



# Student Collaboration

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### Introduction

Collaboration is met with mixed reviews by students. While some enjoy the synergy of working with peers, others simply find it disdainful. Those in the latter group might attribute their dislike of group work to the feeling that their contributions are not fully recognized, the belief that they are carrying the weight of less-motivated team members, or the experience of working with difficult collaborators. For these reasons, some Technical Communication (TC) instructors choose to limit (or eliminate) collaborative projects in their classes. In fact, Jones (2007) reported the STC member survey finding that of classroom collaboration activities, group or team writing is used least often. Other TC instructors resolve to include varying amounts of group writing work in their undergraduate classes despite interpersonal challenges and concerns (both the students' and our own) over workload equity. We see the value in teaching skills that will allow students to work effectively as members of teams, and we are mindful that employers are expecting universities to develop these same skills in our graduates. This white paper seeks to address the following aspects of student collaboration:

- Importance of collaborative work
- Gaining collaborative skills in the classroom
- Collaboration tools and technologies
- Strategies for instructors

### Importance of collaborative work

Collaboration is a fact of life for employees across industries. Even our TC graduates who take work as writers will be expected to collaborate with others (subject matter experts, project managers, colleagues, etc.) to complete projects. Increasingly, our graduates are working on distributed (perhaps globally) work teams, where they will be more dependent than ever on their collaboration skills. Over the last decade, TC literature has investigated the topic of distributed work teams (see for instance, Rice-Bailey, 2014; Robidoux & Hewett, 2010; St. Amant, 2003; Vealey, 2016). In readying our students to work on such teams, TC scholars are examining ways to provide students with concrete, “real-world” experience.

Historically, this experience has consisted of service-learning projects, classroom/industry partnerships, and internships. There is limited contemporary research in our field on the topic of student collaborations. However, lessons learned from Composition Studies on collaborative writing (see, for instance, Hyman and Lazaroff, 2007) offers some insight to apply to our TC classrooms. We can also learn from scholars in disciplines such as Business, Education, and Communication, who have tackled similar challenges. Researchers in each of these areas have examined many aspects of such collaborations. A

recent case study (Brewer, Mitchell, Sanders, Wallace, & Wood, 2015) examined how professors from various disciplines organized to afford students an opportunity to become more skilled in virtual team communication. Increasingly, this experience includes working on distributed teams. TC instructors have partnered U.S. students with foreign companies (see for instance, Johansson, & Dittrich, 1999; Maylath, Vandepitte, Minacori, Isohella, Mousten, & Humbley, 2013; Paretto, McNair, & Holloway-Attaway, 2007), allowing the students to refine their communication and coordination skills on global, distributed, and (in the case of Brewer et al., 2015), interdisciplinary work teams. A recent case of an academic/industry collaboration (Hirst, 2016) details student internships in the nuclear industry and notes that one of several keys to success is for the students to approach the collaboration with enthusiasm for networking and learning.

Students involved in such collaborations experience varying degrees of success and unexpected challenges. As Paretto et al. (2007) pointed out, the primary challenges in preparing students to work on interdisciplinary, distributed teams are preparing them to collaborate on teams, and providing them with the communication practices to support this collaboration (p. 329).

### **Gaining collaboration skills in the classroom**

While undergraduate students are regularly taught writing skills by their TC instructors, they are not as consistently taught collaboration skills. In some cases, students are told simply to complete their work in teams with very little guidance on how to manage the team dynamic. Citing earlier research on student collaboration, Lam (2016) concluded that many instructors who assign team projects fail to clearly train students to work effectively in teams, so students have trouble navigating the complexities of collaborative work.

Researchers have suggested that to be effective collaborators, students must learn skills related to interpersonal communication and group dynamics. Providing guidance in these areas is one way we can improve our teaching and students' understanding of collaborative writing. One study concerned with the interpersonal nature of student collaborations (Halpin, von Davier, Hao, & Liu, 2017) examines collaboration between student writing pairs, looking specifically at how the actions of one student affect the actions of his partner and finding a relationship between the frequency of chat communication and ultimate performance on the collaborative task.

Teaching collaboration to our students is a landscape with many paths to explore. One path recently examined is to provide more structure for student collaborations. Instead of simply directing student to "work in a group," some instructors are providing student with clear strategies or frameworks. Thomas (2014) provided such a framework for a collaborative writing assignment designed to increase students' ability to work in teams. Bogert and Butt (1990), who found that even some students who successfully completed group projects, nevertheless reported being dissatisfied with the process, developed forms to guide students' reflections on their group's process and progress.

## Collaboration tools and technologies

Research on student collaboration has tackled the increasing use of online or cloud collaboration tools. At any moment, there is no shortage of collaborative online or cloud tools, and collaborative software continues to emerge on a regular basis.

Fernheimer, Litterio, and Hendler (2011) discussed how changes in Web infrastructure have allowed interdisciplinary teams to collaborate despite differences in team members' training, geography, and expertise. Ray and Ray (2000) categorized emerging collaboration technologies, suggesting factors to consider when choosing such technologies for TCs working on cross-functional teams. Tucker's (2015) research looked at the knowledge sharing and collaboration that takes place in "virtual communities of practice" and focuses on students' understanding of how to use computer-mediated tools to collaborate and adapting the social media technology for collaborative learning.

Instructors use a variety of online and cloud collaboration tools. Schrameyer, Graves, Hua, and Brandt (2016) focused on the need for students to develop the ability to use such tools and suggested instructors prepare students by incorporating these tools into their courses. Instructors who use learning management system (LMSs) can provide students with collaborative places including wikis and group workspaces. Marketing and Business Manager of e-Learning Industry, Sharon Thompson (2014), suggested several contemporary online tools that ease collaboration among learners in a group, including the following:

- **Proofhub.** Collaboration software that provides group chat capabilities
- **Mindmeister.** Tool that offers mind maps, templates, SWOT analysis, and project planning tools that can be used either synchronously or asynchronously
- **Google Docs.** Software that permits collaborators to write, edit, comment upon, chat, and access documents remotely and easily manages version control
- **BigMarker.** Web conferencing service with a live video chat feature and recording capabilities
- **SlideRocket.** Web-based presentation tool allows learners to collaborate on presentations
- **Skype.** Online communication tool allowing real-time video chat

This list is by no means exhaustive, but it does provide a cross section of the types of tools, many of which are free (Google Docs and Skype), and some of which have free 30-day trials (Proofhub and SlideRocket) available to assist student with collaborative projects.

## Strategies for instructors

Thompson (2014) suggested a framework for a collaborative writing assignment, along with strategies for instructors. These strategies are as follows:

- Set clear definition of expectations and purpose
- Provide clear instructions to students
- Keep groups small
- Monitor and support groups

- Define guidelines for appropriate participation
- Devise activities relevant to the topic

Another researcher (Wolfe, 2010) suggested that when teaching collaboration, instructors should anticipate breakdowns and provide timely feedback to students.

There are several resources on student collaborations available online. For instance, the Writing Center at UNC Chapel Hill (<http://writingcenter.unc.edu/handouts/group-writing/>) provides the following to students:

- Steps in the collaborative process
- Strategies of collaborative writing
- Potential pitfalls of collaborative writing

The University of Connecticut (<http://writingcenter.uconn.edu/collaborative-writing-resources/>) contains initial guidance for instructors undertaking group writing projects with their students. Topics they cite include the following:

- Anticipating obstacles
- Forming groups
- Assigning roles to group members
- Dedicating class time to group work
- Monitoring group work

## Conclusion

Learning collaboration skills is as important to TC students as sharpening their writing skills. Our industry partners expect both the interpersonal skills associated with collaboration and an openness to learning tools that facilitate this collaboration from our graduates. For these reasons, our field would benefit from more exploratory research on how TC instructors can make student collaboration more appealing and beneficial to their undergraduate students and further introduction of various collaboration tools to our students.

## Recommended Reading

Speck, B. W. (2002). *Facilitating Students' Collaborative Writing*. San Francisco: Jossey-Bass.

Thomas, T. A. (2014). Developing team skills through a collaborative writing assignment. *Assessment & Evaluation in Higher Education*, 39(4), 479-495. doi:10.1080/02602938.2013.850587

Wolfe, J. (2010). *Team writing: A guide to working in groups*. Boston: Bedford/St. Martin's.

## References

- 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. doi:10.1109/TPC.2015.2429973
- Bogert, J. & Butt, D. (1990). Opportunities lost, challenges met: Understanding and applying group dynamics in writing projects. *Bulletin of the Association of Business Communication*, 53(2), 51-58.
- Fernheimer, J., Litterio, J., & Hendler, J. (2011). Transdisciplinary ITexts and the Future of Web-Scale Collaboration. *Journal of Business and Technical Communication*, 25(3), 322–337. doi: 10.1177/1050651911400710
- Halpin, P. F., von Davier, A.,A., Hao, J., & Liu, L. (2017). Measuring student engagement during collaboration. *Journal of Educational Measurement*, 54(1), 70-84. doi:http://dx.doi.org/10.1111/jedm.12133
- Hirst, R. (2016). Bonding with the Nuclear Industry. *Journal of Technical Writing & Communication*, 46(2), 151-171. doi:10.1177/0047281616633598
- Hyman, D., & Lazaroff, B. (2007). With a little help from our friends: Collaboration and student knowledge-making in the composition classroom. In F. Gaughan & P. H. Khost (Eds.), *Collaboration(,) Literature(,) and Composition* (pp. 127-145). Cresskill, New Jersey: Hampton Press, Inc.
- Johansson, C., & Dittrich, Y. (1999). Software engineering across boundaries: Student project in distributed collaboration. *IEEE Transactions on Professional Communication*, 42(4), 286.
- Jones, S. L. (2007). How We Collaborate: Reported Frequency of Technical Communicators' Collaborative Writing Activities. *Technical Communication*, 54(3), 283-294.
- Kittle, P., & Hicks, T. (2009). Transforming the Group Paper with Collaborative Online Writing. *Pedagogy*, 9(3), 525-538.
- Lam, C. (2016). Improving Technical Communication Group Projects: An Experimental Study of Media Synchronicity Theory Training on Communication Outcomes. *Journal of Business and Technical Communication*, 30(1), 85-112. doi: 10.1177/1050651915602293
- Maylath, B., Vandepitte, S., Minacori, P., Isohella, S., Mousten, B., & Humbley, J. (2013). Managing Complexity: A Technical Communication Translation Case Study in Multilateral International Collaboration. *Technical Communication Quarterly*, 22(1), 67-84. doi:10.1080/10572252.2013.730967
- Paretti, M. C., McNair, L. D., & Holloway-Attaway, L. (2007). Teaching Technical Communication in an Era of Distributed Work: A Case Study of Collaboration Between U.S. and Swedish Students. *Technical Communication Quarterly*, 16(3), 327-352. doi:10.1080/10572250701291087

- Rice-Bailey, T. (2014). Remote Technical Communicators: Accessing Audiences and Working on Project Teams. *Technical Communication*, 61(2), 95-105.
- Ray, D. S., & Ray, E. J. (2000). Matching Collaboration Technologies to Team Needs: Accommodating Document Management and Communication Goals. *Technical Communication*, 47(1), 122.
- Robidoux, C., & Hewett, B. L. (2010). Collaborating Virtually to Develop This Book. *Virtual Collaborative Writing in the Workplace: Computer-Mediated Communication Technologies and Processes: Computer-Mediated Communication Technologies and Processes*, 400.
- Schrameyer, A. R., Graves, T. M., Hua, D. M., & Brandt, N. C. (2016). Online student collaboration and FERPA considerations. *TechTrends*, 60(6), 540-548. doi:<http://dx.doi.org/10.1007/s11528-016-0117-5>
- St. Amant, K. (2003). Making Contact in International Virtual Offices: An Application of Symbolic Interaction to Online Workplace Discourse. *IEEE Transactions on Professional Communication*, 46(3), 236-240.
- Thomas, T. A. (2014). Developing team skills through a collaborative writing assignment. *Assessment & Evaluation in Higher Education*, 39(4), 479-495. doi:10.1080/02602938.2013.850587
- Thompson, S. (2014). 6 Online collaboration tools and strategies for boosting learning. *eLearning Industry*. Retrieved from: <https://elearningindustry.com/6-online-collaboration-tools-and-strategies-boosting-learning>
- Tucker, V. (2015). Using social media for student collaboration. *The Journal of Faculty Development*, 29(2), 45-56.
- Vealey, K. P. (2016). The shape of problems to come. *Journal of Technical Writing & Communication*, 46(3), 284-310. doi:10.1177/0047281616639478
- Wolfe, J. (2010). *Team writing: A guide to working in groups*. Boston: Bedford/St. Martin's.