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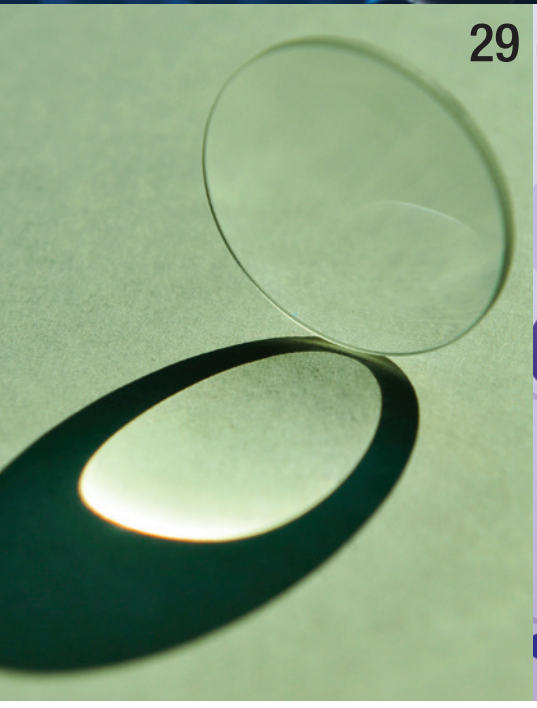

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A Note from the Editor

Happy New Year! Typically, the first issue of each new year focuses on a particular aspect of professional development, and this one fits the theme quite nicely. Our January/February 2024 special issue on Training and Development, provides a broad discussion of educational and training perspectives on professional development, which provides useful, practical takeaways and guidance in building successful careers and skill sets in technical communication. Special issue editors Art Berger and Dr. Nupoor Ranade have curated a collection of features that explore training and development from a wide range of perspectives, including the value of academic and industry partnerships, pathfinding programs, research as lifelong learning, storytelling, student perspectives, and an interview with two training professionals.

This issue also includes two columns and a feature related to professional development, including our Careers column, Technical Communication Body of Knowledge (TCBOK) column, and a feature on STC's Education Program. The Careers column in this issue focuses on the notion of "sending out ships" to cultivate opportunities in career development. Our second, and newly curated column in *Intercom*, focuses on content and topics of interest from STC's TCBOK project, http://www.tcbok.org, presented by various members of the TCBOK Committee. We hope this new column will spark your interest in reading more about the wide range of topics in the TCBOK to expand your knowledge and research in technical communication. You'll also find a feature on STC's Education Program in this issue, providing an overview of its offerings and potential benefits to professional training and development.

We've also recently published the 2024 Editorial Calendar on the *Intercom* Magazine home page, so you can check out a preview of our exciting and upcoming topics. You can view the complete list at https://www.stc.org/intercom/editorial-calendar/ to see what lies ahead in the coming year. If you're interested in contributing an article these topics, or any other technical communication related subject, email your idea or draft manuscript to us at intercom-editor@stc.org for consideration. Check out our updated author submission guidelines at https://www.stc.org/intercom/author-guidelines/ when preparing your manuscript. We hope to hear from you soon! ■

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Guest Editorial

Academia, Industry, and the Society for Technical Communication:

How we can strengthen our careers and the field as a whole through strategic collaborations.

BY ARTHUR BERGER | *STC Member* and **DR. NUPOOR RANADE |** *STC Member*

If you are like us, professional development is one of your goals for the new year. As a technical writer, Art pursues increasingly technical certifications that even most software developers do not have. As a professor, Nupoor fills her schedule with conferences and publications that can have fairly narrow audiences that do not always intersect. Such different focuses in professional development activities reflects the long-standing narrative of academia and industry as "worlds apart" (Dias, Freedman, Medway, and Paré, 1999).

A recent study from the *Journal of Business and Technical Communication* that compared research topics of academia and the field as represented by *Intercom* noted that even the emphases of what technical communication involves can differ considerably among industry and academia (Friess and Boettger, 2021). This disconnect seems to be growing more and more, and is not just limited to training and professional development focuses. Even students recognize this, such as Sangin Lee's masters thesis (2014) that argued for technical communication academics and practitioners to acknowledge and strive towards reconciling the gap within the field in a timely manner to prevent, among other things, a lack of public understanding of the field, clear pathways for entry into the field, industry standards, and professionalization opportunities for practitioners.

But our past histories, activities, and especially this collection of articles for *Intercom* also suggest ways in which bridging these worlds, often through the Society for Technical Communication, can strengthen your career, as well as the field as a whole. The two of us editors met in graduate school at NC State University. We were fortunate to belong to a masters program that emphasized a balance between theory and practice, such as a requirement for a summer-long internship. One highlight was working together to revive a student-run "unconference" on techcomm, SpeedCon, that featured a range of local academic and industry speakers. After graduation and in different careers, we continued to collaborate on research presentations, guest lectures, and other projects together, some facilitated through the Society. Although seldom skills-based, these activities laid the groundwork for future projects, deeper understanding of our place in both worlds, and even promotion packets that would not have been possible if we had pursued individual and job-driven professional development only.

Similarly, the articles in this edition share experiences and ideas for how to bridge the worlds of academia and industry to improve the training and development of practitioners, especially students and early or career-transitioning professionals.

1. Saul Carliner characterizes the key similarities and differences between education and training as applicable to the technical communication industry. He suggests ways that faculty can teach corporate training programs and practitioners can teach college classes to help bridge the gaps of knowledge in both spaces.
2. Chris Dawson takes you behind the scenes of an award-winning, industry-academic pathfinder mentorship program between IBM and NC State University.
3. Stacey Pigg shows how research collaborations contribute not only to the field's knowledge, but also one's own lifelong learning and professional development.

4. Allison Durazzi illustrates a two-step process for connecting work experience to course objectives and learning activities in technical communication, including examples for you to develop your own.
5. Daniel Hocutt shows how through career reflection, you can identify theoretical and critical interventions to help address your mundane communication activities.
6. As both a practitioner and a student nearing the completion of her Ph.D. dissertation, Alexandra Cata-Ross shows where academic research fits into a practitioner's world.
7. We conclude with an interview from Guiseppe Getto, Ph.D. and Christina Mayr, successive past presidents of the Carolina chapter, who share takeaways for what both their academic-industry and Society partnerships mean for professional growth, training, and development as technical writers.

Many of our contributors have shared experiences with the same STC chapters, universities, research projects, companies, and more. This decision was deliberate, to emphasize the personal element in professional development and the interconnectedness of the two worlds. These articles also showcase many programs that exist outside STC. Many times when we think of professional development, either individually or as leaders of an STC chapter, we think of how to build up the infrastructure in our own part of the world. This year, let's consider how we can spend some of our efforts on infrastructure that connects our world with others. We hope that this edition gives you practical ideas on how to do so. ■

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Education and Training in Academia and Industry

By Saul Carliner | STC Fellow

Differentiating between the two can prepare you for more effective professional development and instruction in both settings.

After spending part of my first Canadian Thanksgiving dinner complaining about all of the American prepared foods I couldn't find in the country, someone who was fed up with my complaining commented, "We cook our own food here."

So what does this have to do with education and training, and learning in academia and industry? Well, just as the differences between American and Canadian culture seem invisible to the casual bystander, so the differences between education and training often appear invisible, too.

I became sensitized to these subtle differences from a practical perspective as I moved from presenting professional workshops to teaching for-credit academic programs. Preparing to design a graduate certificate that prepares future instructors for higher and continuing education (the latter somewhat akin to training) illuminated theoretical and philosophical distinctions between the two teaching contexts.

In this article, I characterize the key similarities and differences between education and training, then suggest opportunities and challenges for faculty who want to teach training programs and for practicing professionals who would like to teach in colleges and universities.

Differences and Similarities Between Education and Training

This section explores the differences and similarities between education and training. Specifically, it explores differences in missions, the teaching and learning experience, and governance and similarities in the focus on student outcomes, teaching facilities and media, and characteristics of effective teaching, all of which affect expectations regarding education and training.

Difference: Missions

Although both education and training involve teaching skills to people, the nature of the skills and the time frame in which instructors should expect learners to apply those skills varies widely between education and training. Education is generally intended for long-term application: more than six months after the course. By contrast, training is generally intended for short-term application: within six months of the course (Carliner 2012).

These differences in missions lead to differences in the types of material taught, even if all of the material has direct or indirect application in the workplace. Education generally tends to involve more abstract and conceptual material, while training tends to focus more on concrete material (Malcolm, Colley and Hodkinson 2003, and Eraut 2004). For example, rhetorical strategies underlying different types of communication represent educational content, while procedures for operating an authoring tool represent training content.

> **Academia and industry must often cross lines because of the nature of the content they want to teach.**

Despite this difference in mission between education and training, academia and industry must often cross lines because of the nature of the content they want to teach. For example, if a technical communication program wants students to prepare assignments in a particular authoring tool, they have to provide training on that tool. Similarly, if an employer develops software to protect cybersecurity, the development team needs an awareness of the key concepts, laws, and regulations governing online security. In some cases, a company might provide this education to their employees in-house. In other cases, they might rely on a continuing education provider (like a university continuing education unit or a professional or trade association) or expert company.

Difference: The Teaching and Learning Experiences

Although the facilities and media are the same, the teaching and learning experiences substantially differ between education and training. Consider these differences.

- *Length of courses.* Typical college and university courses are tied to credit values, with each credit representing approximately 10 to 15 hours of work (credits have different values in different countries). Most institutions schedule courses for about 3 to 5 hours a week over a term (10 to 15 weeks depending on the country and whether the institution follows a quarter or semester system). This fosters a longer-term relationship between instructors and learners. By contrast, many training programs are shorter in duration, only taking the time needed to master a tightly-defined subject. Employers, who often pay for training, want to minimize the time away from the workplace because this, in turn, reduces productivity. The lengths of training courses varies. Many self-study e-learning courses run for just an hour or two with many employers offering micro-learning, short bursts of learning running from 30 seconds to 10 minutes. In-person classes usually run in half-day segments, with most running between one half-day to two or three full days, though some run longer. Live virtual classes are often scheduled in shorter segments than in-person ones and might run for several sessions over one to four weeks. The shorter-term nature of these courses also affects the extent to which instructors and learners develop relationships. Continuing education courses fall somewhere between university and training courses. Some use university-like scheduling (one or two short sessions per week for several weeks); others schedule full-day sessions for one or more days. Either the number of continuing education units (CEUs) (a different system than college and university credits, with one hour of class time leading to one CEU) or the amount of course material determine the length of courses.
- *Expectations of class preparation.* The extent of preparation for class sessions varies between education and training. Before college and university classes, learners can expect one to three hours of preparation. As a result, instructors almost always assign readings in advance of class, often assign problem sets and other types of assignments, and sometimes ask learners to watch recorded lectures before class sessions. By contrast, most training programs involve no pre-class preparation. In those cases when a course assumes that learners have a certain minimum level of knowledge, learners might have to complete pre-work, usually a self-study course. Furthermore, because training offered by an employer is considered work, employees can request compensation for time spent in class preparation. Even without that financial concern, because learners have full-time jobs and most have outside responsibilities, most lack time for pre-class preparation so instructors rarely expect it. As with other aspects of the teaching and learning experience, continuing education programs straddle the line between education and training. Some require pre-class preparation but often limit it to one to two hours for the entire class session rather than per hour of instruction.
- *Relationship between instructor and learner.* The relationships between instructors and learners differ between education and training. The longer-term nature of educational courses fosters a closer relationship than possible in training. But so do differences in roles of instructors in the two environments. In addition to teaching, instructors in colleges and universities often provide tutoring to students who have difficulty, and many learners contact instructors for advice on education and career plans. At the graduate level, instructors supervise the research of learners and often hire them as research and teaching assistants. This creates a close working relationship, often resembling that of a mentor and protégé. By contrast, the short length of many training courses limits the opportunity to develop relationships. But so does the one-off nature of many training courses (courses taken in isolation rather than as part of a program).
- *Grading.* Grades—a formal letter or number that encapsulates the extent to which learners mastered the objectives—play a central role in college and university teaching. Providing assignments that fairly capture the instructional material and marking learners' responses consistently and equitably require extensive time, as does providing learners with useful feedback. Instructors in colleges and universities need to leave large amounts of time for marking assignments. Each graded assignment adds to

instructors' workloads. Many training organizations do not assess student learning, and when they do, rely on self-assessments rather than formally marked exams. That's the impact of Griggs vs Duke Power (Legal Information Institute), a 1971 US Supreme Court ruling, which suggests that, unless an organization validates examinations used to make personnel decisions (such as hiring, promotion, and transfers) to ensure that they assess what they are intended to assess and do not discriminate against workers, an employer might indeed be engaging in discriminatory practices, even if it did not intend to. In response, most employers rarely use tests, and when they do, often involve their legal departments in the process. Continuing education programs sometimes involve assessments of learning, especially when offered by college and university continuing education programs and some professional associations (like STC) but they often involve projects rather than tests.

- *Role of student evaluations of teaching.* Student evaluations of teaching, which assess satisfaction with instructors and courses, play important but different roles in teaching in both education and training. In education, student evaluations of teaching play a role in assessing performance and might affect a tenure or renewal decision if the instructor has consistently poor evaluations but the evaluations are rarely used in terminations. By contrast, because the reputation of a training group often depends on satisfaction with instructors and courses, these evaluations play a key role in decision making. The most stringent organizations have an established minimum score that instructors (both full-time and contract) must achieve. If they fail to do so, they might be placed on an improvement plan, and if the situation persists, might not receive further teaching assignments.

Difference: Governance

The governance of academic and training programs substantially differs from one another, meaning the process for initiating and approving decisions as well as who participates in them differ. In academia, all decisions about curricula and courses lie with the faculty. A group of faculty propose curricula and the proposals are approved within the department in which the program resides (and often contains other programs), the College (or, in the British system, Faculty), and University. The proposal must receive majority approval at each level of vote. In the case of accredited programs, the proposed curricula and courses must also be approved by the accrediting body (such as the Accrediting Board for Engineering and Technology and the Accreditation Council for Business Schools and Programs) before the curriculum and program can be accredited.

At the department level, all full faculty members participate in the decision as well as representatives of staff, student groups, and part-time (adjunct) faculty (if they are entitled to a representative). At the other levels, representatives of these constituencies vote on the proposal.

> **The principle of academic freedom protects what faculty can teach.**

Curiously, proposals for academic programs and courses only contain a course title and description, as well as the number of credits. That's because the principle of academic freedom protects what faculty can teach. According to the Canadian Association of University Teachers, academic freedom is "the right to teach, learn, study and publish free of orthodoxy or threat of reprisal and discrimination" (CAUT 2023). When teaching a course, instructors need to create a syllabus that reflects their interpretation of the course description. Furthermore, in most North American universities, faculty own the copyright to their course materials for classroom courses. (Ownership of copyright to online courses varies depending on the institution and the extent of investment it makes in the design and development of the online course.)

By contrast, decision making regarding training programs varies depending on the type of organization. Continuing Education programs of universities and professional associations usually have a committee that reviews and approves suggested program and course

proposals. In workplaces that train their workers, management usually makes the decision but usually delegates the preparation of course and program proposals to a staff member with planning. However, the manager retains decision making responsibility. Companies that develop and market courses try to respond to perceived needs in the market. Some companies use market research to determine what to offer; others use more instinctive approaches.

In many instances, training providers prepare not only a course title and description, but some or all of the course itself and expect instructors to teach the course as designed though they can, with permission, make adjustments. To ensure that instructors teach courses as intended, some providers actually certify instructors to teach courses. The certification processes vary but usually involve someone from the provider observing at least one class session of the instructor. In these instances, the training provider owns the copyright to the course.

In some instances, however, when instructors bring sought-after expertise, the training provider sometimes lets the instructor create their own course. Ownership of the copyrights to that course is negotiated between the two parties.

Similarity: Focus on Student Outcomes

At their core, both education and training focus on student outcomes. Both the Centers for Teaching and Learning in colleges and universities (which support instructors in their teaching) and training departments suggest starting the design of a course by identifying the objectives that students who complete it should achieve. Then both groups advise instructors to next prepare the evaluation, which assesses the extent to which students have achieved the objectives. Last, instructors should choose and sequence instruction and practice activities so that students can master the objectives. Instructors should not include material that does not support one of the objectives.

Similarity: Teaching Facilities and Media

Education and training both occur in one of these situations:

- A physical classroom, which usually has seating for students, a place for an instructor at the front of the room, and audiovisual equipment for sharing slides, videos, and other media. Most college and university classes occur in buildings with several classrooms. Training classes can take place in a variety of types of classrooms including ones like those in colleges and universities as well as meeting rooms in office buildings, conference centers, and hotels.
- Self-study e-learning, which are courses that learners take online at their own pace and at their own convenience. To track student progress and completion, most organizations direct students to these online courses through a Learning Management System like Brightspace, Canvas, or Moodle. Before the pandemic, self-study courses were the most common types of digital learning that people took in both industry and academe, though its prevalence was far higher in industry, with over 40% of all training offered this way (according to the 2021 State of the Industry report).
- Virtual classroom, which is an online meeting space where learners and instructors can meet at the same time. Instruction in the virtual classroom shares similarities with physical classrooms such as instructors lecturing, students responding, and instructors breaking students into groups. Because the experience occurs online, however, some feel it lacks the intimacy of the in-person classroom.

Similarity: Characteristics of Effective Teaching

One more similarity between education and training is what makes effective teaching. Stakeholders in both environments seek student engagement, noting that engaged students are more likely to learn than those who are disengaged.

Although learners' incentives to engage differ (grades for education, benefits of improved skills for training), the means of engagement show relatively strong similarities. Learners in both situations seek opportunities to work through problems and cases in class, to share and critique draft work, and to participate in discussions and instructors in both situations seek to provide these opportunities.

Opportunities and Challenges for Those Who Want to Teach

For those who have an interest in teaching in colleges and universities, training, or continuing education, this exploration of similarities and differences suggests opportunities and challenges. The primary opportunities emerge from the similarities between the two types of teaching: those who have honed teaching skills in one environment can transfer them to another.

The primary challenges emerge from the differences between the two environments. For example, someone who is used to teaching one- to three-hour class sessions twice a week might find themselves physically challenged teaching for two to three full-day sessions. Similarly, someone who is used to teaching training classes without grading might feel overwhelmed by the first few graded assignments in an education context. Requests for tutoring and advice from learners in college and university courses might also present a new experience. Perhaps the biggest challenge will be navigating the number and complexity of rules and regulations in higher education that often do not exist in training contexts.

For those who have taught training courses and would like to teach in colleges and universities, teaching in continuing education programs, which have features of both training and higher education courses, offers a bridging experience. ■

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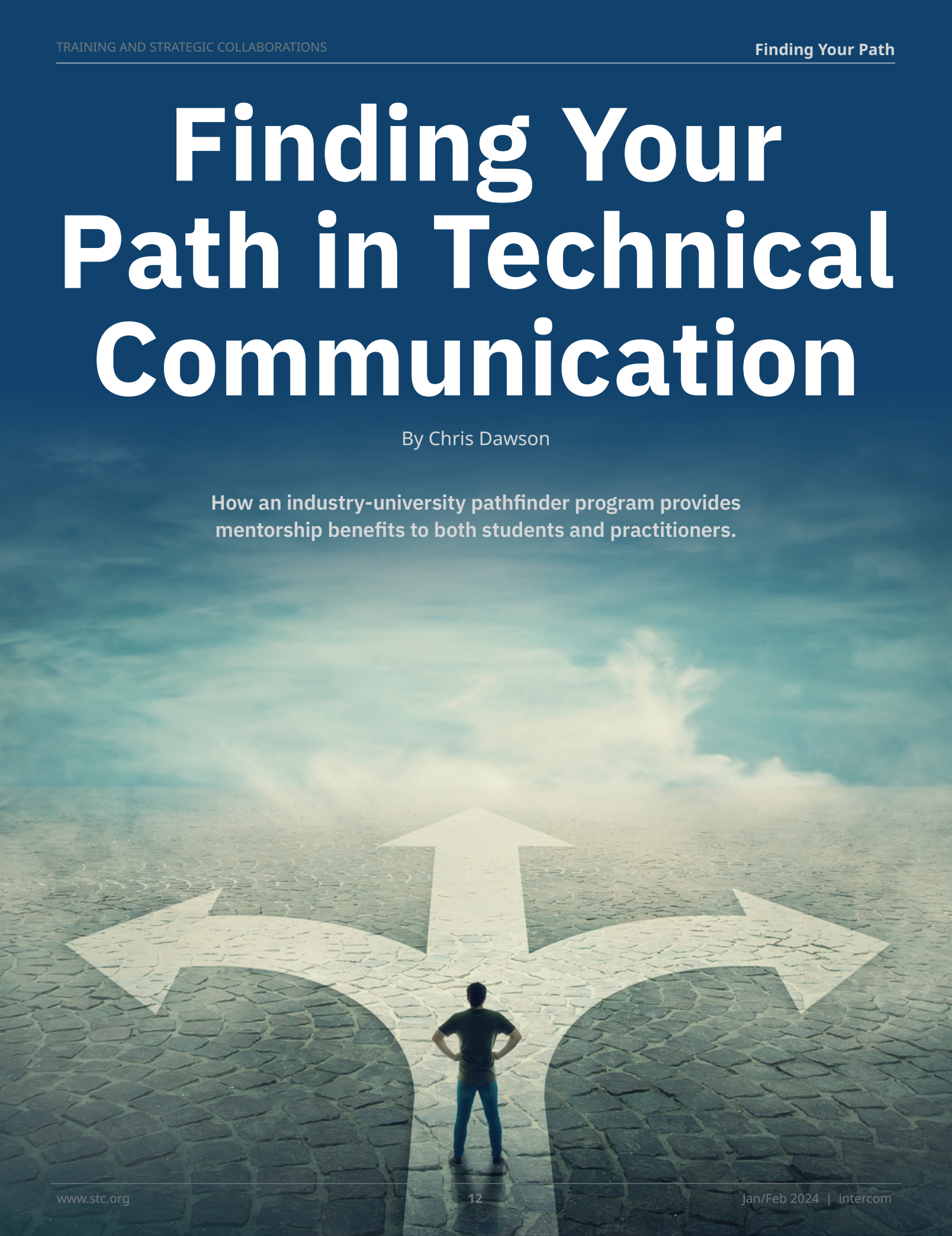
Finding Your Path in Technical Communication

By Chris Dawson

How an industry-university pathfinder program provides mentorship benefits to both students and practitioners.



Technical communication (TC) is not one of the flashy careers that many people think of while they are selecting a career. When I discuss my Technical communication role with friends and family, it almost always requires an explanation of what it is. How do people learn about TC and decide whether it is a profession that they would be interested in?

Narrowing the focus of that broad, industry-wide concern, you might wonder how you and your company can help champion TC as a career option. One way that IBM and Red Hat are trying to promote the profession is through the IBM-NCSU Pathfinder Mentoring Program. The program was started 19 years ago by IBM employees Linda J. Brown and Chris Pepper with about 20 students and mentors. They wanted to provide an opportunity for students to supplement their academic knowledge with practical knowledge from people in the field.

So far, an all time high of over 280 students completed applications to participate in the program for the 2023-2024 school year. All students who apply to the program who major in Computer Engineering, Computer Science, Graphics/Industrial Design, Technical communication, or MBA students with any of these backgrounds are accepted. The inclusion of TC among such a broad swath of majors underscores one of the tenets of the program, that nobody works or learns in isolation, but rather as a team. As such, the program has two major approaches to helping the students learn more about the professional world: one-on-one mentoring and supporting events.

One-on-One Mentoring

For the mentoring side, the program pairs students at North Carolina State University with professionals in fields that interest the students. There have been some mentoring relationships that have either two students or two mentors, which can also be effective with the students also learning from each other. The student and mentor work together for the school year to discover the interests of the student and better prepare the student for what is involved with a career in that field. In some cases, students like technology and writing, but are interested in learning more about what they want to do within technical writing. Given the many different areas of technical writing such as medical, technology, pharmaceutical, grant, and science, as well as the various focus areas such as writing, editing, project management, user experience, and architecture, this gap in knowledge is understandable.

> "This has been an amazing experience. As a non-computer science student, I was hesitant to participate in the mentorship, but my mentor has had a profound effect on my professional development. He has helped me make connections outside of NC State and has helped me land multiple interviews. I know without his assistance I would have never had these opportunities. He has also given me great insight into the corporate world and the different types of companies I could possibly work for, as well as insight into other events where I can network."

Students say that this opportunity to focus on their individual needs is extremely helpful to identify a more focused career path. Some students have entered the program believing that they want to go down a certain path, and leave the program with a completely different path. At a more granular level, a student can target improving specific skills or deliverables during the year. One student might want to focus on his or her resume, while another student might need some practice with interviewing skills.

Supporting Events

Students who sign up for the program not only get to work with their mentors, they also get to attend events that provide additional learning opportunities. This is the supporting events focus. For this piece, a core team of about 17 volunteer members organizes group events for the students in the program. Examples of the group events include:

- **Technical speakers** - Subject matter experts provide information about technical topics, such as blockchain, artificial intelligence, and data security in a multicloud environment.
- **Early career panel discussion** - A panel of recently hired employees (1-5 years) share their experiences and advice for the students from an early career perspective.
- **Executive panel discussion** - A panel of management and technical executives share their experiences and advice with the students from an executive perspective.
- **Mock interviews** - The student participates in a practice interview with feedback from both the interviewer and an observer.
- **Resume writing tips** - A resume expert provides tips on writing an impactful resume.
- **Design Thinking workshop** - Students learn about the Design Thinking process and participate in an activity that follows the steps of the process.
- **Developing your elevator pitch** - Students learn what an elevator pitch is and how to create an effective pitch.

While a large majority of the students in the program are in engineering-related fields, the program supports students in TC with mentors in the industry from IBM and Red Hat. Over the years, IBM and Red Hat have been able to recruit some top Technical communication professionals from the Master's of Science in Technical communication program at North Carolina State University.

For example, two long-time IBM mentors in the program, Frances Overby and Carolyn Carpenter, host an annual "Day in the Life of a technical writer at IBM" event. At this event, Frances and Carolyn invite people who were involved with technical writing at IBM or Red Hat at some

point in their careers. Some of the mentors have moved to roles in different companies, which provides some different experiences and shows some possible paths for technical communicators. After a brief overview about what technical writers do at IBM, the students ask the participants their questions about the job.

> "The IBM-NC State mentoring program was one of the most interesting opportunities I have had the chance to pursue. I was lucky enough to be assigned a dedicated mentor. I went to the IBM RTP campus and engaged with multiple departments of IBM during a large event. Later, my mentor gave me the chance to meet with several IBM executives, with whom I had discussions and could receive insightful advice."

Benefits of the Program

The Pathfinder Program offers many benefits to all of its participants. Through the mentoring and events, students can better imagine what life might be like as a technical writer in general by the insight they gain into these specific companies. As such, they are likely to pursue roles in TC with greater confidence. It also gives the mentors at the company a chance to learn what new-to-TC folks are interested in, what they are learning, and what they want out of potential careers and employers.

Although the program is not a job-placing one, it does naturally lead to a stronger talent pipeline through informal means of connecting employers with potential hires. For example, a participant in the program last

year joined our writing team for an internship during the summer. Even if students do not apply to work at the company, they might get introductions or referrals from their mentors that eventually lead to a role. The mentors might be able to improve their internal hiring processes with better job descriptions and interview questions that are based on their interaction with students, as well as their interactions with other mentors in different departments within the company. By continuously discussing with students what the job means and why it matters, mentors can reflect on effective strategies to attract top talent to join their team as technical writers.

Participating in the program also benefits the mentors. Mentoring skills are no longer expected only from executives. Professionals at all levels are being asked to mentor others to develop the team and share knowledge and skills. Mentors can also benefit from a reverse-mentoring effect in which they learn from the students who share the wide variety of trends they learn about in their programs.

Ideas for Replicating a Similar Program

Now that you have an idea of what a Pathfinder Program can look like, how might you go about starting one? Especially if your company is a small business, it might seem like a pipedream. However, just as finding out about TC does not seem to come naturally at first, you can make a Pathfinder Program become a reality easier than you might think. You can also get valuable feedback to iterate the program as you go.

> "Although I did not fully reach the goals I had set at the beginning of the year for this mentorship relationship, the experience I got was one that I wouldn't trade for anything. My mentor did an exceptional job providing me with exposure to the industry that I hope to enter one day by providing a job shadowing experience since the beginning of the program. I wish there were more emphasis on the goals set at the beginning of the program's duration, but overall I am pretty satisfied with my experience. I thank you all for the beautiful experience that you facilitated to both myself and all others that participated!"

- Reach out to people involved in a similar program. It takes a certain passion to start a program like this, and most would be happy to share their experiences.
- Find out if your company already has a mentoring program in place. If not, are there a couple of people who might be interested in starting one?
- Find universities in the local area to make face-to-face mentoring easier. If you don't have a university nearby, check out some online programs. For example, East Carolina University and Texas Tech University both offer fully online TC programs. Such institutions might already have some sort of industry partnership program, or be interested in developing one.
- Connect with the local STC chapter. They might already have mentorship programs in place, or be better situated to connect several small TC teams to help form an effective mentoring program. This can also help with contacts in other roles of technical communication.
- Find another person or two who are also interested in starting the program to provide ideas and help with behind-the-scenes planning.
- Start small with a few well-planned, well-publicized events. For example, if you can't get long-term commitment to offer one-on-one mentoring yet, hosting a "Day in the Life" panel might be more feasible. This is where your school contacts can really help you spread the word to find students.
- Start a social media account to drive some interest in the program. Make sure that you or your team can keep it active.

Second Semester Survey

- Keep records of participants, take pictures, get testimonies, and share successes.

Conclusion

If you are interested, consider starting a program like this at your workplace. The benefit to the students, as well as to the mentors, is well worth the time and effort. The IBM Pathfinder Mentoring Program was recognized with the IBM Chairman's Volunteer Excellence Award, which is given to programs that are beneficial to IBM and the communities that they serve.

> "The experience gives students the chance to see things from new perspectives, get an inside look at life working for IBM/RedHat, and meet experienced people to connect with that they would never have the chance to connect with naturally. It's a wonderful opportunity at no cost to the student—I'd recommend anyone to participate, regardless of their interest in working for IBM." ■

ADDITIONAL RESOURCES

"IBM-NCSU Pathfinder Mentoring Program." Facebook. Accessed November 9, 2023. https://www.facebook.com/IBMNCSUPathfinder/.

"IBM-NCSU Pathfinder Mentoring Program." LinkedIn. Accessed November 9, 2023. https://www.linkedin.com/groups/7057876/.

"IBM Pathfinder Mentoring Program." IBM MediaCenter. Accessed November 9, 2023. https://mediacenter.ibm.com/channel/channelid/156911071. This site has recorded videos of some past Pathfinder events that the article describes.

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Read *STC's Notebook*

The official blog of the Society for Technical Communication, *STC's Notebook*, is your source for news and insight from the STC community.

Visit *www.stc.org/notebook*

Contribute to the *Notebook!*
Send your submissions to *publications@stc.org*.

How Research Partnerships Can Support Lifelong Learning in Technical Communication

By Stacey Pigg, North Carolina State University

How industry-academic collaborative research projects contribute to lifelong learning.

Over the years, *Intercom* readers have come across numerous appeals for collaboration between technical communication (TC) academics and practitioners, and they may understandably be skeptical when encountering yet another academic advocating for research collaboration. In this contribution, my aim is to provide an alternative perspective on research collaboration that emphasizes its value for lifelong learning. I discuss the value of industry-academic collaborations as sites where researchers from across professional backgrounds can integrate diverse perspectives and co-construct knowledge. Drawing on literature in the field of education, I frame research collaborations as generative sites for reflexive individual learning that can also build the profession when we share our knowledge broadly.

In technical communication, lifelong learning tends to be framed in terms of lifelong education. In other words, discussions about learning often focus on how academics and practitioners can stay on top of changes in technology and industry through various educational and training programs. For example, lifelong learning can be described as some combination of the following:

- On-the-job training aids, knowledge transfer guides, and internal documentation
- Professional development seminars, lunch-n-learns, and similar meetings
- Reading practitioner or research journals such as *Intercom* and *Technical Communication*
- Presentations and conferences such as STC Summit
- Annual training for corporate requirements such as HR and security
- Daily scrums, weekly playbacks, and other less formal venues to share work
- Informal, Q&A-style learning or discussion through online forums, listservs, and chat-based communities such as the Write The Docs Slack
- Networking internally or at professional society meetings and conferences
- Formal training such as boot camps or courses that lead to certification
- Continuing education, such as in-person or online learning through a university

A focus on lifelong learning through education and training aligns seamlessly with the interests of many within the TC profession who also identify themselves as educators. However, from the perspective of lifelong learning theory, the experience of lifelong learning should be understood as broader. Instead, learning is personal and social in its interactions with people, institutions, and the social facts that shape the understandings we encounter, the texts we read, or advice we are given (Billet 2010). Ultimately, lifelong learning theory positions learners as active agents shaping learning and whose learning extends beyond planned encounters (Billet 2010).

I argue that research partnerships offer unique opportunities for learning through providing space for reflexivity in thought, questioning assumptions, and building new conceptual and practical frameworks for action.

In my own research in TC, I have traced these self-directed learning trajectories for entrepreneurs whose learning and professional development needs must be met outside of formal workplace training (Lauren and Pigg 2016). In this article, I argue that research partnerships offer unique opportunities for learning through providing space for reflexivity in thought, questioning assumptions, and building new conceptual and practical frameworks for action. To make this argument, I review scholarship to define and contextualize academic/industry partnerships, while discussing my experience as an academic researching with industry practitioners. I conclude with concrete tips for building the foundation for effective research partnerships beyond the rote work of getting permission, such as from management and ethics boards, to conduct research, namely the following:

1. Design research projects that explicitly build in time for sharing, discussing, and integrating perspectives.
2. Use both research memos and well planned meetings for reflective and reflexive work.

3. Prepare for the timeline to take longer when emphasizing reflexive learning than it would when working alone.

Academic-Industry Research Partnerships and Lifelong Learning

Academic literature on research partnerships emphasizes their importance for solving central problems of science and technology through "innovation-based relationship(s)" with different members and organizational structures (Hagedoorn et al., 2000). Many industries have cut long-term research efforts to save money, while higher education institutions have simultaneously lost state funding and rely primarily on federal grants for research initiatives (Gregory 1997; Shattock 1997). Researching together enables industry partners to satisfy their need and desire for research initiatives, while also providing academic partners with alternative funding sources and increased access to practicing professionals and often more advanced technologies in the field (Gregory 1997). Of course, these partnerships are also associated with many challenges that stem from differences in culture, priorities, and timelines.

Within TC, researchers have consistently and frequently called for more academia-industry research collaborations through arguments focused on their potential to bridge the gaps between practitioner needs and academic interests, as well as to create feedback loops to influence pedagogy (Blakeslee and Spilka 2004; Whiteside 2003). In this vein, Blakeslee and Spilka noted that industry-academic collaborations offer the potential to "define more and better questions in relation to industry" (78). Efforts to promote research collaborations in TC have also noted challenges: different motivations and time scales for career development, different languages and expectations for outcomes, and permissions, conflicts of interest, and intellectual property (Blakeslee and Spilka 2004). Research partnerships also create ongoing ways to maintain alumni relationships and for practitioners to further shape academic programs.

Collaborative research can also provide powerful learning experiences for participating researchers. Through lifelong learning theory, we can recast collaborative research as a site for reflexivity and co-construction of knowledge at the individual level: a space that exists outside institutes, professional credentialing, and in-workplace training on one hand or attending conferences or reading journals or blogs on the other. Edwards and colleagues (2002) argue that reflexivity must be central to active theories of lifelong learning, particularly when posited as learning that helps individuals adapt to changing and uncertain economic and professional circumstances. Defining reflexivity as "the capacity to develop critical awareness of the assumptions that underlie practices, especially the meta-cognitive, interpretative schemata that constitute worlds," Edwards and collaborators emphasize the importance of learning with others who have different experiences and backgrounds from one's own (533). To do so requires accessing alternative perspectives, engaging in dialogue, evaluating one's own assumptions, and disrupting routines or reactive responses. Learning in this sense is not inevitable: it is associated with deliberate engagement and connection to networks that promote exchange and reflection.

Case Study of Collaborative Research

My thoughts about how and why academic-industry partnerships can promote this unique form of learning are shaped by my recent collaborative research study with Arthur Berger on professional development practices in one large IT firm. In this project, we explored a group of documentation writers in order to learn more about their ongoing peer learning processes and found that their learning was oriented most toward improving their team function and improving their product, which often involved a focus on business operations and writing practices (Berger and Pigg 2023).

Arthur and I knew each other because of our shared relationship to the Master's Program in Technical Communication at NC State, from which Arthur graduated and where I am a faculty member. Because of this background, we shared similar interests, experiences, and language that helped us overcome some

pitfalls that collaborators from across industry and academia are likely to encounter when beginning a new project. We also shared a social network due to our relationship to NC State that enabled us to overcome logistical problems such as permissions for research in industry, and IP and timeline concerns that often derail collaborative research projects. Yet, in spite of these similarities, our research stance enabled us to emphasize our different perspectives on TC work, which created moments consistent with conditions needed for reflexive learning. That is, because we had different perspectives on TC work and respect for one another's knowledge, we approached our project in a way that emphasized sharing diverse perspectives, listening to interpretations that differed, and reflecting on our own assumptions about practice as we engaged with one another.

Collaborative research offers a unique opportunity to transform perspectives through active dialogue and integrating perspectives from across industry and academia.

Strategies and Support for Researching to Learn

Collaborative research is difficult, time consuming, and not for everyone. However, for those who want to learn and grow in their knowledge of the profession, while also contributing to our profession's broader knowledge base, collaborative research offers a unique opportunity to transform perspectives through active dialogue and integrating perspectives from across industry and academia. For those who wish to enact similar processes, the existing research has useful guidance for establishing effective research partnerships in any collaborative context. For example, any effective collaborative research involves taking time to build trust, setting shared expectations about project roles and communication, aligning goals for the products and processes of the research, and making clear guidelines about data management and intellectual property. With academic/industry collaborations, there are further issues to consider, such as the ethical considerations that include permissions for research, conflicts of interest, transparency, data privacy, and the impact on academic independence and research integrity. In order to cultivate conditions for effective dialogue that lead to learning, I recommend three steps, which I will discuss in the following paragraphs.

1. **Design research projects that explicitly build in time for sharing, discussing, and integrating individual perspectives.**

Many moments for conversation and shared decision making exist in collaborative research projects. For example, during project design and planning stages, team members must work together to define goals and objectives, discuss research scope, make decisions about division of labor, discuss research needs and gaps in existing knowledge, choose relevant research methods, and set research timelines. To maximize the potential for individual leaning, building in time to make these decisions together enables more discussion and dialogic work.

In our project, we also found that data analysis moments were helpful moments for dialogue and discussion. Our methods involved qualitative coding of two artifact types. In order to facilitate the timeline, we separated the coding of the project in ways that allowed each of us to take a pass at open coding our first data set (video captures of meetings) before meeting with one another to explain and talk across our codes. This enabled each of us to see the activity in front of us fully from the other's perspective, which led to a much richer understanding of the work we had encountered. Coder agreement was ultimately important for this project, and so we drew on both our individual perspectives in generating thematic coding categories together after our initial passes that merged our expertise. Once we coded the data using our shared coding categories, we also built in time to discuss all of the codes that we'd understood differently.

2. **Use both research memos and well planned meetings for reflective and reflexive work.**

A reflexive lifelong learning perspective means taking active steps to avoid groupthink, a phenomenon that takes place when diverse perspectives are stifled because of a desire for harmony or efficient process. A team can make the best decisions when all points of view can be heard, even when multiple viewpoints may cause dissensus or conflict. In order to avoid groupthink, teams need to find ways to invite different voices, seek out possible challenges to prevailing ideas, create a safe environment for sharing, and actively cultivate inclusive facilitation strategies.

Again, in data analysis, we used individual analytical memoing to ensure that both researchers were articulating their perspectives on the meaning and interpretation of data before attempting to reconcile our viewpoints. We planned meetings to be spaces for acknowledging commonalities in our thinking, as well as for working through areas of disagreement. The combination of individual written analysis and spoken conversation and centering initial disagreements, rather than immediately pushing for agreement, enabled us a space to negotiate shared meanings.

3. **Prepare for the timeline to take much longer when emphasizing reflexive learning than it would when working alone.**

Perhaps this is clear from the prior examples, but reflexive processes are not always the fastest processes. Research timelines almost never proceed without bumps and detours, and planning for conversation, disagreement, and conflict almost always means moving more slowly than planned. This makes it even more important to schedule regular team meetings, dedicated brainstorming and active listening, and debriefing sessions after major decisions have been made.

I have emphasized reflexivity, but our project also supported lifelong learning in the traditional sense of formal professionalization efforts for ourselves and others. For example, as part of our project, we published one proceedings paper, one article, and gave one conference talk. My research with Arthur was central in moving forward my own knowledge and interest in TC, as well as my commitment to better understanding and facilitating lifelong learning. More support from professional organizations through initiatives, grants, and policies for encouraging research collaboration between academia and industry would have the effect not only of improving research products and contributions to the field, but also of enriching researchers in the process. ■

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Making Stories Make Meaning

By Allison Durazzi | STC Member

Using Industry Experience in the Technical Communication Classroom.

Like many professionals, I have my share of "you wouldn't believe this…" stories, including an event I produced during which people walked through plate glass windows—twice, in the same hour (thankfully, without injury). Or when I found out I had twenty minutes to brew tea for a performer—a specific brand, an exact temperature, with a particular kind of honey—while I was stage-managing at an outdoor festival with precisely none of these items on hand. Stories like these can entertain our students while also giving them insight into the importance of technical and professional communication. Because, as it turns out, those plate glass windows were not marked at eye level as required by building codes. And contract riders are helpful only if you communicate requirements to everyone involved in the production.

These stories illustrate the implications of technical communication course topics, but sharing anecdotes still leaves students with a gap that they have not yet learned to bridge—the gap between understanding and practical implementation. To bridge that gap, I started a practice of using my experiences like these to create relevant in-class activities and small-stakes assignments. Regardless of how much industry experience you may or may not have, transforming your experience into lessons for students is a valuable skill as a trainer, teacher, instructional designer, and more. In this article, I offer a few workplace stories that connect to technical communication courses, my process of developing them for use in the classroom, and outlines of each that can be adapted for other classes.

Most of the anecdotes I bring into the technical communication classroom are not from conventional technical communication positions, yet technical communication was ever present in those roles. For example, the winter I spent on a commercial fishing vessel in the Bering Sea is not apparently technical communication. However, written and oral technical communication examples abound, including training on how to assess roe quality, safety instructions for survival suits (aka "Gumby suit"), and directions to repair boat machinery. Back on land, I built a career in nonprofit management, primarily working in the arts and in legal aid. Almost all my jobs involved event planning, something that features in some of the following discussion.

Teaching Context

As a graduate teaching assistant at Iowa State University, I've taught a number of technical and business communication classes in the university's communication-across-the-curriculum initiative. For consistency across multiple sections of a class, the course director provides a template learning management system site, lecture slides, sample activities, and assignments, along with guidelines on how much we can alter the syllabus while still maintaining the integrity of the course. For example, an instructor may assign different readings but not a different textbook. An instructor may create our own lecture slides, in-class activities, and alter or swap out some assignments, but for all sections, the final project is a recommendation report and it is a group project. Students in the Technical Communication course are typically third-year undergraduates in a wide variety of majors.

Most of the anecdotes I bring into the technical communication classroom are not from conventional technical communication positions, yet technical communication was ever present in those roles.

Helping students see how the course concepts will bear on their careers is a key part of my role as an instructor. The primary way that I go about this is to look for ways to illustrate theories or concepts as I review course materials and plan lessons. In this article, I share a bit about four of my professional stories and how I used each to develop an activity or assignment in technical communication and technical editing classes (Table 1 shows an overview of each).

Collaborative Work

In a previous job, I had an opportunity to lead a project that was usually handled by a more senior staff person. I led an in-house planning team comprising managers and directors—all of whom ranked higher in the organization

Table 1. Connecting experience to classroom lessons.

Workplace story summary	Skills used/developed	Informs this lesson or activity
Team lead without positional authority; others on team held positions ranked higher; some nonperformers.	• Leading without title • Motivating others • Managing projects • Budgeting	Team Conflict exercise to support team agreements
Volunteer negotiated contract without authorization. Official record (meeting minutes) provided organization leverage to void and renegotiate.	• Resolving conflict • Writing meeting minutes	Minutes—group project. I showed them examples, provided a template, and required each team member to write minutes once
Taking contracts, doing business as a freelancer.	• Researching • Marketing • Networking • Planning • Organizing	"Editor for hire" assignment asks them to research questions about business models, self-employment, and marketing, and working with clients
Editorial clients using outdated terminology	• Using style guides • Understanding inclusive language guidelines • Sensitivity, DEI concepts in technical communication • Communicating across differences • Relating to audience • Analyzing audiences	Style Guide Comparisons (builds off "Style Guide Scavenger Hunt"). Introduces students to *Conscious Style Guide*.

than I did. Given our relative ranks and institutional power, we each had different stakes in the success of the project. The months of planning were filled with conflict: one manager kept missing and resetting a funding deadline; another manager refused to commit the staffing hours previously agreed to. I felt like I was in a school group project for which I needed an A and the rest of my team could pass with a C. As the conflicts arose, though, I spoke with each colleague and referred back to the project parameters. Though not all conflicts were resolved, we did complete the project on time and budget.

It was an obvious plus that the project team had project parameters to reference and the technical and business communication courses already use an assignment called "Team Charter" in which teams articulate their divisions of labor, meeting schedules, and so on. Despite the team charters, though, I noticed my students struggling with team conflicts, things like a team member skipping meetings or failing to submit work. So I revisited my project lead experience to see how I could use it to help students both write and enforce team charters. I developed an activity that generates conflicts. In class, I call it a brainstorming activity, but it is really a role-playing activity that is designed to fail. It is the failure that gives students a starting point for considering the pros and cons of addressing conflict and how they codify these ideas in their team charters.

In-Class Activity: Addressing Team Conflict

We start by discussing, as a whole class, what they like and dislike about group projects. I ask them how they resolved the "dislikes" in past group projects. Then I ask what they did to ensure that the "likes" happened. Students typically identify issues around uneven participation of team members but struggle to identify strategies for addressing these problems or working toward positive outcomes.

At this point, students break into their groups for a "brainstorming exercise" in which each team must generate ideas and settle on their top 2 project ideas. Each student in a group receives one of four different roles and objectives for the brainstorming session, with the strict instruction to not share their objectives with each other. The roles, briefly, read:

- You are "the negotiator." Your goal is to get unanimous agreement on the top 2 ideas, whatever the cost.

- You are "the skeptic." Your goal is to point out flaws in each idea presented. Agree to nothing.
- You are "the documentarian." Your goal is to write down all the ideas. Only speak if you need to clarify something for the notes.
- You are "the creative genius." Your goal is to generate as many ideas as possible as quickly as possible. Keep sharing, even if it means interrupting people.

By assigning students extreme goals, they are free to engage without personally identifying with the role. After about two minutes, I ask groups to share their topics, knowing that I've designed an impossible scenario. We discuss the activity with some pointed questions to elicit frustrations, such as

- "How does it feel when you're trying to get agreement and someone keeps refusing to engage?"
- "How did you make sure you captured discussion points when someone was talking rapid-fire?"
- "What could you do to make the 'skeptic' more engaged in an actual group discussion?"

After reflection, the class develops one or two strategies together. Groups use the remaining time to draft their team charters.

Meeting Planning and Documentation

As both a staff person and a volunteer with nonprofit organizations, I've seen a fair amount of confusion over roles. However, nothing could have prepared me for the time a volunteer obligated us to a service contract that could potentially cost several thousand dollars.

In a committee meeting, a volunteer offered to approach a consultant. The committee wanted to consider other vendors and ultimately delayed action until after the next meeting—all reflected in the meeting minutes. A day or two later, the volunteer had not only approached their contact, they reported on. The official record protected the organization from liability and also defused tensions while we worked out a solution that worked for all parties.

In the classroom, I bring this experience to teach documenting team meetings. After a short lecture discussing my experience and the financial risk involved, I connect it to the group project and the list of group project "dislikes" from an earlier lesson. The volunteer who overstepped could be a group member who rewrote everyone else's contributions. I then introduce low-stakes assignments to help them practice documenting their work in meetings.

Assignment: Team Meeting Documentation

Once the group project is underway, groups meet several times to collaborate and check in. Each team member is required to take a turn setting a meeting agenda, facilitating another meeting, and writing minutes of yet another meeting. I provide them with sample agendas and sample meeting minutes. Structured this way, the assignments also reinforce the expectation that everyone contributes equally.

Self-Employment

A few years before graduate school, I took on freelance work in digital marketing and editing. I worked with creative professionals such as graphic designers, video producers, and photographers, many of whom were also self-employed. For my own rates, I considered market analysis based on total compensation packages, not just take-home salaries. This allowed me to anticipate self-employment tax rates, however I made some missteps along the way and was surprised by a hefty tax bill my first year.

Self-employment is not exclusive to creative professionals as technical editors, web developers, and

business consultants are self-employed. Indeed, Freelancers Union estimates a third of the US workforce is self-employed. In 2021, during online teaching due to the pandemic, contract work came up in our Technical Editing class. Facing an uncertain job market, students brought up the idea of taking contracts or freelancing until they found permanent jobs. Telling them my cautionary tale about taxes might shock them into remembering the point, but it wouldn't help them prepare. I wrote a research memo assignment for them called "Editor for Hire." The first year, it was an extra credit assignment. In subsequent semesters, I offered this assignment as one of several options from which students could choose.

To develop the assignment, I reviewed the materials I collected from my own self-employment, my time working in a program that coached lawyers on setting up their practices, and my volunteer experiences helping nonprofit organizations file for tax-exempt status and mentoring artists in marketing their work. I identified the materials most relevant to a potential freelance editor. I also reviewed common questions across a variety of editors' message boards, online groups, list servs, and association meetings. I made a list of questions to research before deciding to take contracts or set up shop as a freelancer. Ideally, a student could use this assignment as a starting point for writing a self-employment business plan.

Assignment: Editor for Hire Research Memo

In this assignment, students are given a list of starting questions and links to relevant resources about undertaking self-employment. Questions include:

A. Will this be your primary job or supplemental income?
B. Where will you work?
C. Which business model is best for you and why?
D. What level(s) or type(s) of edit will you offer?
E. What industry will you focus on?
F. Do you need additional credentials to edit in that industry (E)?
G. What's the going rate for this work (D) in this industry (E) at your skill level?
H. What costs will you incur?
I. What business licenses are required for the state and city where you'll work?
J. How will you track your costs?
K. How will you track your hours?
L. How will you bill your clients?
M. How will you accept payment?
N. What professional associations are appropriate to join? What do they cost?
O. How will you let potential clients know you're available?
P. How will you refer clients to other editors for projects you can't take?
Q. Many freelance editors find contracts essential. Look up examples of contracts, talk with other editors about their contracts, or consider some of the following:
   - how many rounds of edits you provide within a specific period
   - what type of files you accept
   - how much communication you'll have with the client and how (email, phone, videoconference)
   - what your work hours are or what your typical response time is
   - acceptable error rates, resolving disputes
   - when payment is due
   - and so on...

Relevant resources include:

- Editorial Freelancers Association Editorial Rates
- Freelancers Union
- IRS Topic No. 762, Independent Contractor vs. Employee
- NOLO.com
- Small Business Administration's material on choosing a business structure
- STC Salary database
- Katharine O'Moore-Klopf's Copyeditors' Knowledge Base

Inclusion Language in Technical Editing

The technical communication field has long been concerned with matters of inclusive language. Talking with my freelance editing clients about inclusive language was made easier with references to resources about usage and not just my assertion that a term was outdated or problematic. To prepare students for dealing with these issues, I built on an existing assignment about mechanical editing. The original assignment asks students to apply different styles to the same sentence. For example, "'The meeting will be held on January 4.' How should 'January 4' be written in AP Style? Chicago? MLA?"

Each of the comprehensive style guides offers direction on inclusive and bias-free language. In practice, though, editors often need more information and increasingly refer to *The Conscious Style Guide*, a peer-edited inclusive language resource created by editor Karen Yin. In this assignment, students gain awareness of differences between comprehensive style guides, read suggestions authored by people affected by language choices, and access resources they can use in their careers.

Assignment: Style Guide Comparison—Inclusive Language

After completing the assignment on mechanical editing, students look up what the three comprehensive style guides recommend when writing about people with disabilities and then compare that to the relevant section in the Conscious Style Guide.

Part 1.

- What is the recommendation when writing about people with disabilities, according to AP Style? Chicago? MLA?
- What is the recommendation when writing about people with autism, according to AP Style? Chicago? MLA?
- What is the recommendation when writing about people who are deaf, according to AP Style? Chicago? MLA?

Part 2.

- Go to Conscious Style Guide at www.consciousstyleguide.com and look up the sections on disabilities, autism, and Deaf/deaf. Read at least two entries in each section (a minimum of six articles altogether).
- In about 200 words, compare and contrast what the authors say about language in the section about disabilities.
- In about 200 words, compare and contrast what the authors say about language in the section about autism.
- In about 200 words, compare and contrast what the authors say about language in the section about Deaf/deaf.

Part 3.

You are a technical editor at a large software company. Your company released an update dramatically improving videoconferencing capabilities for deaf people. Now your software has an animation that translates speech into ASL. **Should your documentation refer to "deaf people" or "Deaf people?" Why?**

Conclusion

These are a few examples of how I developed my work experience into more meaningful learning activities. It's worth noting that there is no shortage of stories to use from case studies and news media. The Association of Teachers of Technical Writing members often email ideas about how to use recent news in technical communication courses. The email list is open to members and non-members alike. I hope reading these examples sparks some ideas for using your own experiences in your next workshop, training session, or class. ■

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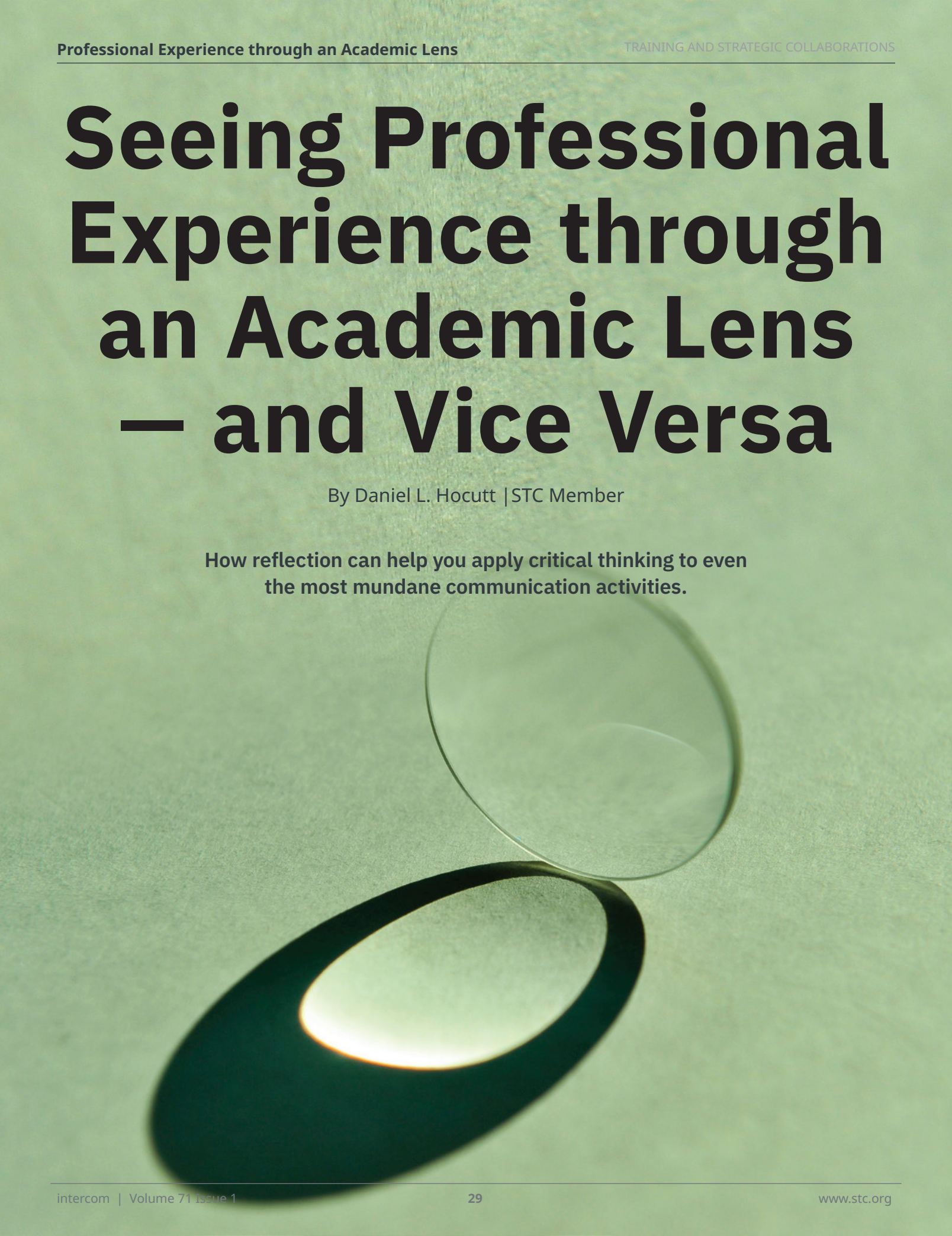
Seeing Professional Experience through an Academic Lens — and Vice Versa

By Daniel L. Hocutt |STC Member

How reflection can help you apply critical thinking to even the most mundane communication activities.



In 1998, I swore off an academic career after completing my master of arts in literature. Nineteen years later, I earned my PhD in English with a technical communication dissertation. Along the way I worked for three years as an educational leader, ten years as a freelance web developer, 25 years as an online marketing content manager, and about five years as a technical communication scholar. Here, I offer takeaways from about 25 years of freelance web development and online content management through the lens of my academic experiences in technical communication.

Takeaway 1: Every skill you've learned matters.

When I graduated in 1998, critical literary theory was deconstructing itself and the practice of literary analysis, and I wanted no part in that destruction. I turned instead to educational leadership, directing summer residential governor's school programs for gifted high school students in the humanities and in visual and performing arts. Supervising 400 high school students for a four-week residential experience on a college campus while managing a staff and faculty of 50 was more rewarding (and less destructive) work than critical literary theory, but with much greater liability and responsibility. But in my free time, I was becoming a self-taught web manager and freelance web developer, too. I came to HTML from desktop publishing as a yearbook advisor, using Aldus PageMaker (some readers will resonate) to teach print layout.

As I learned desktop publishing, I realized this emerging World Wide Web might enable similar approaches to publishing multimedia content. I used Notepad to write code and the free Mosaic browser to test my code, and from there I started designing simple web pages to parallel my wife's curriculum development side hustle. A few years later, following my wife in relocating for her job, I gave up the educational leadership position and became a full-time freelance web developer, which included a part-time remote position as web manager on a marketing team for my previous employer. Ten years later, I returned to working in person as a full-time web manager on the marketing team (now "marketing and engagement") for a continuing higher education unit of a small private university, where I remain employed.

As a leader, I learned how to communicate clearly and plan strategically. As a desktop publisher, I learned design fundamentals. As a freelance web developer, I learned time and task management. These are skills I use every day in my professional work that also influence my scholarship.

Takeaway 2: Focus on practical, hands-on skills.

Academic study and teaching have focused my learning on practical, hands-on skills. While I'm happy to discuss theories (and have been known to do so *ad nauseam*), my preference as a teacher is to develop assignments that seek to solve workplace problems, especially those related to communication. In my business and professional communication class comprised largely of working professionals, I ask students to propose a communication solution to a workplace problem. In my research methods class, I ask students to propose a formal academic research project that will contribute knowledge and understanding to a real-world problem in their sphere of activity, whether professional, paraprofessional, interest-based, or academic.

As a student, both my master's thesis and my doctoral dissertation focused on ways of accomplishing especially difficult tasks — tracing surprisingly complex non-linear narrative discourse in an eighteenth-century British novel and tracing online network activity through web searches and results — using relatively straightforward, otherwise known methods.

For my master's thesis on *Tristram Shandy*, my final chapter described hypertext-assisted browsing as a metaphor for non-linear narrative. For my doctoral dissertation in algorithmic influence in online search, I used commercial browser developer tools to mine HTTP archive (HAR) files to outline network activity. My academic and professional experiences work together and urge me to identify common sense, hands-on methods for advancing knowledge and understanding. In my daily profession, I'm focused on making progress on and completing projects.

While I appreciate a strategic approach to project planning, once the planning is complete, my primary desire is to deliver, preferably within our established timeframe.

Takeaway 3: Follow your professional pathway where it leads.

My formal training is in high school education. I graduated with a secondary teaching license, and I practiced teaching high school English, including yearbook journalism, for four years until I returned to full-time graduate studies in English literature. My spell as an educational administrator emerged as a result of my teaching experience and graduate studies, although my academic focus was on seventeenth-century novels rather than educational administration. Despite no longer working at the secondary level, teaching has remained an important part of who I am. I've taught as an adjunct professor every spring and fall, and many summers, teaching composition, research methods, and a class on the trickster in mythology and culture. When dwindling undergraduate enrollments made it clear that I would need to earn a terminal degree to teach cross-listed undergraduate and graduate classes, I finally reconsidered my stance on returning to the classroom to earn an advanced academic credential. Remarkably, I still held an extraordinarily narrow view of English studies. I considered marketing communication to be a business field, which I fell into as an organized, tech-savvy English major who could design and write for the web. I didn't know technical communication existed as a field of study or as a profession. My application to Old Dominion University's doctoral program was based on my stated interest in composition and rhetoric and my master's thesis on *Tristram Shandy* as a writing sample. There was nothing to point me, my selection committee, or my future faculty mentors toward a focus on technical communication.

Only after my first doctoral studies class did I realize there was room in the composition and rhetoric camp for technical communication, and only after my second class did I recognize technical communication as a subfield of English. And then, early into that second class, I began to recognize that I was solving many of the problems and practicing many of the techniques that technical communication texts referenced. As a content manager on a marketing team, I was serving as our team's technical communicator. Because higher education needs to sell itself, my role as a manager was part of a marketing team, but my roles and responsibilities reflected the approaches, skills, and methods I was learning about technical communication. So within my first two semesters, I discovered a new field and that I practiced the skills and techniques of that field, even if my job description wasn't "technical communicator."

I'm understating the impact of this recognition. It was as if I finally understood my attraction to technology and the ease with which I picked up software and hardware use. My early studies in Pascal suggested I wasn't a strong coder, but my experience in teaching and administration indicated I could communicate effectively in oral and written formats, and that I could explain the value of understanding symbolism in Stephen Crane's *The Red Badge of Courage* to high school students or the importance of shaping curricula to existing frameworks in gifted educational settings.

Recognizing the connection between my day job and my course of study came as an accidental revelation rather than intentional professional development. I didn't seek to become a better technical communicator or to research technical communication through doctoral studies. Instead, doctoral studies enabled me to connect the dots of my professional experience to date, offering insights into my daily work. I was fascinated, even enthralled, by the work I was doing as a marketing communicator when viewed through the lens of technical communication, eager to conduct research and explore intersections.

Takeaway 4: Identify the intersections among the practical expertise you collect.

I've identified several areas where my marketing communications (marcomm) practice and my

Technical communication (techcomm) research have intersected. I share these here in hopes to encourage ongoing examination of the ways practical experience and academic research can combine to make tangible, productive differences in the work of technical communication practitioners and scholars.

Data Analytics

While I've collaborated with issue co-editor Nupoor Ranade on multiple projects related to data analytics for audience analysis, my first examination of data analytics focused on how data collection processes in Google Analytics relate to composition and rhetoric viewed through the lens of network. Because I regularly use Google Analytics to examine user behavior on the web content that I manage, I wanted to examine the process by which Google Analytics collects and reports data in order to shape insights for website managers like me. At the time, I was involved in using Google Analytics to contribute data points and related context showing progress on key performance metrics (KPM) to executive reporting dashboards, so understanding the rhetorical influence of Google Analytics as a network was useful to me professionally. The insights I garnered won't surprise my readers: I discovered the deeply submerged black boxes of algorithmic activity in Google data collecting and processing activities that have the potential to impact everything from machine learning and artificial intelligence to knowledge discovery and generation. As a result of my research, I more critically approach web and data analytics platforms and investigate, to the extent possible, their data collection, configuration, processing, and reporting functions to better understand their strengths and limitations. I continue to use data analytics for audience analysis, but I do so better understanding shortcomings and better contextualizing results for decision makers. My techcomm research helps me better contextualize marcomm KPM reports as nuanced and multidimensional.

IA and Content Management

My technical communication coursework led me to recognize that developing and revising information architecture (IA) on a website is a process involving multiple stakeholders, not simply a product of market research. It's user-focused, not product generated. As our campus communication department upgraded our website to a mobile-first interface, it offered an opportunity to engage stakeholders in card sorting exercises to determine whether major revision to our IA was palatable to our internal stakeholders. As any higher education web manager knows, while prospective students are an outward-facing website's primary audience, its internal stakeholders wield considerable influence in determining the extent to which data-centered and market-centered changes to visible infrastructure can be made. I faced the question of whether our internal stakeholders would tolerate shifting our IA from a product-centered structure (e.g., degree programs, noncredit programs, personal enrichment programs, summer programs) to a topic-centered structure (e.g., teacher education, information systems, HR management, nonprofit management). While I could make the case with web analytics data that user behavior supported, or at least didn't contradict, the value of a topic-based IA, a formal, two-tiered card-sorting exercise involving our internal stakeholders revealed little tolerance for revising the IA in ways that might call into question governance over specific areas of study. As a result, I made minor revisions to our IA using different vocabulary, but retained in large part the original product-centered structure as we incorporated the updated design. Methods from marcomm and techcomm combined to make fundamental decisions about website IA and content strategy.

Single Sourcing Content

I've attended the Symposium for Communicating Complex Information (SCCI) annually since 2017. Doing so has emphasized the importance of single-sourcing content for clarity using content management systems (CMS) for web and component CMS (CCMS) across platforms. In our commercial CMS, I've taken these lessons to heart in developing online marketing tools for our degree programs and professional certificates. Best practice in web marketing is to develop custom landing pages for specific products that focus visitors' attention on a single call to action. In our case, combining our customer relationship manager (CRM) software's inquiry forms into our custom landing pages required

a separate landing page per product per online advertising platform (i.e., Bing, Facebook/Instagram, Google, LinkedIn, Twitter). Each platform-specific landing page for an individual product (e.g., bachelor's degree in paralegal studies, master's degree in liberal arts) requires identical content with the exception of the inquiry form, which is platform specific. Single sourcing content using copy blocks inserted using PHP inserts (coded and managed through our CMS) enables me to develop extensive sets of HTML components that can be deployed across the site as needed without introducing the possibility of contradictory or mismatched content. Combining techcomm single-sourcing best practices into marcomm landing page best practices enabled me to streamline deployment, simplify revision, and improve the accuracy of web content across dozens of individual web pages.

Takeaway 5: There's strength in joining the academic and professional.

This serves as both my final takeaway and my primary point. My purpose in sharing this reflection is to emphasize that intersections of practice and research, of academic and professional, represent areas of strength and growth. Furthermore, different approaches to communication, like marcomm and techcomm, may also generate growth and development when overlapped. As I continue working as a web manager, I continue researching algorithms and platforms that influence the behavior of users online. I find in technical communication research and scholarship the answers to questions raised through marketing communication practice and techniques. I'm a better professional because I conduct research, and I'm a better (and better-equipped) researcher because I work in the field.

On the day I'm composing this sentence, I spent the better part of the morning examining the Google Ads interface to provide screenshots of specific ways that generative artificial intelligence is being incorporated into ad copywriting. I'm using those screenshots in a research article encouraging the fields of rhetoric and computers and writing to pay careful attention to the changing role of online advertising copywriters, who find themselves writing less and critically curating more of their ad copy. Skills needed for marketing communicators and technical communicators are changing rapidly, and academic programs that train technical communicators need access to cutting-edge technological advancements in the field. I'm in a unique position, because I have access to those cutting-edge tools because I actively advertise online. I also have the theoretical knowledge to apply frameworks — like ethics or social justice or diversity, equity, and inclusion — to this hands-on work toward a more critical approach to mundane activities. Getting the work done is important, but doing it within ethical and responsive frameworks is vital to retain human-centered approaches to users and customers.

This capability — of applying theoretical and critical interventions to mundane communication activities — is at the heart of the intersection between the academic and professional. I encourage exploring this intersection as a means of retaining technical communication's focus on meeting the needs of human users. ■

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Reflections on an Interwoven Path between Academia and Practice

By Alexandra Cata-Ross | STC Member

A glimpse into how the identities of researcher and practitioner played a role in shaping my career, and what technical communicators can learn from this interesting intersection.

When I describe "what I do," it depends on who I'm talking to–either I'm researching professional technical communication work in the video games industry for my dissertation, I'm an Information Architect at Epic Games, or, most simply, I'm a technical writer on *Fortnite*.

In some ways, this seems relatively straightforward. There's a clear delineation between my identity as an academic, as a practitioner, or trying to explain my job in the simplest terms possible to someone completely outside of tech. In reality, my identities and career paths are far more woven and intertwined than I expected: It's about one path nudging or overtly influencing the other, but all of these paths intersect. On reflection, my practitioner work has largely influenced the way I approach my research and pedagogical practices, while I can take and apply the theories I learned through my research into my practitioner work.

In this essay, I describe my paths and show where these entanglements have benefitted me throughout my career. I close with some thoughts about the relationship between academic and practitioner work and practices, and I provide some recommendations for those on a similar journey.

A Brief History

Like many technical writers, I fell into the profession by circumstance. Graduating in 2011 with a BA in English Literature in the wake of the 2008 recession, finding a job was a struggle. I was fortunate enough to have two professional summer internships, so I applied for jobs as a technical writer while barely knowing anything about the field. I started working in government defense with Science Applications International Corporation (SAIC) later that year on program documentation. In 2013, I transferred jobs to a more traditional technical writing position at United States Central Command (USCENTCOM) editing and content managing IT and other technical documentation. In 2015, I started working as an information developer at Omnicell, Inc. in the medication adherence division on machinery for packaging pills into blister packs. In summer of 2019, I started my internship as a Technical Writing Intern for Unreal Engine at Epic Games. Later in fall of 2020 I transitioned to supporting the now Fortnite Ecosystem as an information architect and I've been in that role since.

In general, I've written and produced a wide range of genres such as project management documentation, user guides for hardware and software, online help systems, UI writing, content management documentation, keyword taxonomies, and more.

As an academic, I started my journey through the MA in Technical Communication program while working for SAIC and finished while at Omnicell. There were certain courses I had to take, but I took advantage of the course offerings that I didn't have direct access to within my own day-to-day work environment. The Rhetoric of Science class is one I still remember fondly, and actually enabled me to teach a similar class while in my PhD. I also took hypertext theory and learned how to code a website by hand with HTML5 and CSS3. While I don't use it everyday, knowing how HTML works at a basic level and being able to read it has been immensely valuable.

The video games connection comes in for my MA Thesis. At the time, about 2017–2018, mobile usability and design was a big topic of discussion in the field. With my MA thesis, I applied Joe Welinske's mobile usability heuristics to the mobile games Hearthstone and Clash of Clans. My thesis posited that good mobile games are great examples of core mobile usability design concepts, as they are highly technical systems conveying a lot of information to users quickly and efficiently.

I enjoyed working on my master's thesis. I was finally getting to combine my career passions in usability and user experience with my leisure interests of video games. I had tried searching for technical writing jobs within the games industry, but the jobs were so few (and still are, largely). Even when I was qualified for a position, they preferred someone with a background in video games or entertainment more broadly. Getting a PhD was the only reliable way of continuing to work at the intersection of video games and tech comm. I was looking for a change, career-wise anyway, so getting into the Communication, Rhetoric, and Digital Media PhD program at NC State University was the perfect opportunity.

In the interdisciplinary program at NC State, I explored a variety of topics between video games and technical communication. I dabbled in feminism in esports and live streaming, chatbot design, game menu design and affect, and microtransactions in mobile games. Dissertation wise, I always was interested in technical communication practices within video game development. My initial ideas morphed into exploring formal practitioner work within Epic Games to understand technical communication work in the video games industry, leveraging my goodwill and positionality as a worker (intern and contractor) who had been there for three years by the time I started working on my dissertation.

Throughout this time, I published a few papers, wrote a book chapter, and participated in service activities like being a journal editor for Press Start and being a member of NC State's Esports Charter Committee. While my practitioner experiences affected the kinds of theories I was interested in, I found that it more directly impacted my pedagogical approaches. In my technical writing for engineers' course and my technical communication courses, I brought my experiences into my curriculum and the classroom. But during my time as a full-time PhD student and candidate, I still largely considered my practitioner and academic work separate. In reflection, it may have been because during most of my time in the PhD program, I thought I was going to go into academia.

As it turns out, while I enjoy being in the classroom, I realized I preferred mentorship to teaching. I really enjoyed sitting down with students and helping them navigate their early careers and giving advice, as opposed to classroom teaching. Additionally, at Epic, I was given the opportunity to be a full-time employee as an information architect while staying part time as I used up my Graduate Student Support Plan (GSSP). I really enjoy working on the Fortnite Ecosystem and Epic's version of the metaverse, and of course, nothing replaces an amazing team and manager. I decided to stay at Epic and switch to full time while going part time on the PhD as I finished out my dissertation.

A Woven Path

As I briefly mentioned above, my practitioner work overtly bled into my pedagogical practices as a teaching assistant within the PhD program. This was, in part, because of my time at Omnicell working on hardware and machinery; I have many fond memories of laying at an awkward angle on the concrete floor with a camera taking pictures for a maintenance or installation manual or catching the electrical engineer out on the manufacturing floor and getting an impromptu rundown of the machine startup sequence (CB101 is the first switch you flip!).

It was my work here with the machinery that brought an attentiveness to the material interactions we have as users—thinking about how the physical "thinginess of the thing" mediates user experiences and interactions in different contexts depending on the level of expertise and environment. For example, when is it appropriate for a user to fix an error of the robotic arm not correctly grabbing a canister and what precautions are needed? When does a technician need to be called? How does this disruption affect the flow of work?

> **My work brought an attentiveness to the physical "thinginess of things."**

This led me to think about what it means to be hands on as a technical writer—in order to write documentation, I was often at the machines, playing with the software, sometimes identifying bugs and suggesting UI designs by adjusting verbiage or positioning of elements. The material interaction, whether physical or digital, drove the underlying underpinning of "playing" with the products and understanding them as a user within my teaching.

Less abstractly, this translated directly into my pedagogy. I asked my engineering students to pick their own technologies, real or imagined, to write documentation for and asked them to put themselves in the shoes of the users. For my

introduction to technical writing and editing course, I brought Fortnite into the classroom with the intention to force the students to encounter a technology they were unfamiliar with and document it (to great success). For my Analysis of Scientific and Technical Communication course, I brought in interdisciplinary readings on media critiques, new materialism, and materiality as one way to give a humanistic view to the technologies we interact with around us.

Within my practitioner work, the influences are more subtle. I did take an information architecture class which was helpful from a theoretical standpoint—understanding the limitation of classifications and the politics embedded in them—but this is perhaps the only overt example. Instead, I find myself thinking more critically about information, access, and equity, particularly since all the Fortnite Ecosystem documentation and official learning content is available online for free.

This leads me to the broader topic this issue of *Intercom* seeks to address—how do we connect practitioner and academic technical communication work? Simply, we need both, the theoretical and practical.

Looking Forward at the Intersection

Interweaving theory into what I do on a routine basis and why has always not only enhanced my work as a practitioner, but I feel more invested in what I'm doing. Academically, I feel my research is grounded in the perspective of the average technical writer and helps me think critically about how I can take some of these broader ideas and distill them into practice.

It's not easy, and most individuals on either side are not in my position. It doesn't help that technology changes so rapidly that practitioners are forced to adapt or move on. On the other side, getting a research project approved, executed and completed, especially with human participants, takes months, if not years. So what are we to do?

Understanding the roles each group inhabits is useful here. To me, practitioners are proactive about shifts and changes within the field by necessity. Researchers tend to be reactive when it comes to applied theory. However, I do think that technical communication as an academic field is on the edge, or proactive, about understanding technical communication practices outside of the profession.

I believe this is in part because, as a field, we know what good document design is. We know, generally, what good web, mobile, and even micro content design looks like. There's always more to learn as systems become more dependent on micro-content and technologies shift and change, but the foundation of what supports technical communication work is the same–audience analysis, strong communication skills, with other things sprinkled in: written communication skills, media editing, coding. As such, academics don't need to focus on that as much anymore and have been able to focus on sites of technical communication practices, instead of professional technical communication within a workplace. For example, social media as outlets of technical or risk communication (which has overlap with existing literature and researchers in sociology and media studies), or social justice work that involves accessing information and how that access, or lack of, affects the lived experiences of people in need.

Where I see the benefits between the two sides merging is for academics to take those forward thinking concepts and theories and also consider ways of how this connects back to technical communication work. There are applications depending on the field, topic, or technology to name a few. In turn, practitioners can keep their fellow academics abreast of the issues they currently face and how their work is changing. For example, going all remote during COVID lockdown and then subsequent varied return to office policies greatly impact the way work is done. What does this mean for technical communicators? Are they removed from the products they work on? How can they continue to communicate efficiently? I strongly believe and know there is a plethora of research on the usage of social applications within workplaces to draw from and share.

Recommendations and Final Thoughts

Intentionally merging academic and practitioner knowledge requires three shifts in current interactions. First, we need spaces where academics and practitioners can come together and just talk shop, that is, to discuss the work they do, changes in the field, and their goals for the profession's development and growth. The 2021 SIGDOC conference's hybrid model held several local in-person sites, and it was a nice way to bring both local practitioners and academics together.

> **Merging academic and practitioner knowledge requires three shifts:**
> **1. Space to come together.**
> **2. Willingness to engage.**
> **3. Structural incentives.**

Second, there needs to be a willingness to engage, which also means considering the other audience when talking or presenting information. For example, the academic journal Technical Communication is focused on applied theory and purposefully includes practitioner takeaways in the abstracts. However, the research articles are still written for academics (which is why most practitioners don't read any peer-reviewed journals, per a 2018 survey report). On the practitioner side, incentivizing academics to attend conferences with talks, events, and lower costs is a great start—academics often go to conferences, but travel budgets are typically far more limited than corporate travel budgets.

The third shift is more difficult and has more to do with the structural boundaries that incentivize interaction. Academic tenure is based on strict rules set by each university that don't build in support for applied research or service-based activities that involve practitioners. In fact, in order to publish quickly to meet a tenure quota or to publish a book for tenure, doing additional research with human participants can be too time consuming. To be clear, if you don't make tenure, in many cases you have to leave the university. This is a significant financial and life-altering outcome of failure that essentially means deviation from tenure is punished.

On the other side, practitioners just want to do their job as seamlessly as possible. Speaking from experience, it can be hard to focus on things I want to learn more about, as opposed to what I am required to get done. Carving out time for these interactions and efforts has to be rewarded and prioritized. Unfortunately that's largely on an individual basis, as opposed to organizational (much like the tenure system to academics).

For me, throughout most of my PhD, I thought I would end up in academia doing research and teaching. However, while at Epic, I was afforded the opportunity to transition from a technical writer creating end-user procedures and guides to the more strategic information architect role. I ended up on a great team in a role that I love, and by staying at Epic, my family gets to stay in North Carolina, which we love. Ultimately, once I finish my PhD, I'm looking forward to continuing in my current role at Epic (and making everyone call me Dr. Catá for at least a month).

I still want to continue to work with my dissertation research and present it to both academic and practitioners alike, and work on projects like this *Intercom* issue—the intersection of academia and practice will always be important to both the field of technical communication and to me. I look forward to contributing towards this intersection in the future. ■

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Academic and Practitioner Perspectives on Training and Development for Technical Communication

By Guiseppe Getto, Member and Christina Mayr, Associate Fellow

An interview that highlights how academics and practitioners can each complement and challenge the other to develop professionally.

When asked to participate in this special issue of *Intercom*, we wanted to try something fun. We had already collaborated together in many ways: successive turns as president of the STC Carolina chapter, co-instructors of the "So You Want to Be a Technical Writer" online course, and co-authors of a previous article for *Intercom* about information design. Maybe it was due to the inescapable election season, but we had an idea to make this article like one of those interviews where a Democrat and a Republican talk about the issues but also how they work across the table and are still friends.

We recorded a podcast-style interview hosted by the guest editors of this issue, in which we answer a series of questions about training and development from the perspectives of an academic researcher (Guiseppe Getto, GG) and an industry practitioner (Christina Mayr, CM). Then, the editors revised for clarity and conciseness to turn the discussion into an article that compares and contrasts—as well as encourages you to think about—how research and practice can inform your professional development journeys in technical communication.

Can you describe what you think a typical (academic/practitioner) approach to training and professional development looks like?

CM: In my experience, many managers don't actively engage in their employees' professional development. They typically let employees pull together their own resources, such as conferences, webinars, presentations, blogs, articles, and books, as long as it loosely aligns with their job and goals.

I take a slightly different approach. My employees still plan out their own professional development. Along the way, I provide guidance by discussing their preferences and aspirations, and take a more active role in aligning those with the right resources. While I largely leave the decisions to them, I offer consultation and coaching to introduce them to new opportunities.

For instance, one employee showed a knack for interface design, so I encouraged her to explore UI/UX, complementing her skills and interests. Similarly, another employee wanted to be a program manager more than a technical writer. Instead of dissuading or trying to sneak project management into his writing responsibilities, I put him in charge of conducting Scrums and implementing Agile development practices. Sometimes a nudge in the right direction is not only what your coworkers need, but what you can give if you take the time to get to know their skills and interests.

Another way to develop is through practical demonstrations. For example, you might have a job shadowing, where you share how you do a specific task. These demos are not just formal training sessions that try to cover how to use an entire product. Instead, they are task-driven, such as "this is how you use this DITA tag," or "this is how we apply styles." This hands-on approach assists them in learning and improving, but is not always common. Many managers tend to be more hands-off.

Sometimes a nudge in the right direction is not only what your coworkers need, but what you can give if you take the time to get to know their skills and interests.

GG: In academia, our post-PhD professional development is driven primarily by two factors: our students and research pursuits. As faculty, we often need to adapt to new teaching demands. For instance, I was given an instructional design master's course, an area I hadn't previously taught. Adapting is common among academic tech comm professionals, as we're expected to excel in various subjects like technical writing and content strategy.

On the research front, we have to display a similar versatility to explore a broad range of communication-related topics. Our options encompass studying fellow researchers' work, participating in conferences to learn from peers, and publishing in academic journals. Ideally, teaching and research complement each other, though sometimes they diverge. While I specialize in UX and content strategy, I've taught technical writing, business writing, and

first-year composition—so adapting to the program's needs is essential.

What do you think your top challenges in training and professional development are?

CM: Just keeping up is crucial. Technical writing might evolve more steadily than other disciplines, but new tools and methods emerge constantly, often from recent advancements like AI and are shared through both traditional and non-traditional platforms like conferences, LinkedIn posts, or Slack threads. The challenge lies in absorbing and adapting to these shifts, avoiding complacency, and embracing change. Many remain attached to traditional approaches, resistant to new methodologies that may seem challenging or lack perceived value. Guiding people to evolve with the industry is a major hurdle. As Guiseppe mentioned, technical writers are remarkably versatile, skilled in various areas from UX to project management. We've got all of these tentacles, and it can be hard to focus and become an expert in just one of those areas.

GG: Yes, I agree with keeping up. In academia, though, the motive is a little different. We have to keep up with the ever-changing entry-level job demands of the field because that is what our students need to know to go out and be technical writers, instructional designers, or UX writers. Our faculty must navigate guiding them, illustrating what each role requires. This is complex, given that these requirements vary based on the companies and even people who write the job postings. Since many of us in the faculty are not full-time practitioners, we rely on staying informed through methods like research, alumni engagement, collaborating with practitioners, or even being consultants ourselves. Such methods enable us to provide relevant instruction and set realistic expectations for our students.

CM: I want to add on to what Guiseppe just said. I think it's interesting that he and I have similar trajectories yet opposite problems. He needs to learn by doing so that he can teach, whereas for me as a practitioner, as I advance in my role, I do less "doing" because I have to do more "teaching." My technical writers are the ones who stay immersed in the doing. Managers facilitate success, while employees report industry shifts and suggest directions. Employees must feel empowered to propose improvements, and rely on their managers to instruct them. Learning goes both ways: I am constantly learning from my employees.

To address his concerns about job-readiness for students, I also want to touch on some of my challenges as a hiring manager. Technical writers can be hard to find, because they require both broad communication skills as well as some knowledge in what can be very niche domains, like identity management. A recent job posting yielded over 100 applications, but fewer than 10 were qualified. I think a candidate's potential matters more than ticking qualification boxes, but managers must also grasp personality fit and passion, which are hard to convey on paper. It's about finding those eager to learn and align with the team. I can train skills, but finding a good fit both from the person and the team's perspective can be hard. It takes honesty, self-awareness, curiosity, and the willingness to explore other areas that you may not have known about.

> **Technical writers can be hard to find…a recent job posting yielded over 100 applicants but fewer than 10 were qualified.**

Are there any things in particular that you think your (academic/practitioner) colleagues need help from the other side? Such as topics, resources, programs, or others?

CM: On the academic side, colleagues like Guiseppe rely on my tool knowledge and support. I've even helped to secure student licenses from companies like Heretto, oXygen, and Madcap. These companies seek student loyalty and partnerships with academia to build tool proficiency. My pedagogy is a 3-hour tool demo, assigning a project, and facilitating lessons learned as well as providing direct feedback. Academic papers in portfolios don't sway me as a hiring manager. I value practical documents showcasing skills, like a concise document created using Madcap Flare, even if it's on a random topic, like

bathing a cat—what I look for is well-structured, well-formatted, and well-written content. From an industry perspective, I encourage academics to share insights, validate industry practices through research, and potentially collaborate on user testing. In particular, user testing often takes a backseat due to time constraints, so that is an example of a place where researchers can bridge this gap and provide valuable insights for both academia and industry.

GG: One crucial and often overlooked way that industry can help academia is access. Academics often lack opportunities for industry-based collaboration like the user testing that Christina brought up. While user testing aligns with academic research goals, companies rarely approach academics for such tasks. For instance, my study involving iFixit, a popular online community with repair guides, faced initial resistance due to concerns about revealing proprietary methods. This scenario is common, where companies fear research could expose trade secrets. Access is critical, especially for cutting-edge research validation. However, obtaining access to bleeding-edge industry practices is challenging, as companies are apprehensive about reverse engineering from academic research. This access barrier is a significant obstacle for academics seeking to validate and contribute to industry practices.

> **One crucial and often overlooked way that industry can help academia is access.**

CM: Yes, that's a good point. It's hard for companies to be willing to do these things. I think that it takes a genuine commitment to partnership. Some local examples that come to mind are the NC State-IBM Pathfinders program. But how to create this sort of pipeline, I'm not sure. Both sides would benefit in many ways, but you have to have an initial connection and clear goals in mind to build the relationship.

GG: Yes, it seems like the programs come along organically. Often, a person at a company might individually reach out to a specific program about getting an intern. Or conversely, an academic might reach out trying to help students get an internship. But there are so many companies and universities, and we can't cold-call everyone. Even after establishing a program, it can take immense effort to maintain it. And so, programs like these are often fragile.

CM: Now, I'm thinking of it like Sales 101: You have to make yourself known. Say that a professor emails me and says, "I have interns who are interested in content reuse, information architecture, and UX testing. They can work onsite or virtually and have a tentative project plan that they can execute in a 12-week timespan." Because so much pre-work has already been done–identifying candidates, developing a project plan, aligning with what my team produces–I can more easily get approval than if I had to help develop an internship program from the ground up.

GG: I can see how that approach could be effective. One caveat I'll add, though, is that it takes commitment to the field at large. Many times when I've asked practitioners, I am told that they don't have an internship program or even ask why they should bother with interns when they could hire someone with experience, such as a short-term contractor? It can take a lot of work on our side to prepare students, but then also a lot of work on industry to mentor and train new hires. Add to this the pressure on new hires to demonstrate instant expertise, and you can have an unrealistic and unsustainable environment.

To close out the interview, do you have any advice on what not to do when collaborating with or drawing insights from the other side? Perhaps some approaches that you've seen that have not been helpful or other failures or pitfalls to avoid.

CM: Even though I'm on the industry side, the first thing I thought of was education, and specifically professional development and training. Many continuing education focuses on basic, general knowledge vs. practical, advanced domain knowledge. For example, one course might promise to teach you how to write "clear and concise content," which is something that we've known as a field is important

for at least a hundred years. Even if the courses are about tools, they're often targeted towards beginners, something like a "DITA 101," and DITA itself is nearly 30 years old.

While such courses can be helpful for new or transitioning professionals, the majority of us are not beginners. Technical writers need real-world technical expertise to excel, especially in the ever-evolving tech landscape. Incorporating hands-on experience within your domain can enhance writing quality and provide a competitive edge.

> **Technical writers need real-world technical expertise to excel.**

GG: I agree with that. I think there can be a temptation to teach the things we know are well-established theoretical concepts and frameworks, as well as industry best practices. If you put in the time and effort to update such course content, that can be alright. But there is this pitfall of pushing that off for one more year, and suddenly you find yourself talking about the same topics in the same ways as people did 20 years ago.

For example, when I talk to practitioners who have had a long career, I'll ask how their job has changed over time. One common trend is that much of the work has shifted from writing long-form content to managing smaller bits of chunkable content that is rearranged and displayed in multiple outputs or "multichannel" delivery for unpredictable audiences. Even if we as instructors know this, it can be difficult to teach. Common assignments that might at first seem to be keeping up with industry, like writing a Medium blog post about this tech topic, or the classic write a recipe using DITA, are actually then revealed to be disconnected from reality. Where are the multichannel delivery and componentized content management aspects in such assignments? They're difficult to replicate, and so we fall into this trap of teaching what's easier to teach and just telling them, it will be similar to this, but different in these ways. ■

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CHRISTINA MAYR is a Knowledge Management Lead at Epic Games, as well as an instructor of STC training courses. She is an active STC member, having recently served the Society on the Nominating and Summit committees.

Well, How Did You Become King, Then?

BY TIMOTHY ESPOSITO | *STC ~~King~~ President*

As we move from the holiday season to the almost certainly more exciting Season of STC Elections, you may be wondering: How do the STC elections and board of directors work? Well, it could be something like this:

> **WOMAN:** Well, how did you become King, then?
>
> **ARTHUR:** The Lady of the Lake, her arm clad in the purest shimmering samite, held aloft Excalibur from the bosom of the water signifying by Divine Providence that I, Arthur, was to carry Excalibur. That is why I am your king!

Unfortunately, strange women lying in ponds distributing swords is no basis for a system of government. Supreme executive power derives from a mandate from the masses, not from some farcical aquatic ceremony. So, STC had to abandon that form of leadership selection ages ago.

In order to forestall reverting to ruling via the Divine Right of Kings, STC created the Nominating Committee. The role of this committee is to find and interview potential leadership candidates. They screen for leadership experience and may recommend potential candidates for a certain role, like Secretary. For example, after being a chapter treasurer for a year, I applied to the Nomination Committee to run for STC Treasurer. They wisely recommended I get some more experience and apply again in a couple of years. Once they have a potential election slate, they bring it to the board for approval.

After the board approves the slate, the general candidates are announced to the members. Then any of the members can ask questions of the candidates on Slack. Typical questions include, "What sort of changes would you like to see the Society make in order to improve our membership experience?" and "What is the airspeed velocity of an unladen swallow?". When the election commences, every member who has paid their dues is sent a private email to vote in the election. It is very important that you have maintained your membership and provided a valid email address to smoothly participate in the election process. Following the announcement of the election results, the new board of directors takes office during the Annual Business Meeting, held in the spring. It will be that new board who will greet you at the next Summit.

While that summarizes the selection of board and nominating committee members, there is of course more to be done by the board. The election is just the starting off point on the STC leadership journey. The board is

a busy group and we are always working on something, ranging from improving member engagement, assisting member committees, helping communities, or even finding a shrubbery so you get the two-level effect with a little path running down the middle. Regardless of what the board is working on, it is always with the intention of making STC the best experience for you.

If you can help the board on its quest for the technical communication holy grail, let us know by sending a swallow carrying a coconut to board@stc.org. ■

TIMOTHY ESPOSITO (tmesposit.stc@gmail.com) is the 2023-24 president of STC. His ongoing column will keep you updated on STC's direction, and be filled with dated cultural references such as Monty Python and the Holy Grail, which he watched way too many times in college and has only once visited the castle in Scotland where it was filmed. Pro tip: they do provide coconut shells for you at the gate.

Expand Your Knowledge, Enhance your Skills

All About STC's Education Program.

BY CRAIG BAEHR | *Fellow*

Professional training is key to building a successful career and skill set, whether on-the-job or through formal education. To support your professional development needs, STC's Education Program offers a wide range of training courses and webinars, from beginner to advanced levels, on topics of interest to practicing (and future) technical communicators. Whether you're looking to expand on education and training received from colleges, universities, or technical schools, STC's professional courses and webinars are also a great way to expand your skills, or learn new ones, which support your professional goals.

Professional training courses often provide practical skills and takeaways, which support your existing knowledge, skills, and abilities, often in hands-on settings. STC's training courses and webinars can help you build and improve your technical knowledge, acclimate to new skill sets when changing jobs and professions, prepare for professional certification examinations, and help orient you to new skills in the technical communication profession.

Professional Online Training Courses

STC's online courses allow learners to explore a subject in depth over the course of several weeks, through guided instruction from an experienced instructor, and to exchange knowledge with the other participants. These courses feature a breadth of topics on technical communication subjects with practical knowledge takeaways. Courses are open to members and non-members and all skill levels; however, advanced topics may have

Training Course Benefits

- Learn the essentials through an in-depth overview of specialized topics in technical communication.
- Courses cover the full range of core competencies, tools, and professional development topics in technical communication.
- Direct interaction with subject matter experts and experienced instructors on topics.
- Earn course completion certificates, digital badges, and/or continuing education units.
- Great way to supplement skill sets and to learn practical takeaways that are directly applicable to a wide range of technical communication workplaces and settings.

specific prerequisites. A typical course meets once per week for 60-90 minutes over several weeks, however some courses are offered in shorter durations, such as 1-3 sessions. While many courses are delivered synchronously, some can be delivered asynchronously or as hybrid combinations. As such, these courses offer participants a wide range of topics, modalities, and scheduling options.

STC also rotates its popular and core course offerings each year, providing multiple opportunities to take courses on topics such as the Tech Comm Fundamentals, Designing for Non-Designers, Instructional Design, Professional Certification Exam Preparation, Technical Editing, So You Wanna Be a Technical Communicator, User Experience, and others. Additionally, new course and webinar topics are added every year, following specialized topics of interest and new trends in technical communication, such as Accessibility, Content Strategy, Introduction to XML, Taxonomy Creation for Content Tagging, Video Production, and many others. After completing a course, participants earn a course completion certificate and can check their education report card record online for a list of completed courses.

Live and Recorded Webinars

On a monthly basis, STC also features and produces multiple live, one-hour, webinars on popular and trending technical communication topics, ranging from beginner to advanced levels. Recently featured topics have included How to Create Quality Content, Growing Your Career in Business Development, Producing Sustainable Release Documents in an Agile Environment, From Technical Writer to Instructional Designer, Using MadCap Flare for Content and Branding, and others. Many webinars are free and the recorded archives of select sessions are provided for members to download and experience asynchronously. And many popular topics featured as Webinars are developed and featured as online courses, if you are interested in more of a deep-dive on a particular topic.

What to Expect from STC Education

Both courses and webinars are delivered using established platforms such as GoTo Meeting and Zoom, for live synchronous sessions, and Moodle, an online Learning Management System (LMS), used to provide asynchronous content and interaction for learners. In addition, you can expect the following from STC educational offerings:

- Content created and delivered by expert practitioners.
- Relevant and useful technical communication topics.
- Asynchronous and synchronous delivery options.
- Expert advice and feedback on course assignments and projects.
- Quality instruction and useful takeaways to build your knowledge and skills.
- Topics that appeal to a wide range of expertise and skill levels.
- New and trending topics which relate to technical communication.
- Connect and network with subject matter experts, which include both students and instructors.

Visit the STC Education Program Web page at https://www.stc.org/education/ for descriptions, pricing, and the schedule of course and webinars, or email us with other specific questions at education@stc.org. ■

Webinar Benefits

- **Features new and trending topics, tools, and best practices in technical communication.**
- **Excellent high-level overview of a specialized topic in a condensed, one-hour, online format.**
- **Interactive presentations, where participants can ask questions and engage in discussions on topics.**
- **Demonstrations and case studies of key concepts in working practice.**
- **Presented by specialists and practicing technical communicators.**

Advancing Your TechComm Career: Are You Sending Out Ships?

BY JACK MOLISANI | *Fellow*

I learned early in life that opportunities for career advancement don't usually appear "out of the blue"—you have to make them happen. Here's an example.

When I first started working as tech writer, I wasn't well known in the tech comm community so I set out to change that. I joined the STC, I volunteered in my local chapter, I learned everything I could about authoring tools and digital publishing.

In those early days of online help, publishing technology was changing fast. We went from DOS to Windows 3.1 to Windows 95, to an XML-based help, and more.

It was a good time to be a technical writer with online help experience—many companies were hiring consultants to keep up with the changes. In fact, Joe Welinski produced a conference called WinWriters that focused solely on creating online help.

I noticed one year that there was a panel discussion in the program where the Big Names in online help were going to decompile the WinZip online help (which was really bad), update it, and recompile it. The panelists would then show what they fixed and why.

I saw an opportunity to get some great exposure, so I asked Joe if

I could be on that panel. He said, "Sure."

There I was, practically a nobody in tech comm circles, sharing the stage with industry experts who wrote *books* on online help! I positioned myself as an expert by being on same stage as other experts.

Notice, however, that no one invited me on that panel, I had to *ask* (and the answer was yes!).

This is an example of what Chellie Campbell calls "sending out ships" in her book, *The Wealthy Spirit*.

Sending Out Ships

You've probably heard the expression, "When my ship comes in..." Any idea where that expression originated?

In the nineteenth century, merchants in Europe would mortgage everything they owned to build and provision ships to sail to the New World. When (if) the ships finally returned loaded with furs and spices and other goods, the merchants would be rich beyond their dreams.

However, there was no GPS and satellite telephones back then, so the merchants would go down to the dock each day, literally waiting for their ship to come in.

However, as Chellie observes, "I know plenty of people waiting for their ship to come in—but they aren't sending any out!"

You have to send out ships for your ship to come in!

And you can't just send one ship—there are hurricanes and sandbars and mutinies, all of which can prevent your ship from returning. So you have to send out multiple ships.

Every article you write, every blog post you make, every networking event you attend is a ship that might someday come in.

The secret to ongoing prosperity and "job security" is to keep sending out ships.

You Can't Control When Ships Come in

Chellie also points out that you can't control when ships come in, only when you send them out.

A case in point: After starting my outsource technical writing company, I called the head of documentation at a leading manufacturer of consumer electronics and asked if she had any projects to outsource. She said no, her current staff had things covered.

I replied, "Okay, I'll check in again next quarter." And I did. In fact, I checked in every quarter for almost two years. Then in my next quarterly check-in call, she replied, "I just got out of a meeting where they gave me a writing project and I don't have anyone to do it. Come on in!"

And then, after the item I documented hit the market, *PC Magazine* said in a review, "The concise manual made setup easy."

Bingo!

You better believe I put a copy of that review in my portfolio and showed it to every prospective client. That one project (two years in the making) has generated ship after ship (new clients)—all because I kept calling and didn't stop after the first "no."

Again, you never know when a ship is going to sail in. You're just responsible for sending them out.

Keep A Ships Log

In her book, Chellie also recommends keeping a log of how many ships you send out. (She calls it, simply enough, a Ships Log.)

By recording how many ships and what types of ships you sent (going to network lunches, speaking at conferences, etc.), you can see how many ships out it takes before you get a ship back in.

I know from keeping my own logs as a recruiter that it takes me an average of thirty calls and/or emails to customers (or potential customers) before someone says yes, they need my help filling a position.

It gives me an idea of how much promotion I have to do before a ship comes in, and it takes all the sting out of people saying "No" when I ask them for business.

I used to get discouraged when potential customers said no. Because I know I need twenty-nine nos before I get a yes, whenever I get a "no" I think, "Great! I only need twenty-eight more nos!"

In other words, I *know* I need twenty-nine nos for me to get to yes, so I look forward to getting them. Each and every no is getting me one step closer to a yes!

The same could be said about applying for jobs and asking for raises.

Career Advancement: Asking For the Sale

Because I keep a Ships Log, I know how many nos it takes to get what I want (a new client, a new job to fill, etc.). That makes it a game, not a chore. And I love playing games where I know I'll win if I just play long enough. (In my case, "long enough" is twenty-nine nos.)

Chellie knows this concept so well that she does a daily affirmation, "There's money in the phone and I'm calling me some today!"

You might not be a Sales Person, but you are in sales. Every time you ask for resources, you're making a "sale." Ditto for going to conferences, learning new tools, and keeping up with the latest publishing technology.

Seize The Opportunity!

Some of my favorite film characters are the seagulls in the animated movie *Finding Nemo*. Whenever they saw food, they yelled, "Mine! Mine! Mine, Mine, Mine!"

I do the same when spotting new opportunities.

Are you afraid that AI will make you obsolete? Or are you leading the charge to see how artificial intelligence can make you more productive, save your organization money, perhaps even generate revenue?

You may be familiar with the Latin term, *carpe diem*, which means "seize the day." I prefer *carpe potestatem*, which means "seize the opportunity."

Is your professional development happening by accident, or by design?

Carpe potestatem! ■

JACK MOLISANI has been a project officer in the Space Division of the USAF, the manager of training and documentation of a multi-million dollar software firm, and currently is the owner of ProSpring Technical Staffing, an agency specializing in content professionals.

Jack is the president of the Los Angeles STC chapter, produces The LavaCon Conference on Content Strategy, and is the author of *Be the Captain of Your Career: A New Approach to Career Planning and Advancement.*

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You can connect with Chellie Campbell on her website https://www.chellie.com

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Learn more at www.stc.org/certification

TCBOK Time

BY DEANNE LEVANDER | *Fellow*

TCBOK Time, a new featured column, will explore different features and topics from STC's Technical Communication Body of Knowledge (TCBOK) project, giving you a glimpse of the wealth of content resources available to you for free in the TCBOK, found online at http://www.tcbok.org or selecting Body of Knowledge from the Publications menu on the STC home page. This first column's focus is how to find specific content in the TCBOK, using its basic keyword search feature.

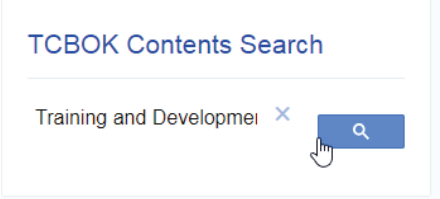
Where can you find ....

We're all accustomed to finding the resources we need to get things done, but are you even aware of the Technical Communication Body of Knowledge (TCBOK) as a bonafide resource? This column features some tips for using the TCBOK to find content about anything, including training and development. It also explores behind the scenes, to help you get the most out of the TCBOK.

Open a TCBOK session

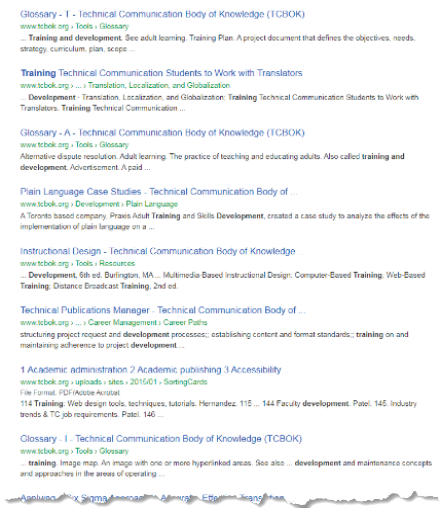
Anyone can open a TCBOK session: just go to www.tcbok.org. You can also click a link on the STC website.

After you get to the TCBOK home page, search for a term or phrase to bring up relevant content. A Google®-powered search box is on each TCBOK page.



Find the content you need

Scroll through the search results to find content that resonates with your needs. The second line of each search result contains the navigation breadcrumb for that search result. The content search for T&D results in the following list:



Perhaps you were hoping to find a list of resources for a research paper, or maybe to support an article you are writing. The TCBOK contains many resources from which to choose, already curated for you. The benefits of using the TCBOK include specific information from STC publications such as *Intercom* and the *Technical Communication Journal**. Look at Tools > Resources. You'll find many different resources, all available through your fingertips.

Increase your efficiency

The TCBOK is also a fast way to get a list of useful results. Review search results and grab a topic that sounds interesting or is on-point with what you need. For example, select the fifth item from the search results above (Instructional Design – Technical Communication Body of Knowledge). The following main topics are part of Tools > Resources > Resources by Category > Instructional Design:

- Adult Learning
- Classroom
- Computer-Based
- General
- Intercultural
- Learning Objects
- Learning Organizations
- Models
- Needs/Task Analysis
- Performance-Centered

The benefit of using a tool like the TCBOK is that you can scan through the search results quickly to see if there is anything useful in the list of results. The content of the Instructional Design page is a bibliography of written material relevant to the field of Instructional Design.

Knowledge management

Organizations accumulate and store member knowledge and expertise. For STC, the knowledge and expertise that makes for successful technical communication practices is of special importance and has found its way into the TCBOK.

As discussed above, a significant benefit of the TCBOK is the speed at which information can be found. If one is interested in certification, the TCBOK contains specific content about technical communicator core competencies. For students in a technical communication program, the TCBOK contains a wealth of resources for research purposes.

STC is a knowledge organization, so it is only fitting that it has a body of knowledge, which contains the accepted ontology—set of concepts and categories unique to a group—of the Society and its members. The TCBOK has evolved from content developed and contributed by students of Technical Communication to content that has been developed and published in *Intercom* and *Technical Communication Journal*.

Watch this space for more information about making your way through the TCBOK. As more content is added to the site, its value to the audience grows. Have confidence that the content you find in the TCBOK is useful and timely. ■

Content Heuristics for the TCBOK

We review each submission against the following heuristics (a minimum of three out of the five is required for inclusion):

- It is timely or contributes to STC's history.
- It is relevant to the discipline of technical communication.
- It provides value to practitioners (for example, advances their knowledge) and academics (for example, can contribute to a syllabus for a course in technical communication).
- It is original and not redundant TCBOK content.
- It aligns with one or more of the nine core competencies of professional certification.

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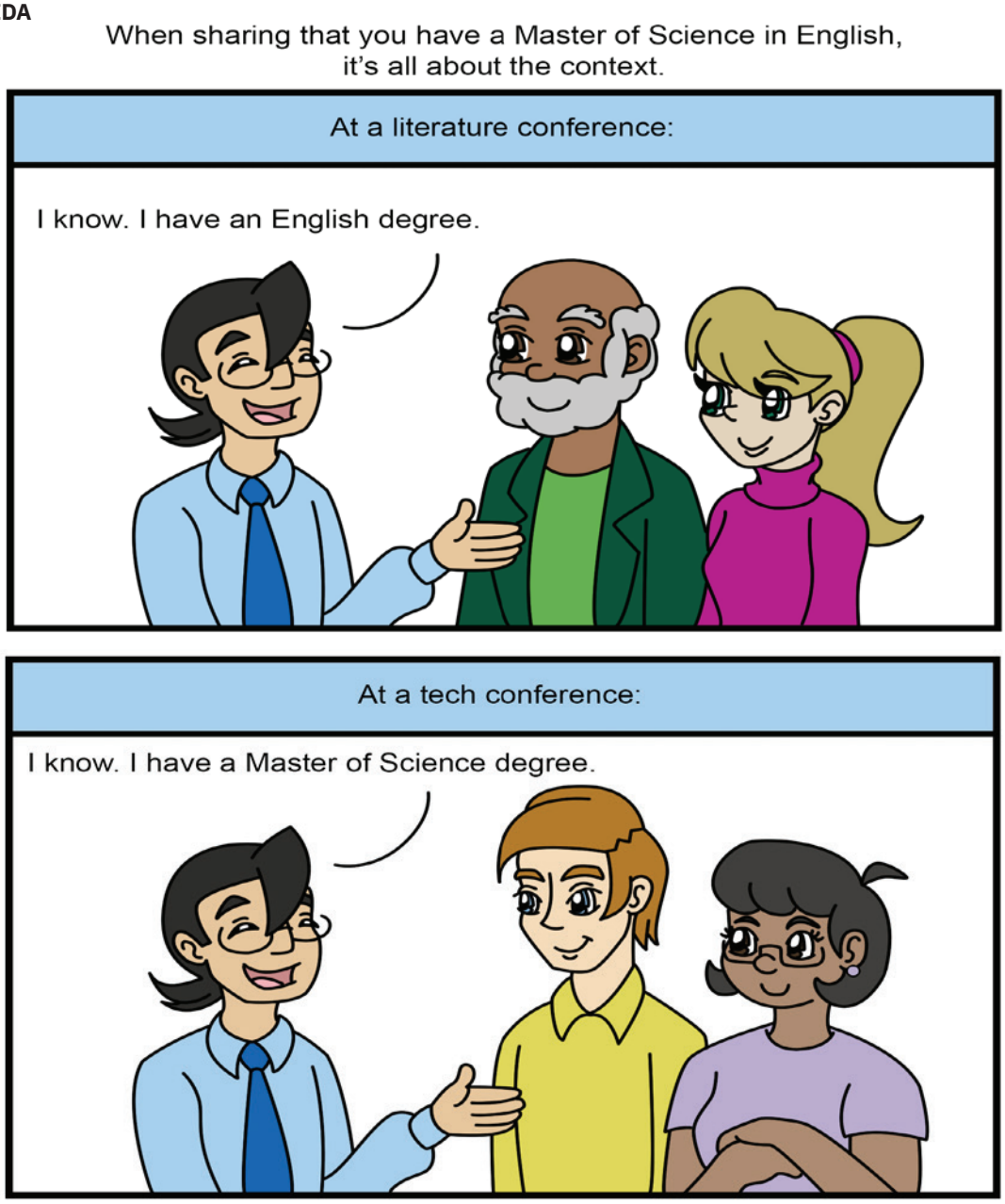
Explaining a Degree in Technical Communication

BY S.E.M. ISHIDA



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