal of Business and Technical Communication, 32(3), 373-404. https://doi.org/10.1177/1050651918762027

Bosch-Sijtsema, P. M., & Sivunen, A. (2013). Professional virtual worlds supporting computer-mediated communication, collaboration, and learning in geographically distributed contexts. IEEE Transactions on Professional Communication, 56(2), 160-175. https://doi.org/10.1109/TPC.2012.2237256

Brewer, P. E. (2015). International virtual teams: Engineering global success. IEEE Press; Wiley. https://doi.org/10.1002/9781118886465

Brewer, P. E., Mitchell, A., Sanders, R., Wallace, P., & Wood, D. D. (2015). Teaching and learning in cross-disciplinary virtual teams. IEEE Transactions on Professional Communication, 58(2), 208-229. https://doi.org/10.1109/TPC.2015.2429973

Burnett, R. E., Cooper, L. A., & Welhausen, C. A. (2013). What do technical communicators need to know about collaboration? In J. Johnson-Eilola & S. A. Selber (Eds.), Solving problems in technical communication (pp. 454-478). The University of Chicago Press.

Carney, W. (2010). Removing barriers to collaborating in virtual writing projects. In B. L. Hewett & C. Robidoux (Eds.), Virtual collaborative writing in the workplace: Computer-mediated communication technologies and processes (pp. 128-143). Information Science Reference. https://doi.org/10.4018/978-1-60566-994-6.ch007

Coppola, N. W. (2011). Professionalization of technical communication: Zeitgeist for our age. Technical Communication, 58(4), 277-284.

Ede, L., & Lunsford, A. (1990). Singular texts/plural authors. Southern Illinois University Press.

England, P. S., & Brewer, P. E. (2018). What do instructors need to know about teaching collaboration? In T. Bridgeford (Ed.), Teaching professsional and technical communication (pp. 159-175). Utah State University Press. https://doi.org/10.7330/9781607326809.c010

Giammona, B. A. (2004). The future of technical communication: How innovation, technology, information management, and other forces are shaping the future of the profession. *Technical Communication, 51*(3), 349-366.

Hedden, C. (1992). Hypertext and collaboration: Observations on Edward Barrett's philosophy. Technical Communication Quarterly, 1(4), 27-41. https://doi.org/10.1080/10572259209359511

Hewett, B. L., Robidoux, C., & Remley, D. (2010). Principles for exploring virtual collaborative writing. In B. L. Hewett & C. Robidoux (Eds.), Virtual collaborative writing in the workplace: Computer-mediated communication technologies and processes (pp. 1-27). Information Science Reference. https://doi.org/10.4018/978-1-60566-994-6

Jones, S. L. (2005). From writers to information coordinators: Technology and the changing face of collaboration. Journal of Business and Technical Communication, 19(4), 449-467. https://doi.org/10.1177/1050651905278318

Jones, S. L. (2007). How we collaborate: Reported frequency of technical communicators' collaborative writing activites. Technical Communication, 54(3), 283-294.

Mamishev, A. V., & Williams, S. D. (2010). Technical writing for teams. Wiley. https://doi.org/10.1002/9780470602706

Mehlenbacher, B. (2013). What is the future of technical communication? In J. Johnson-Eilola & S. A. Selber (Eds.), Solving problems in technical communication (pp. 187-208). University of Chicago Press.

Mitchell, A. (2012). Interventions for effectively leading in a virtual setting. Business Horizons, 55, 431-439. https://doi.org/10.1016/j.bushor.2012.03.007

Mitchell, A., Chen, C., & Medlin, D. (2010). Teaching and learning with Skype. In C. Wankel (Ed.), Cutting-edge social media approaches to business education: Teaching with LinkedIn, Facebook, Twitter, Second Life, and blogs (pp. 39-56). Information Age Publishing.

Nidumolu, R., Ellison, J., Whalen, J., & Billman, E. (2014, April). The collaborative imperative. Harvard Business Review, 92(4), 76-84.

Oxford University Press. (n.d.). Collaboration. In *Oxford English Dictionary*. Retrieved May 31, 2021, from https://www.oed.com/

Robinson, J., Dusenberry, L., & Lawrence, H. M. (2016). Collaborative strategies for distributed teams: Innovation through interlaced collaborative writing [Paper presentation]. IEEE International Professional Communication Conference, Austin, TX, United States. https://doi.org/10.1109/IPCC.2016.7740489

Selfe, C. L. (1992). Computer-based conversations and the changing nature of collaboration. In J. Forman (Ed.), New visions of collaborative writing (pp. 147-169). Boynton/Cook.

Trimbur, J. (1983). Consensus and difference in collaborative learning. College English, 5, 602-616. https://doi.org/10.2307/377955

Wojahn, P. G., Blicharz, K., A., & Taylor, S. K. (2010). Engaging in virtual collaborative writing: Issues, obstacles, and strategies. In B. L. Hewett & C. Robidoux (Eds.), Virtual collaborative writing in the workplace: Computer-mediated communication technologies and processes (pp. 65-88). Information Science Reference. https://doi.org/10.4018/978-1-60566-994-6.ch004