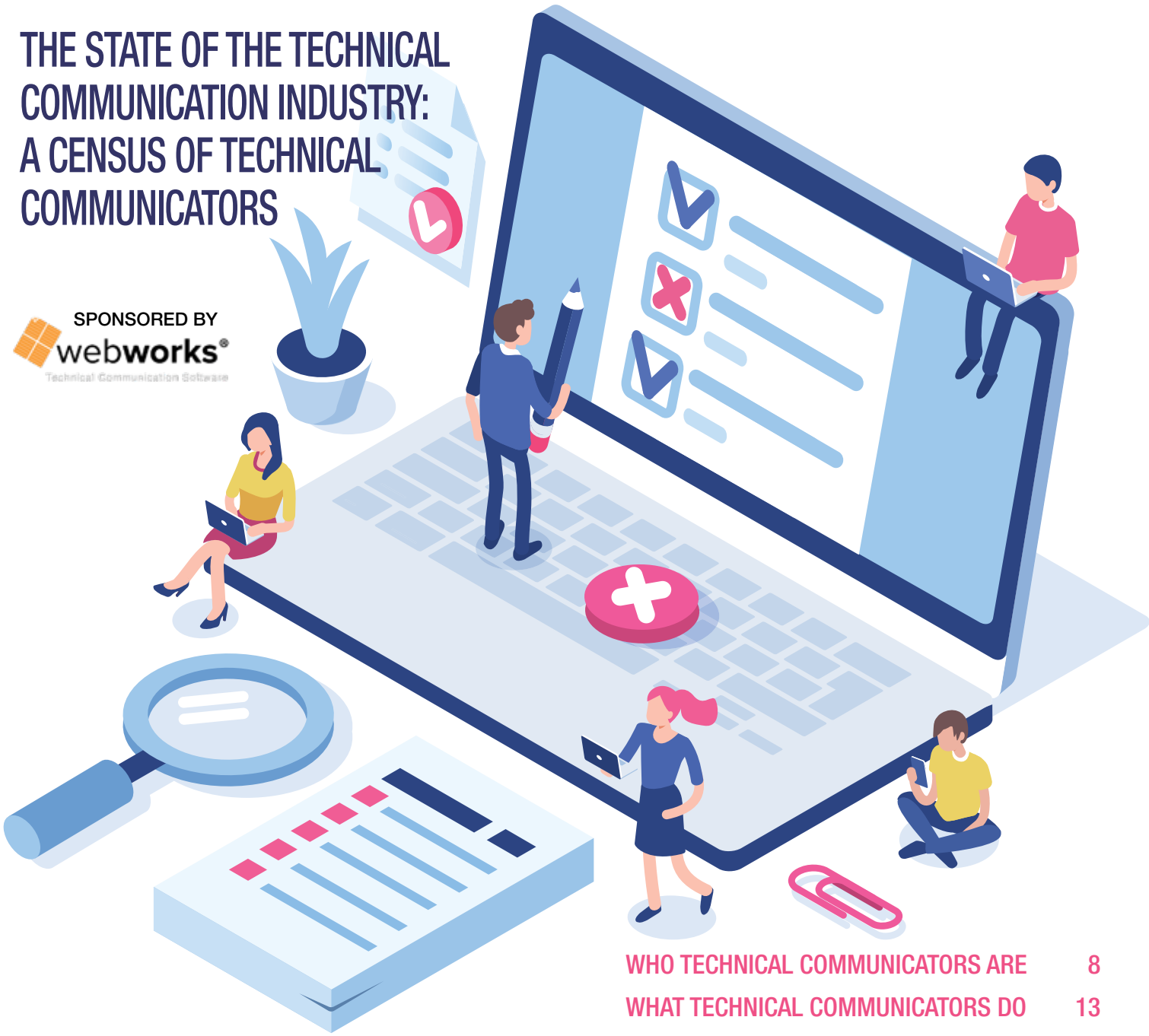
DECEMBER 2018

intercom

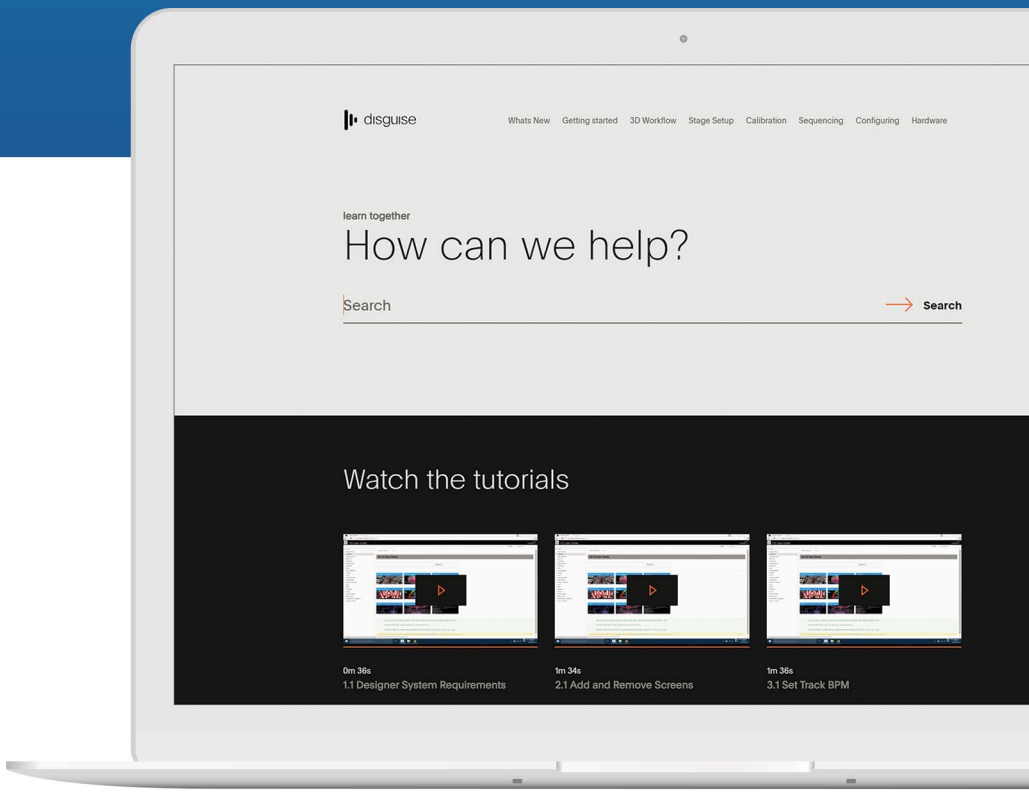
THE MAGAZINE OF THE SOCIETY FOR TECHNICAL COMMUNICATION

THE STATE OF THE TECHNICAL COMMUNICATION INDUSTRY: A CENSUS OF TECHNICAL COMMUNICATORS



Visual Production Innovator disguise Delivers State-of-the-Art User Experience Using MadCap Flare

Single-Source Publishing with MadCap Flare Streamlines Content Delivery



disguise

By delivering its online Help via a new intuitive and interactive HTML5-based online user guide, disguise gives customers up-to-date, easy-to-access information whether they are in the design studio or on location.

> MadCap Flare is the industry standard, with its open, native XML architecture, immensely powerful out-of-the-box features, and large user base. Without Flare's robust out-of-the-box capabilities, we wouldn't have been able to do all the customizations to our Help site and carry out our vision of creating a high-quality user experience.

JOE BLEASDALE | Training Manager, disguise

Get Started on a Free 30-Day Trial Today at **MadCapSoftware.com**

madcap software

XML Documentation for Adobe Experience Manager

Multiple content sources. One destination.

Easily manage content from your Marketing, Technical Documentation and Customer Support teams.

Learn more

For a personalized demo or questions,
please write to us at techcomm@adobe.com

December 2018

Volume 65 | Issue 8

On the cover: Shutterstock/Irina Strelnikova

A Note from the Editor

WHEN I SET UP the editorial calendar for 2018, I wanted to kick off the year with a futuristic theme, and I wanted to wrap up the year with a report on the state of the industry. I believe that it's important for us to stop and get a little introspective periodically. Often we get heads-down in our work and forget to look up and see what's going on around us.

A review of the state of the industry gives us an opportunity to stop and see where we are, professionally as individuals and in organizations. When we know where we are, we can decide if we're going where we want to go and at the right speed.

Socrates is credited with saying, "The unexamined life is not worth living." I believe this issue's guest editor would agree.

Saul Carliner is a Professor of Educational Technology at Concordia University in Montreal, and a Fellow and Past President of STC. He was President of STC when I took on my first Society-level volunteer role, so we go back a long time (yes, decades). When, in our *Intercom* Editorial Advisory Panel meeting at the end of 2017, he said he'd like to administer and analyze a survey to feed this "state of the industry" issue, and that he'd like to guest edit the issue, I was thrilled.

What I didn't realize was that he was planning to write all of the articles as well! He has almost singlehandedly brought this issue to life. He and Concordia University PhD student, Yuan Chen, administered the census, analyzed the results, created the charts from the data, and wrote the articles that explain the data.

I think you will find the results intriguing and perhaps a bit unsettling. I, for one, am glad—some discomfort with current circumstance is motivating. We should always be asking questions, analyzing our situation, and striving for more—in other words, living the examined life.

We also have three columns for you in this issue:

- Cindy Currie and Kit Brown-Hoekstra give us their take on the essential technical communicator's bookshelf and dispense invaluable management advice for those jumping back into the job market after a time away.
- Tom Barker makes an excellent argument for group work and how it should be conducted in coursework.
- Scott Abel very generously shares, in the spirit of this month's theme, a high-level snapshot of findings from the annual *Content Wrangler Technical Communication Industry Benchmarking Survey.*

And as always, don't forget to check out the Society pages!

Saul Carliner, Yuan Chen, the columnists, and I would *love* to hear from you! We provide our email addresses so that you can get in touch. We would also love to discuss any articles with you online—did you know that you can comment on the Web version of any article? Start or join a conversation! I'll be looking for you!

Until then, enjoy the issue!

Andrea Ames

— Andrea L. Ames
andrea@idyllpointllc.com

intercom

Intercom, the magazine of the Society for Technical Communication, is published to provide practical examples and applications of technical communication that will promote its readers' professional development.

Publisher Society for Technical Communication
Chief Executive Officer Elizabeth E. (Liz) Pohland
Executive Editor Andrea L. Ames
Assistant Editor James Cameron

SOCIETY FOR TECHNICAL COMMUNICATION
9401 Lee Highway, Suite 300
Fairfax, VA 22031-1803
+1(703) 522-4114 | +1(703) 522-2075 fax
Send questions and correspondence to the editor at the above address. General information about STC: stc@stc.org *or* www.stc.org.

Address Changes: membership@stc.org
Intercom Editorial: intercom@stc.org

Reprint Permissions: www.copyright.com
Intercom (ISSN 0164-6206) is published 8 times a year (monthly, except for February, April, June, and August) by the Society for Technical Communication, 9401 Lee Highway, Suite 300, Fairfax, VA 22031-1803, a nonprofit educational organization, as a service to its membership. Membership in STC includes an online subscription to **Intercom**. Periodicals postage paid at Fairfax, VA, and additional offices.
Postmaster Send address changes to **Intercom**, Attn: Membership, c/o Society for Technical Communication, 9401 Lee Highway, Suite 300, Fairfax, VA 22031-1803.

To advertise in **Intercom**, contact Stacey O'Donnell at *stacey.odonnell@stc.org*, Society for Technical Communication, 9401 Lee Highway, Suite 300, Fairfax, VA 22031. Ph: +1(703) 522-4114; Fax: +1(703) 522-2075.

A Note from the Guest Editor

IF YOU THINK back to the summer of 2018, many of you might remember receiving an email inviting you to participate in a census of technical communicators. The invitation promised that the results would be published in an upcoming issue of *Intercom*. This is that issue.

Before sharing those results with you, I want to provide some additional background about the census that was not feasible to include in the invitations sent last summer—seven basic questions which explore the reasons for conducting the census, explain the procedure followed to conduct the census, analyze the results, and acknowledge the limitations of those results.

Why a census?

I have a double-double career in academia and industry in both technical communication and training and development. I mention that because the idea for the census emerged from practices in my other field, training and development. Major organizations have conducted annual or bi-annual surveys of practice in that field for more than three decades. *Training* magazine launched its first Industry Survey in 1982 and, with one exception, has conducted it every year since. That survey primarily focuses on the numbers: the sizes of training budgets, expenditures on outside services, the subjects covered by training, the media used in training, and the size of the employer-provided training industry.

By the 1990s, others followed suit. The Association for Talent Development (ATD) (formerly the American Society for Training and Development) launched its State of the Industry survey, focusing mostly on per-worker metrics, such as the average number of hours of training, average expenditure on training per worker, and the number of training programs for which the typical training and development professional has responsibility. Also in the 1990s, the Conference Board of Canada launched a survey that was similar to ATD's. In both professional and peer-reviewed circles, these reports are widely cited, because they provide insights into the overall situation in training. I have always lamented that we did not have a similar study in the technical communication field, because it could provide insights into common questions that repeatedly get asked, like the position of technical communication in organizations, the extent to which different technologies and processes are used in everyday practice, the concerns that technical communicators have about their careers, and the professional development practices of people in the field. (Disclosure: I am Research Director for *Training*, though I do not work on the State of the Industry Report, and was a reviewer for the most recent Conference Board of Canada Learning and Development Outlook.)

Everything came together when preparing the editorial calendar for the upcoming year of *Intercom*. The last issue of the year is typically a State of the Industry issue, and usually features predictions or opinions from people in the field. The census was suggested, and the *Intercom* Executive Editor and Editorial Advisory Panel liked the idea. STC recognized that agreeing to this issue also meant that they would need to provide support for the survey, which they did.

Hasn't someone done a study like this?

Yes and no. Yes, in the sense that some studies of particular segments or people in tech comm have been conducted. WritersUA, for example, conducts an annual survey of user assistance professionals. Similarly, as we administered this study, The Content Wrangler ran a study of tools used by content professionals. The Center for Information Development Management conducts surveys of practices of its members.

But since 1995, when STC conducted a similar, one-time study, no one has overseen a comprehensive study of technical communicators—user assistance writers, API writers, engineering proposal writers, technical editors, technical illustrators, their managers, and others—that explored not only characteristics of their job but also of their professional development practices and their perceptions of their jobs and the profession. That's how this study differs.

What does the census cover?

Like most censuses, ours is intended to learn more about who we are and what we do as technical communicators. But because this is a census of people who share a profession, ours also sought information about engagement with, and feelings about, current jobs, fields, and professional statuses. Specifically, the census explores these issues:

- Who we are and how we came to be technical communicators: our demographics, education, and professional backgrounds. The first article in this special issue explores who technical communicators are.
- What we do: our current jobs and job titles, the characteristics of the organizations in which we work, reporting relationships within those organizations, the types of projects on which we work, the processes followed when working on them, and the types of tools that assist us. The second article in this special issue explores the work of technical communicators.

- How we develop ourselves professionally, including the professional literature we read, events we attend, the training in which we engage, and the associations to which we belong. The third article explores the professional development practices of technical communicators.
- How we feel about our jobs and careers, including perceptions of working conditions, satisfaction with and security in our current jobs, perceptions of our place within the larger professional order, and our satisfaction with our careers in technical communication. The fourth article explores the perceptions of jobs and careers.

How was the census conducted?

Before launching the census, a pilot was conducted with five technical communicators working in different roles (management, individual contributor, and contractor) and in different places (in the United States, Canada, and the United Kingdom) to ensure the completeness and clarity of the survey instrument. Based on their comments, the census was revised.

The census launched 11 July 2018 and closed 27 August 2018. During that period, STC and I recruited participants. Several email messages were sent to the STC email list, inviting known technical communicators to participate in the census, announcements about the census were included in the *TechComm Today* e-newsletter, and announcements were posted on the STC website. In addition, several announcements were sent to LinkedIn groups associated with technical communication and technical communication management, as well as to individual technical communicators on LinkedIn.

All of the messages and announcements explained the purpose of the census and what participation involved, and they also provided a link to the survey. The messages and

announcements also mentioned an incentive to participate: 120 $10 USD Amazon gift cards would be awarded to those who completed the census.

Those who clicked on the link first encountered a landing page with an informed consent form. The form described the tasks involved in participating, as well as the risks and benefits, including the drawing for gift cards. Those who formally agreed to participate began the census.

The census had six sections:

- About Your Job, which explored characteristics of jobs and the organizations for which technical communicators work
- Professional Development, which explored the formal and informal training of technical communicators
- Satisfaction with Your Work, which explored satisfaction with resources for participants' jobs, respect received, and concerns about job security
- Perspectives on the Profession, which explored satisfaction with the profession, long-term career intentions, and perceptions of the role of technical communication within the larger ecology of the organization
- Participation in the Community, which explored the events technical communicators attend and the organizations they join
- Demographics

Those who completed the survey were provided with the opportunity to enter a second survey, where they would provide their contact information for the drawing. Researchers kept census responses separate from those for the drawing so that the responses to the census would remain anonymous. The names were provided to the STC office, who conducted the drawing without involving me or my research assistant.

In all, 676 people completed the census. The responses of those who exited the survey before completing it were not included in the analysis of the data.

What are the limitations of the census?

As studies go, the census was a behemoth. It took at least 30 minutes to complete and asked nearly 60 questions. But even with that many questions, we could have asked more. For example, the census did not ask questions about the audiences served by technical communicators. That's an important question, as some people have written that it is gravitating toward engineers, while others see the future in highly connected, end-user documentation, like a content Internet-of-Things.

But that's just one of the limits. Another is the representativeness of our study. We primarily (though not exclusively) recruited from STC and 591 of the participants are STC

members, representing 13% of the membership. As the largest professional organization serving the field, that's a natural source to find technical communicators. But not all technical communicators belong to STC, so the concern arises about the extent to which the participants are representative of the broader population of technical communicators, even though we recruited outside of STC.

A third limitation is how we reported results in this issue. The results reported here are aggregate, rounded to the nearest whole number. This ensures simplicity of reporting, but it limits precision.

Finally, there are also the general limits of all survey research. Survey research is great for identifying trends and issues, but not so great for ferreting out nuance and meaning. To ensure responding is as easy as possible, surveys typically suggest possible responses, as this census did, but the suggested responses represent the knowledge base of those who prepare the census and, in any diverse field, even a well-informed group, has its limits. To address that, the "other" option was included with most questions, along with opportunities to write in responses, but we admittedly overlooked a few details—an issue about which some participants contacted STC and me.

In addition, survey research is great for identifying "how much" something affects us, it's not always so great at explaining the resulting patterns. Statistical analysis can help fill in some of the gaps, but that's beyond the analysis presented here.

How does the census affect you?

That depends on you and your interests and needs. I anticipate that the typical technical communicator will use this census as a point of comparison. They can assess the extent to which their backgrounds, job situations, tools, and processes are similar to those of other technical communicators. Similarly, they can assess their professional development practices and perceptions of their jobs and careers with those of other technical communicators.

Those who are selling products or services to technical communicators might use the results of the census to gain a general understanding of the broader technical communication market. In that way, they can determine whether their products and services appeal to the general market or a specific segment.

Those who are professors, like me, can use the census results to learn what's going on in practice overall, and assess the extent to which our research and teaching align with it. The results might inspire ideas for future studies and adjustments to teaching.

Should this census be conducted again in the future (and I hope it will), people interested in following the evolution of the profession—professors who study the field, as well as advocates who assume professional and thought leadership roles—have scientifically collected data and points of comparison (responses to the same questions at different points in time) on which to base recommendations for the future.

What happens next with the census?

As noted earlier, the results presented in this issue are only the aggregated responses to questions. This is a rich data set that demands further in-depth analysis, and we plan to pursue that in the months ahead. The additional analysis is being targeted for publication at peer-reviewed publications, including *Technical Communication*. The analyses will look for patterns in the data. For example, do the results suggest that technical communication jobs in particular industries or geographic regions have unique characteristics? Do the results suggest that people with certain demographic or job characteristics are more or less likely to engage in professional development?

In addition, I hope that the census will be replicated in two to three years. By periodically collecting data about the people in the profession and their jobs, we not only learn about what we do, but over time, we can observe how the profession is responding to changing economic and social conditions.

I have also scheduled a formal presentation of the census at the 2019 STC Technical Communication Summit & Expo, 5–8 May 2019 in Denver, CO.

For now, however, we have a first portrait of technical communicators. The rest of this issue shares different parts of that portrait.

Acknowledgements

I would first like to thank STC for the opportunity to conduct this study, for providing access to members to collect the data, and for providing a publication in which to report it. I would also like to thank STC for recruiting our sponsor, WebWorks, who funded the incentives that spurred participation in the census. And for those concerned about the role of the sponsor in shaping this census, I would also like to thank our sponsor for respecting the independence of the research.

Thanks also go to Liz Pohland, Stacey O'Donnell, Andrea Ames, and James Cameron for their personal intervention in launching this census and publishing the results.

I would like to thank Yuan Chen, a PhD student at Concordia University, who handled much of the legwork of this study and who is therefore credited as a co-author on the rest of the articles in this special issue.

I would also like to thank the pilot users of the survey, who helped ensure that the census was as complete and clear as possible. Although privacy rules prevent me from naming you, you know who you are, and I remember your contributions.

Most of all, I would like to thank the 676 people who completed the census for sharing your time, facts, and perceptions with us. By design, I do not know who you are, but thanks to you, we have the largest-ever survey of technical communicators, and without you, we would have no census data to report.

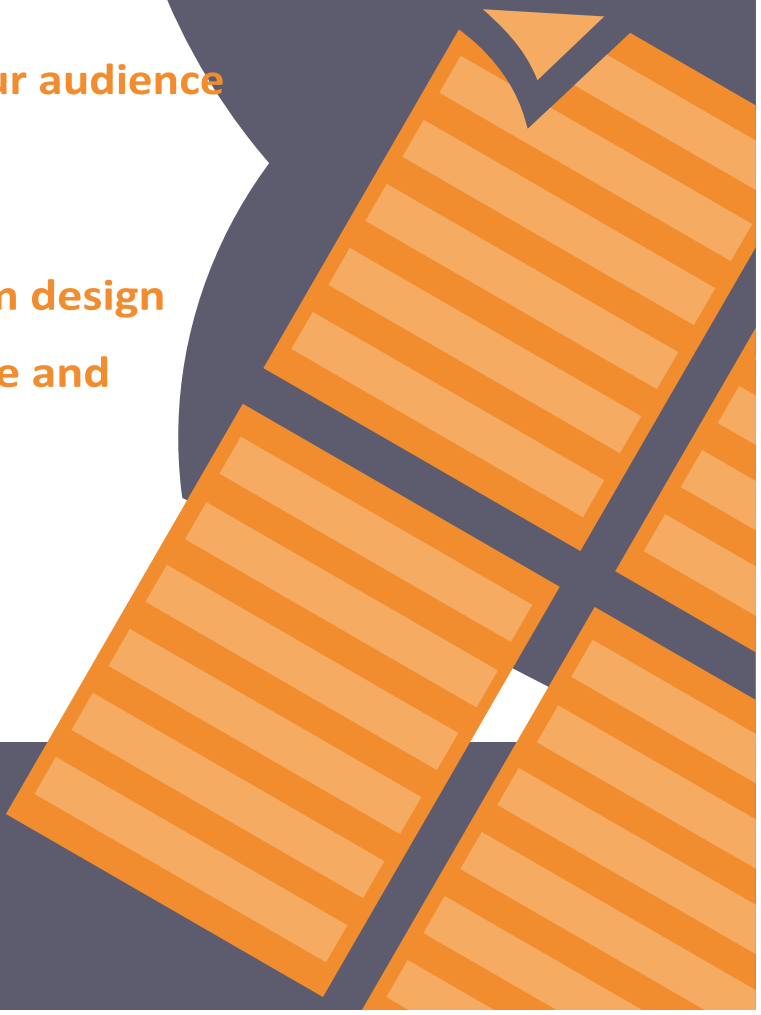
— Saul Carliner

webworks®
Technical Communication Software

ePublisher

How does ePublisher make publishing work for you?

- One click publishing workflow
- Spotlight Search to help break down content silos
- Analytics to show how your audience engages with your content
- Responsive HTML5 custom design that delivers your message and branding on any device



Learn more at
www.webworks.com

Who Technical Communicators Are:
A Summary of Demographics, Backgrounds, and Employment

By SAUL CARLINER | *STC Fellow* and YUAN CHEN

IN THE EARLY 2000s, STC conducted a branding study to identify its "brand profile." A marketing communications firm that specialized in branding conducted a number of focus groups to identify who technical communicators are as people, and how to communicate that to the world. They concluded that technical communicators were predominantly female, wore comfortable work clothing and sensible shoes, and that Lisa Simpson—the smartest of *The Simpsons* children—characterized them.

Shutterstock/ASDF_MEDIA

But what does the recently conducted census say about who technical communicators are and how they ended up in careers in technical communication? The first section of the census provides some insights. It reports what participants shared about their demographics and their educational and professional backgrounds. Then it reports what participants shared about their jobs and the employers for whom they work.

Demographics of Technical Communicators

What types of people work in technical communication? The demographics reported in the census provide some general insights about age, gender, and racial and cultural affiliations.

Age

Technical communicators tend to skew older: 48 percent of participants in the census are age 50 or older, and the largest age group is age 56 to 60. On one hand, this aligns with current workforce projections, which suggest that the largest growing segments of the workforce are 50 or older. On the other hand, the low percentage of workers under the age of 35 raises concerns about the long-term status of the profession. Figure 1 shows the ages reported by participants in the census.

Gender

The majority of technical communicators (57 percent) are female; 40 percent are male and 1 percent identified as other. Two percent chose not to identify their gender.

Racial and Cultural Associations

Diversity appears to be a challenge in technical communication. Eighty-one percent identified as White. Association with other groups ranges from 2 to 5 percent. Figure 2 shows the racial and cultural affiliations reported by participants in the census.

Educational and Professional Backgrounds

How did technical communicators end up in the field? This section explores that issue by reporting on the backgrounds of technical communicators: educational attainment, fields of study, where they started their adult working careers, certification status, and the length of time in the profession.

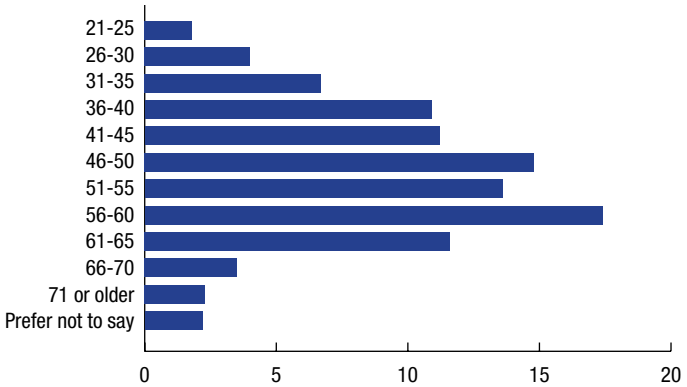
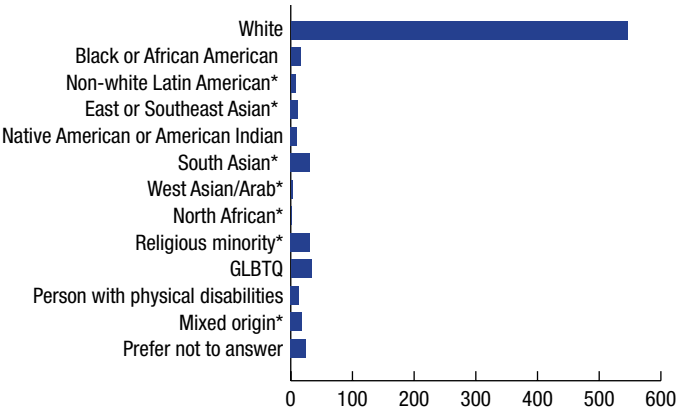


Figure 1. Age of technical communicators.



** Non-white Latin American (including indigenous persons from Central and South America); East or Southeast Asian (such as Chinese, Japanese, Korean, or Vietnamese); South Asian (Indian, Pakistani, Sri Lankan); West Asian/Arab (such as Afghani, Arab, Iranian); North African (Algerian, Egyptian, Libyan, Moroccan, or Tunisian); Religious minority (such as Hindu, Jewish, or Muslim); Mixed origin (parents from two of the groups listed above)*

Figure 2. Racial and cultural associations of technical communicators.

Educational Attainment

The majority of technical communicators have degrees, with 63 percent holding or currently pursuing a bachelor's degree, 41 percent holding or currently pursuing a master's degree, and 11 percent holding or currently pursuing a PhD.

Fields of Study

Although technical communicators are educated, most do not pursue academic degrees in the field. Only 32 percent have degrees in the field, 68 percent do not

So what did people study? Although slightly less than a third of participants have a degree in technical communication, communication—more broadly defined to include creative writing, English, journalism, and professional writing—is the most common field of study at both the bachelor's and master's level. Humanities, social sciences, and engineering are the next most popular broad areas of study, with people in the field studying in such diverse fields as education, information technology, library science, and mathematics. Figure 3 shows the number of participants in the broad areas of study of business, communications, engineering, fine arts, humanities, natural sciences, and social sciences.

When Careers Started

The majority of technical communicators (59 percent) began their adult working careers outside of the field. Only 41 percent of participants in the census started their careers in the field. In other words, for many people, technical communication is a career they start later in their career journeys.

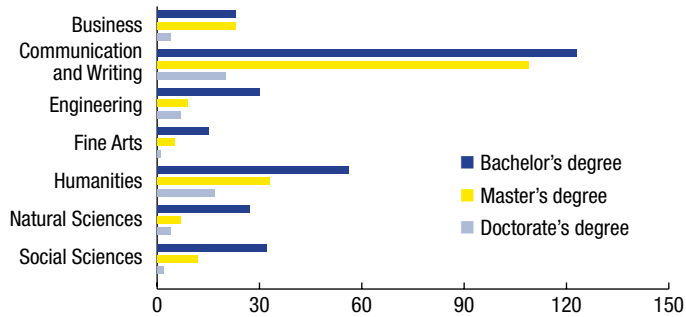


Figure 3. The fields of study of technical communicators.

Certification Status

In recent years, interest in certification—the validation of competence in a particular field by a third party—has grown and, along with that interest, the number of certifications available has also grown. In fact, STC relaunched its certification program in 2016. Unlike licenses, which people must have to legally work in a field, certification is voluntary.

Of those participating in the census, 17 percent have at least one certification and another 14 percent seek certification in the next year. The census did not ask participants to identify the certification they held or were seeking.

Length of Time in the Profession

In general, technical communicators have long tenures in the profession. Only a bit over a quarter of the participants in the census (26 percent) have only been in the profession for a decade or less, with fewer than 3 percent joining in the past year. By contrast, another 29 percent of the participants have logged a quarter century or longer in the field. And about a sixth of technical communicators (17.4 percent) have worked 16 to 20 years. Figure 4 shows the length of time participants have spent in technical communication.

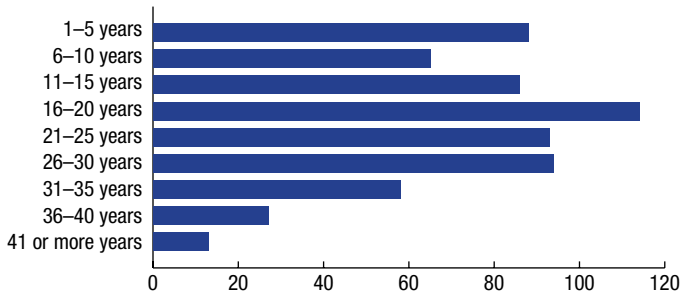


Figure 4. Length of time in technical communication.

About Our Jobs

What types of jobs do technical communicators have? This section explores that issue by reporting on their employment situations (that is, whether technical communicators work internally or externally), the function to which internal technical communicators report, their primary job roles within those functions, and their tenures in their current jobs.

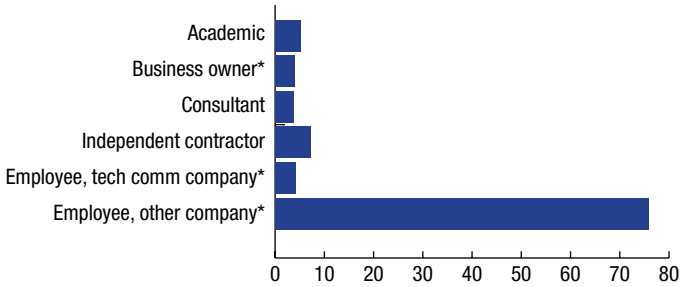
Employment Situation

For the past several decades, technical communicators have had great interest in the service sector and its impact on employment in the field. The service sector refers to arrangements in which organizations hire third parties to prepare their content and includes contracting, outsourcing, and offshoring. People working in the service sector are said to work externally, while those working inside organizations are said to work internally.

The census suggests that the overwhelming majority of technical communicators (76 percent) work as employees of organizations whose primary business is something other than providing technical communication services (such as a software development firm, defense contractor, or educational institution).

By contrast, just 19 percent work in the service sector, identifying as either business owners, consultants, contractors, or regular employees of an organization whose primary business is providing technical communication-related services (such as a contract writing firm). The remaining 5 percent identify as academics.

Figure 5 shows the employment situations of technical communicators.



** Business owner (legally self-employed); Employee, tech comm company (regular employee of an organization whose primary business is providing technical communication-related services, such as a contract writing firm); Employee, other company (regular employee of an organization whose primary business is something other than providing technical communication services, such as a software development firm, defense contractor, or education institution)*

Figure 5. The employment situations of technical communicators.

Department to Which Technical Communicators Report

Another management question that has generated much discussion is the department to which technical communicators report. The discussions have focused on the merits of working in research and development, marketing and sales, and other internal departments. The census results suggest that no single department dominates, although two figure prominently: information technology and information services (IT/IS) (21 percent) and research and development (19 percent). Only 6 percent work in the manufacturing department and 5 percent in the marketing and sales department.

Primary Job Role

The majority of the participants in the census (62 percent) identify their primary job as a writing role: 37 percent as writers and another 25 percent as writer/editors. The

next largest group of participants identify their job role as management (14 percent). Although the field of technical communication likes to characterize itself as a big-tent that includes editors, illustrators, and UX specialists, professionals in these role represent just small percentages of those in the census (3.5 percent, 0.6 percent, and 0.8 percent respectively).

Figure 6 shows the primary job roles of technical communicators.

** Business owner (2 or more employees other than you); Manager or supervisor (with personnel responsibilities); Project manager (with no personnel responsibilities); Publishing or translation technology specialist; Subject Matter Expert (whose job has a significant writing component)*

Figure 6. Primary job roles of technical communicators.

Tenure in Current Job

Although nearly three-quarters of technical communicators have been in the field for longer than 10 years, their tenures in their current jobs is much briefer: 85 percent of all technical communicators have 10 or fewer years in their current job. In fact, 55 percent have worked for five or fewer years in their current position. Figure 7 shows the tenure of technical communicators in their current jobs.

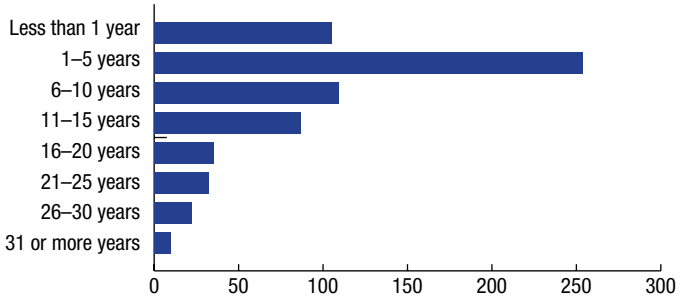


Figure 7. Tenure of technical communicators in their current jobs.

About the Organizations for Whom Technical Communicators Work

What types of organizations employ technical communicators? This section provides a portrait of them, including the industries in which technical communicators work, the regions of organizations employing technical communicators, and the sizes of those organizations.

Industries in Which Technical Communicators Work

On the one hand, a wide variety of industries employ technical communicators, but 39 percent work in just two industries—technology (24 percent) and IT services and solutions (15 percent)—and several industries each have fewer than 1 percent of the population of technical communicators, including construction (0.3 percent), entertainment (0.3 percent), hospitality (0.6 percent), private security solutions (0.3 percent), real estate and insurance (0.3 percent), residential and commercial services (0.5 percent), scientific equipment manufacturing (0.8 percent), and wholesale distribution (0.2 percent). Figure 8 shows the industries in which technical communicators work.

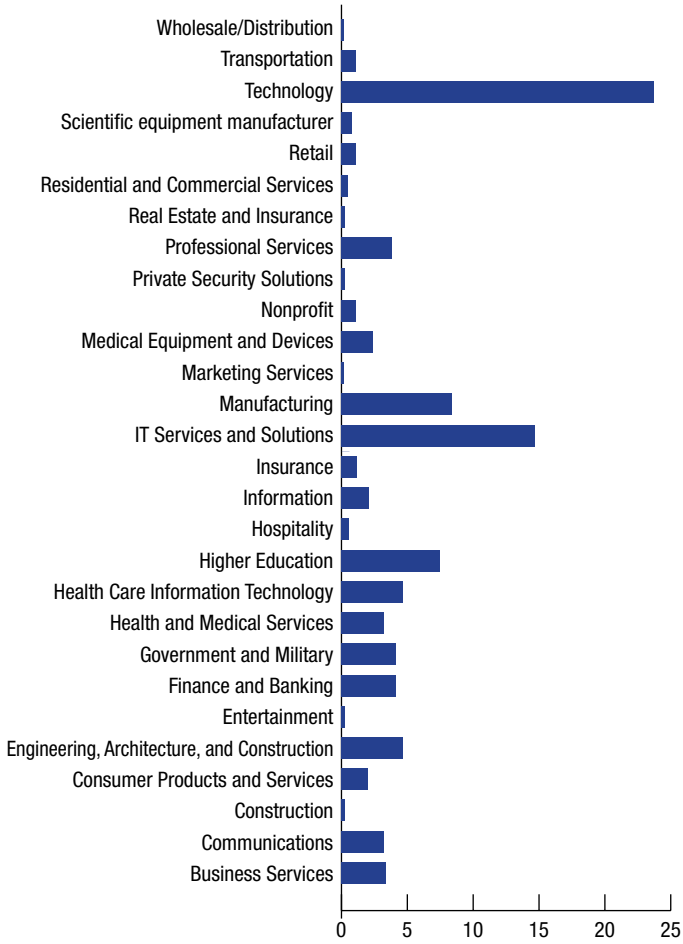
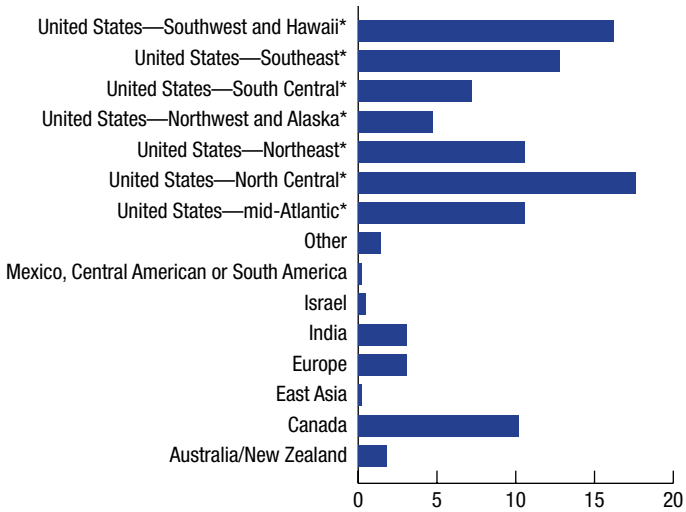


Figure 8. Industries in which technical communicators work.

Regions of Organizations Employing Technical Communicators

The overwhelming majority of participants in the census work in the United States (80 percent). Within the United States, the two regions employing the largest number of technical communicators include the North Central region (Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin) (18 percent) and the Southwest and Hawaii region (Arizona, California, Colorado, Hawaii, Nevada, New Mexico, and Utah) (17 percent).

Another 10 percent of participants work in Canada. Figure 9 shows the geographic regions in which technical communicators work.



** United States—Southwest and Hawaii (Arizona, California, Colorado, Hawaii, Nevada, New Mexico, and Utah); United States—Southeast (Alabama, Florida, Georgia, Kentucky, Mississippi, Louisiana, North Carolina, South Carolina, and Tennessee); United States—South Central (Arkansas, Kansas, Missouri, Oklahoma, and Texas); United States—Northwest and Alaska (Alaska, Idaho, Montana, Oregon, Washington, and Wyoming); United States—Northeast (Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont); United States—North Central (Illinois, Indiana, Iowa, Michigan, Minnesota, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin); United States—mid-Atlantic (Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, Virginia, and West Virginia)*

Figure 9. Geographic regions in which technical communicators work.

Sizes of Organizations Employing Technical Communicators

The largest percentage of technical communicators works for organizations employing 500 or fewer workers (39 percent). Another 28 percent work for medium sized organizations (501 to 5,000 workers), and 33 percent work for large organizations (5,001 and more workers). The two sizes of organizations employing the largest number of technical communicators is organizations with 1,001 to 5,000 workers (17 percent) and 25,001 and more workers (16 percent). Figure 10 shows the sizes of organizations employing technical communicators.

What Does This Mean?

This basic analysis of the characteristics of technical communicators and their jobs from the census suggests the following:

- About who technical communicators are: we tend to skew older, female, and white.
- About technical communicators' backgrounds: we are well-educated, and even though technical communication is a popular field of study, the majority of us do not have degrees in the field. Furthermore, most of us entered the field as a second or third profession, rather than a first profession, but once we enter the field, many of us stay there. Although many of us hold a certification, more do not.

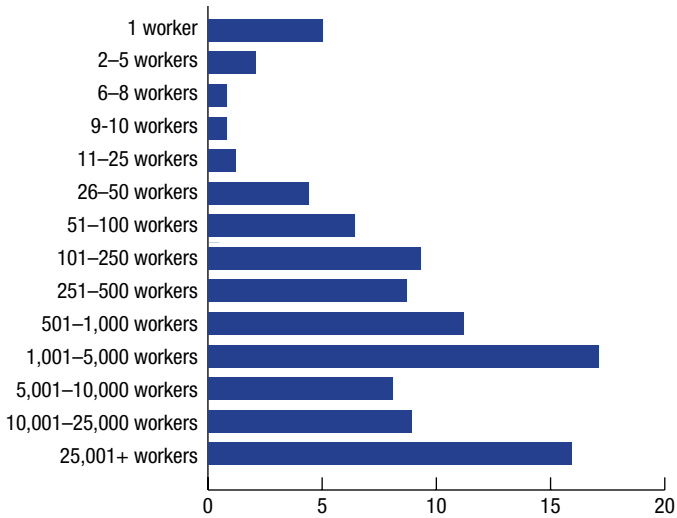


Figure 10. Sizes of the organizations employing technical communicators.

- About our jobs: we overwhelmingly work internally as captive employees of organizations whose primary business is something other than providing technical communication services (such as a software development firm, defense contractor, or education institution). The service sector (contracting, consulting, outsourcing) accounts for just under 20 percent of employment. The majority of us work in writing-related positions as writers or writer-editors or as managers. Although we remain in the field for decades, most technical communicators change jobs far more frequently.
- About the organizations in which we work: we work in a variety of industries, but the largest numbers of us work in the technology and IT services and solutions industries. Participants in the census overwhelmingly work within the United States, where over a third of the participants work in just two regions: North Central and Southwest and Hawaii. Technical communicators work in all size organizations, but we are most likely to work in medium-sized organizations (501 to 5,000 worker).

Does Lisa Simpson still characterize the essence of technical communicators? The census did not answer that question. i

SAUL CARLINER *(*saulcarliner@hotmail.com*) is a Professor of Educational Technology at Concordia University in Montreal, and a Fellow and a Past President of STC.*

YUAN CHEN *is a PhD student in Education at Concordia University in Montreal.*

Shutterstock/ GaudiLab

What Technical Communicators Do

By SAUL CARLINER | *STC Fellow* and YUAN CHEN

ONE OF THE ONGOING CHALLENGEs in the technical communication profession is identifying what technical communicators do and the tools with which they work. It sounds like a simple question, but it has been the subject of STC committees, university research studies, and countless articles in professional magazines and blog posts.

Previous studies have either used methods that limit the number of people who can participate, or they have focused on a particular type of communicator (such as user assistance specialists) or a particular issue (such as technology).

The next part of the census provides a comprehensive portrait of the jobs of technical communicators: job roles and reporting relationships, work practices, and job-related perceptions. The results could differ from your own work situation.

Job Roles and Reporting Relationships

What are the primary job roles and reporting relationships of technical communicators? This first section explores the primary job roles of technical communicators, job titles, most common work responsibilities, and the department to which technical communicators report.

Primary Job Role

As also noted in the first article of this issue, the majority of the participants in the census (62 percent) identify their primary job as a writing role: 37 percent as writers and another 25 percent as writer/editors. The next largest group of participants identify their job role as management (14 percent). Other traditional roles identified with technical communication represent just small percentages of the census participants: project managers represented 5 percent, editors (without writing responsibility) 3.5 percent, subject matter experts who have writing as part of their responsibility 2 percent, and business owners (with two or more employees other than the participant) represented 1.5 percent. Also as noted in the first article in this issue, illustrators and UX specialists represent just 0.6 percent and 0.8 percent (respectively) of the participants. Figure 1 shows the primary job roles of technical communicators.

** Business owner (2 or more employees other than you); Manager or supervisor (with personnel responsibilities); Project manager (with no personnel responsibilities); Publishing or translation technology specialist; Subject Matter Expert (whose job has a significant writing component)*

Figure 1. Primary job roles of technical communicators.

Job Titles

About a third of the participants shared their job titles. Of those, 46 percent had the term "technical writer" (most common), "editor," or "communicator." About 5 percent use "information developer" in their job title, and another 5 percent incorporate the term "documentation" into their titles. Only three participants had the term "content" in their job titles: one content architect, one content developer, and one content strategist.

About 25 percent of the participants were in a senior role. The majority use the term "senior" to indicate this status, but 3 percent each use the terms "principal" and "lead" to do so.

Work Responsibilities

To get a sense of the key work responsibilities of technical communicators, we asked them to identify their top three work responsibilities. Developing content is the most prominent work responsibility of participants in the census: a primary job responsibility of 48 percent of participants, a secondary responsibility for 17 percent, and a tertiary responsibility for another 10 percent.

Editing is the second most prominent work responsibility, with 12 percent identifying it as a primary responsibility, 31 percent as a secondary responsibility, and 15 percent as a tertiary responsibility.

Management is the third most prominent work responsibility. Eleven percent of participants in the census identified it as their primary job responsibility, and 2 percent identified it as a secondary or tertiary responsibility.

Project management (with no personnel responsibility) is the fourth most prominent work responsibility, with 8 percent of participants identifying it as a primary responsibility, another 8 percent as a secondary responsibility, and 9 percent as a tertiary responsibility.

Planning the strategy for an organization's content is the primary work responsibility of just 6 percent of participants, but a secondary responsibility for 16 percent, and a tertiary responsibility for 20 percent of participants.

By contrast, only two participants (0.3 percent) identified providing usability services as a primary job responsibility. Another 2 percent identified that as a secondary responsibility, and 5 percent identified it as a tertiary responsibility. Figure 2 shows the work responsibilities of technical communicators.

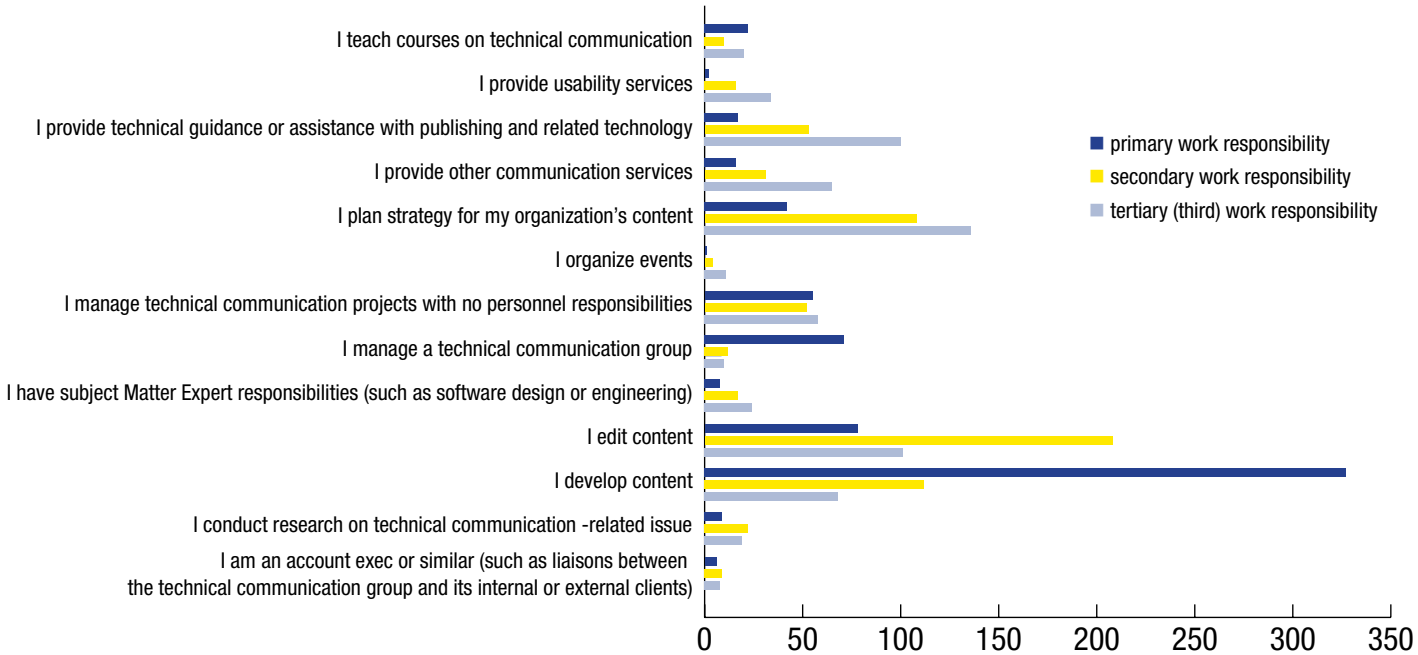


Figure 2. Work responsibilities of technical communicators.

Department to Which Technical Communicators Report

As noted in the previous article in this issue, the census results suggest 40 percent of technical communicators work in one of two departments within organizations: information technology and information services (IT/IS) (21 percent) and research and development (19 percent). Only 6 percent work in the manufacturing department and 5 percent in the marketing and sales department. 22 percent work in another department.

Work Practices

What do technical communicators do in their jobs? That is, what products do they produce, what work practices do they follow, and what technologies do they use? The next section reports what the census found.

Products Produced

To get a sense of the most common types of work products produced by technical communicators, the census asked participants to identify from a list as many as many as five types of products on which they worked most during the previous 12 months. The most common was user guides, on which 66 percent of participants worked during the past 12 months. Second was help and user assistance topics (52 percent), reference material (46 percent), tutorials and training materials (45 percent), and policies and procedures (40 percent).

The least common products included chatbots (just 2 percent of participants produced them), scientific reports (7 percent), social media content (9 percent), white papers (9 percent), and newsletters (12 percent).

Table 1 ranks the work products produced by technical communicators.

Work Practices

Work practices, such as structured writing, translation, and agile methodologies, also play a major role in the work of technical communicators. To get a sense of the extent to which several practices that are well covered in professional and peer-reviewed publications in the field affect the work of technical communicators, the census asked participants to identify the extent to which six practices affect their current work projects or, for those between jobs, their most recent work projects.

The work practice that affects technical communicators most are technical communication standards, which affect 45 percent of participants to a great extent and another 37 percent to some extent. The work practice that most affects technical communicators next is structured writing. By contrast, the practices that affect technical communicators least are translation and printing (66 percent of participants indicated that these practices affect them minimally or not at all). Table 2 shows the extent to which the six work practices affect technical communicators.

Note that some participants did not respond to the question, so the percentages do not add up to 100 percent.

Table 1. Products produced by technical communicators.

Products Produced in the Past 12 Months	Rank	Percentage Who Produce Them
User guides	1	66 percent
Help and user assistance topics	2	52 percent
Reference material	3	46 percent
Tutorials and training materials	4	45 percent
Policies and procedures	5	40 percent
Knowledge bases	6	31 percent
Product specifications	7	26 percent
Employee communication materials	8	26 percent
User interfaces	9	25 percent
Marketing information	10	20 percent
Other	11	16 percent
Proposals	12	15 percent
Newsletters	13	12 percent
White papers	14	9 percent
Social media content	15	9 percent
Scientific reports	16	7 percent
Chatbots	17	2 percent

Table 2. Extent to which practices affect technical communicators.

	To a great extent	To some extent	Minimally	Not at all
Technical communication standards	45 percent	37 percent	9 percent	5 percent
Structured writing	37 percent	27 percent	14 percent	18 percent
Agile	29 percent	23 percent	16 percent	28 percent
Translation	15 percent	16 percent	20 percent	46 percent
Printing	10 percent	22 percent	32 percent	34 percent
Other	30 percent	40 percent	17 percent	10 percent

Technologies Used

Technology also plays a major role in the work of technical communicators. To get a sense of the technologies used most, the census asked participants to identify from a list as many as seven technologies with which they worked most during the previous twelve months.

The most widely used technology by participants was word processing, used by 76 percent of participants. Next were Acrobat (66 percent), spreadsheets (65 percent), presentation graphics (51 percent), and graphics (43 percent).

The least commonly used technologies are storyboarding or wireframing, used only by 4 percent of participants. The next least-used technologies included engineering graphics (6 percent), translation management systems (7 percent), video and sound editing (8 percent), and database (9 percent) technologies. Table 3 ranks the technologies used by technical communicators.

Table 3. Technologies used by technical communicators.

Technology	Rank	Percentage Who Use It
Word processing (such as Word and Google Docs)	1	76 percent
Acrobat	2	66 percent
Spreadsheet (such as Excel and Google Sheets)	3	65 percent
Presentation (such as PowerPoint and Apple Keynote)	4	51 percent
Graphics (such as Photoshop and Illustrator)	5	43 percent
Cloud storage (such as Dropbox, OneDrive and Google Drive)	6	42 percent
CMS (SharePoint)	7	32 percent
Collaboration tools (such as MS Teams and Slack)	8	31 percent
Help authoring (such as MadCap Flare, and RoboHelp)	9	31 percent
Desktop publishing (such as InDesign and FrameMaker)	10	30 percent
Web development (Dreamweaver, HTML, CSS, JavaScript)	11	21 percent
Component Content Management System—proprietary	12	20 percent
eLearning authoring (such as Camtasia, Captivate, and Storyline)	13	19 percent
Project planning (such as Visio)	14	18 percent
Other	15	15 percent
Open Content Management System (such as Drupal or WordPress) (tie)	16	14 percent
DITA (Darwin Information Typing Architecture) (tie)	16	14 percent
Database (such as Access and MySQL)	18	9 percent
Video and sound editing (such as Premier, Avid, and Audacity)	19	8 percent
Translation management system	20	7 percent
Engineering graphics (such as AutoCAD)	21	6 percent
Storyboarding/wireframe (such as Axure)	22	4 percent

Job-Related Perceptions

Although an article later in this issue explores in-depth the perceptions that technical communicators hold of their jobs and careers, this section reports on some particular perceptions of the feedback received on their work, the time available to perform their jobs, and their general job satisfaction.

Perceptions of Feedback Received on Work

In general, participants feel they receive feedback on their work. Sixty-five percent of participants either agree or strongly agree with the statement, "My superiors provide me with feedback on my work. (For those who are employed, superior is your supervisor or manager; for those who are contractors or self-employed, your superior is your client or the person who places you in positions, such as a recruiter)." More than a third, however, feel that they do not receive feedback, with 19 percent disagreeing or strongly disagreeing with the statement about feedback and another 16 percent neither agreeing nor disagreeing.

Perceptions of Time Available to Perform Jobs

By contrast, participants in the census seem to have mixed feelings about whether they have sufficient time to produce content. Forty-six percent of participants agree or strongly agree with the statement, "My employer provides sufficient time to produce the content needed by our users." Of the remaining participants, 30 percent either disagree or strongly disagree, and 24 percent neither agree nor disagree.

Satisfaction with the Job

Despite these concerns, the overwhelming majority of participants are satisfied with their current jobs. Seventy percent of participants agree or strongly agree with the statement, "I am satisfied with my current job in technical communication." Of the remaining participants, 12 percent neither agree nor disagree, and 18 percent disagree or strongly disagree.

What Does This Mean?

This basic analysis of the jobs and work practices from the census suggests the following:

- Core work of the field is in writing, editing, or overseeing writing. This is reflected in the job roles and primary, secondary, and tertiary work responsibilities. Other roles exist, but these roles dominate. Not surprisingly, technical writer or communicator is the most common job title.
- Core work products are traditional technical communication products, such as user guides, help systems and user assistance, reference materials, tutorials and training materials, and policies and procedures. To produce them, standards and structured writing play major roles; translation, not so much. And printing—once central to technical communication groups—plays a limited role in the work. The most widely employed technologies include the key components of general use office applications, as well as a publishing tool (Adobe Acrobat) and graphics tools.
- Technical communicators could use more time to complete their work, but they feel they receive feedback and are, in general, satisfied in their jobs.

Although the census provides insights into core nature of the work of technical communicators, it has its limitations. Most significantly, it only provides a broad picture; it does not provide deep insights into the unique characteristics of the jobs of each individual technical communicator.

Professional Development of Technical Communicators

Shutterstock/liravega

By SAUL CARLINER | *STC Fellow* and YUAN CHEN

PROFESSIONAL DEVELOPMENT—that is, engaging in activities to build awareness about a job, employer, industry, or economy; maintain skills; and build skills for future positions—is a popular topic among technical communicators. Suggestions about what technical communicators should do to develop professionally, and the opportunities available, have filled pages of *Intercom* magazine and STC's *Technical Communication* journal, been popular topics at STC's Summit, and have been covered on popular blogs like Tom Johnson's *I'd Rather Be Writing*, and other publications and events in the field.

But what do technical communicators actually do to develop themselves professionally? The census explored practices associated with professional development: what technical communicators read, which events they attend, their plans for professional development in the coming year, their certification status, their go-to source of reliable information on the field, and their investments in professional development.

What Technical Communicators Read

Census participants were asked about their use of several types of information sources: social media sites, blogs, magazines and webzines, and peer-reviewed journals.

Social Media Sites

Social media sites let people identify others as "friends" or "links," join groups of like-minded people, and follow the news and information they share through their posts. Social media is updated all the time, although particular friends, links, or groups might not post regularly.

The census asked which social media sites participants visited frequently (at least once a month in the past 12 months), and which ones they have not visited at all. Table 1 shows the patterns. Participants could add (as write-ins) other sites that they had visited 12 or more times in the past 12 months. Instagram received six or more mentions.

Table 1. Patterns of visits to social media sites.

	Percentage of Participants Who Visited the Site at Least Once Per Month the Past 12 Months	Percentage of Participants Who Had Not Visited the Site at All During the Past 12 Months
Wikipedia	77 percent	13 percent
Facebook	73 percent	18 percent
Facebook groups	47 percent	40 percent
LinkedIn	83 percent	8 percent
LinkedIn discussion groups	42 percent	43 percent
Twitter	44 percent	42 percent
STC Body of Knowledge	21 percent	66 percent
Google	17 percent	68 percent

In general, social media sites were the most followed among all types of media consumed by technical communicators: just 3 percent of participants said they had not visited a social media site in the past year and 5 percent had not visited any of the sites listed.

Blogs

Over the past decade or so, blogs have emerged as popular sources of professional information. Some have a sole author; some represent an organization. Some publish new posts one or more times a week; some go weeks or months between posts. Some have a large following; others have an occasional following.

The census asked which blogs participants visit frequently (six or more times in the past 12 months); and which ones they have not visited at all. The most visited included:

- I'd Rather Be Writing (33 percent had visited six or more times in the past 12 months; 20 percent had not visited at all in the past 12 months)
- The Content Wrangler (25 percent of participants had visited six or more times in the past 12 months; 26 percent had not visited at all in the past 12 months)
- Scriptorium (11 percent of participants had visited six or more times in the past 12 months; 41 percent had not visited at all in the past 12 months)

Many participants added (as write-ins) blogs that they had visited at least six times in the past 12 months but that were not listed. Two received five or more mentions: Every Page Is Page One and Grammar Girl.

Note, however, that 46 percent of participants had not visited any blog in the past 12 months.

Professional Magazines

Although blogs are among the newest sources of professional communication, organizations continue to publish traditional media—magazines and webzines that are led by an editor and have many contributors. Most follow a regular publication schedule. Magazines typically publish every month or two; webzines typically publish new articles weekly or monthly. Professional magazines have the second-longest history within the profession. For example, STC's *Intercom* is in its third decade as a magazine and was published as a newsletter for several decades prior to that.

The census asked which professional magazines participants visit frequently (five or more times in the past 12 months), and which ones they have not visited at all. The most visited included:

- *Intercom* (52 percent had visited five or more times in the past 12 months; 6 percent had not visited at all in the past 12 months)
- *Techwriting Today* (8 percent of participants had visited five or more times in the past 12 months; 52 percent had not visited at all in the past 12 months)

Less than 5 percent of participants had visited other magazines and webzines, like *Learning Solutions, Communication World,* and *User Experience,* five or more times in the past 12 months. By contrast, 58 percent or more of participants had not visited these three magazines and webzines at all in the past 12 months. Participants could write in other magazines or webzines that they had visited five or more times in the past 12 months; none received five or more mentions.

In addition, 39 percent of participants had not visited any professional magazine or webzine in the past 12 months.

Peer-Reviewed Journals

Peer-reviewed journals typically publish research and theory. They use a structured review process in which experts in the area of a proposed article weigh in on whether the journal should publish it. Because of the focus on research and the rigor of the peer-review process, these are preferred publications of academics (in fact, academic faculty are evaluated on the number of articles they publish in peer-reviewed journals). Most peer-reviewed journals say, however, that they also have an audience of practicing professionals. Peer-reviewed journals have the longest history in the profession; two (including STC's *Technical Communication*) are well into their seventh decade of publication. A typical peer-reviewed journal publishes between one and four issues per year.

The census asked which peer-reviewed journals participants read frequently (three or more times in the past 12 months), and which ones they have not visited at all. Table 2 shows the readership of the major journals in technical communication: the percentage of participants who had read three or more issues in the past 12 months and the percentage that had not read any issues in the past 12 months.

Table 2. Readership of peer-reviewed journals.

Journal	Percentage of Participants Who Read 3 or More Issues in the Past 12 Months	Percentage of Participants Who Had Not Read at All in the Past 12 Months
Business and Professional Communication Quarterly	3 percent	34 percent
Communication Design Quarterly	4 percent	34 percent
International Journal of Business Communication	3 percent	35 percent
Information Design Journal	2 percent	35 percent
Journal of Business and Technical Communication	5 percent	32 percent
Journal of Technical Writing and Communication	8 percent	28 percent
IEEE Transactions on Professional Communication	10 percent	28 percent
Programmatic Perspectives	2 percent	35 percent
Technical Communication	28 percent	10 percent
Technical Communication Quarterly	7 percent	28 percent

Participants could write in other peer-reviewed journals that they had visited three or more times in the past 12 months; none received three or more mentions. Significantly, 62 percent of participants had not visited any peer-reviewed journal three or more times in the past 12 months.

In general, peer-reviewed publications were the least followed among all types of publications. Although 3 percent of participants said they had visited all journals at least three times in the past 12 months, 62 percent of participants had not visited any.

What Technical Communicators Attend

Events provide professionals with the opportunity to interact directly with one another, either face-to-face or through virtual technology. The census specifically asked about the extent of participation in two types of events: conferences and meetings (which included webinars).

Conferences

Conferences are periodic events that bring together many professionals in the field to become inspired, learn about the latest developments, and network with other professionals. Conferences typically run one to three days; some include half- and full-day educational workshops before or after the event. Because of the expense of attending conferences—most involve a registration fee, as well as travel and lodging expenses—many technical communicators attend conferences less frequently than once a year.

Recognizing that many technical communicators might not have the opportunity to attend an event each year, the census asked which events they had attended in 2017 and 2018 (the past two years). The most attended events were STC Summits, which 21 percent of participants had attended in 2017 or 2018. The next most attended events were STC certificate programs, in which 4 percent of participants participated. Fewer than 3 percent of participants had attended the rest of the events listed. Participants could also write in the names of events not listed. Several had five or more mentions, including: Australian Society for Technical Communication Conference, Center for Information Development Management (CIDM) conferences, IEEE ProComm (professional communication conference), Lavacon, Madworld, and several STC regional conferences including Interchange (New England), Spectrum (Rochester), and STC India.

Half of participants (50 percent) did not attend any conference in 2017 or 2018

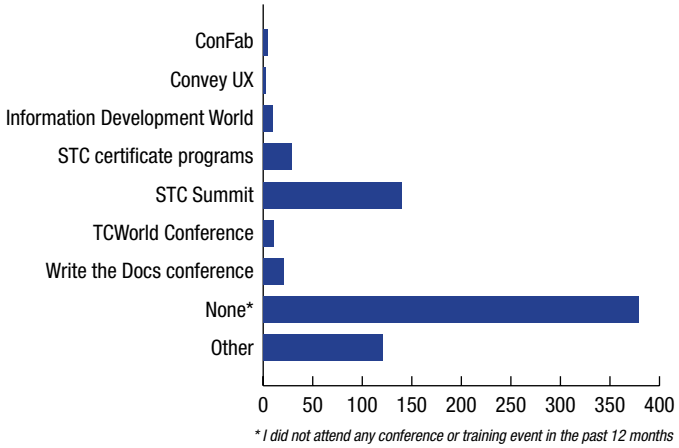


Figure 1. Conference participation in 2017 and 2018.

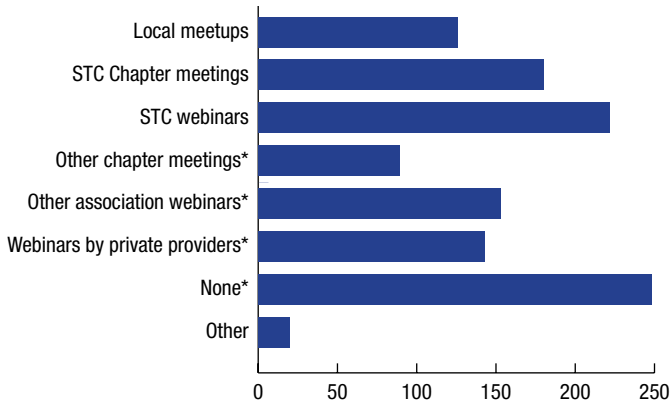
Meetings

Meetings are brief events of one to three hours that bring together people with shared professional interests. Some are organized around a topic and might include a formal program with a guest speaker. Others are organized for networking and primarily focus on introducing people and providing them with an opportunity to speak. Some meetings are formally organized by organizations like geographical communities and Special Interest Groups of STC; others are organized more informally, such as meet-ups organized by one or two people and promoted through social media. Many organizations hold meetings several times a year; other types of events are one-offs. Some meetings occur in person, while others occur online, such as webinars.

The census asked participants about the extent of their participation in meetings. Because many choices are available, the census asked whether participants had attended at least one meeting in the past 12 months.

STC webinars were the most-attended events, with about a third (33 percent) participating. STC Chapter meetings were next most-attended, with 27 percent participating. Webinars of professional associations other than STC and by private content providers like the ContentWrangler were also popular, with 23 percent and 21 percent participation, respectively. In addition, 13 percent participated in STC geographical community meetings. Participants could also write in the names of other events they attended, but none received more than five mentions.

Furthermore, a bit more than a third of participants—37 percent—had not attended any meetings in the past year.



** Chapter meetings of professional associations other than STC; Webinars of professional associations other than STC; Webinars by private providers (such as the Content Wrangler); I did not attend any conference or training event in the past 12 months*

Figure 2. Participation in professional meetings at least once in the past 12 months.

Plans for Professional Development

In addition to exploring the professional development in which technical communicators have participated in the past year, the census also looked ahead at plans for professional development in the coming year. The census specifically asked participants whether they plan to participate in formal training or education in the next 12 months. Table 3 shows the responses.

Table 3. Professional development plans in the next 12 months.

Do you plan to participate in any formal training or education over the next 12 months?	Percentage
Yes	36 percent
No	36 percent
No response	28 percent

The census asked those who indicated that they planned to pursue training or education in the next 12 months about the training or education opportunities they plan to pursue. The largest percentage (21 percent of all participants in the survey) indicated that they plan to take a course offered by a professional association. Another 17 percent plan to take a course from a private provider. Among the options written in for "Other," nearly half identified self-study options, including online courses by private providers, DIY-training through YouTube, and books. Table 4 shows the education and training options that technical communicators plan to pursue in the coming year.

Table 4. Education and training options that technical communicators plan to pursue.

How do you plan to pursue this training or education?	Percentage
Formal degree program	5 percent
Academic course	7 percent
Course offered by my employer	9 percent
Course offered by a professional association like STC or ATTW	21 percent
Course offered by a private provider like the Content Wrangler or Coursera	17 percent
Other [*write-in*]	10 percent

Certification

In recent years, interest in certification—the validation of competence in a particular field by a third party—has grown and, along with it, the number of certifications available. STC relaunched its most current certification program in 2016. Unlike licenses, which people must have to legally work in a field, certification is voluntary.

Of those participating in the census, 17 percent have at least one certification and another 14 percent seek certification in the next year. The census did not ask participants to identify the certification they held or were seeking, and thus those responses can represent any certification.

Go-To Source

Of all the sources of information explored—social media, blogs, professional magazines, peer-reviewed journals, conferences, and meetings—on which sources do technical communicators rely most? The census also asked participants to identify their "go-to source"

among all of the sources of information. Books are the top "go-to" source, while blogs are the top second "go-to" source. Table 5 lists participants' top two "go-to" sources of material.

Table 5. Top two "go-to" sources.

Source	Number 1 "go-to" source	Number 2 "go-to" source
Blogs	7 percent	10 percent
Books	13 percent	7 percent
Events (training classes, webinars, conference, and meetings)	6 percent	7 percent
Magazine/webzines	5 percent	5 percent
Journals	6 percent	3 percent
Social media	3 percent	5 percent
I do not have any "number 1/2 go-to" source.	46 percent	

Investments in Professional Development

Professional development requires funding and time to complete. So the census explored the investments made in professional development: who covers professional development costs—workers or employers—as well as how much time and money technical communicators personally invest in their professional development.

Who Pays?

Several decades ago, employers were expected to cover all of the costs of professional development. That expectation has shifted in recent decades, with a growing understanding that workers and employers each contribute. But to what extent?

According to data provided in the census, either the communicator or the employer tend to cover an expense in its entirety; sharing is much less common. Employers seem most likely to cover membership dues and training expenses (41 percent and 36 percent respectively). By contrast, technical communicators seem most likely to cover their own membership dues and publication subscriptions (39 percent and 31 percent respectively). But large percentages of technical communicators covered no publications expenses (40 percent) or conference expenses (48 percent) in the past year (both hinted at by data reported earlier).

Table 6 reports on who covered different types of professional development expenditures.

Personal Funds Invested

If technical communicators need to invest their own funds in professional development, how much are they actually investing? The census explored this issue, too. The largest percentage (31 percent) spend $250 USD or less per year. The next largest percentage (16 percent) spend $251 to $500 USD per year. To put this spending in perspective, STC membership hovers near $225 per year (actual cost varies depending on a number of factors), while some private conferences have registration fees that exceed $1,500 USD (and that's before travel and lodging costs). Table 7 shows the personal investments made by technical communicators in their professional development.

Table 6. Who pays for professional development expenses.

Expenditure	I paid	My employer paid	We shared costs	No expenditures in the past 12 months
Publication subscriptions	31 percent	24 percent	2 percent	40 percent
Membership dues	39 percent	41 percent	2 percent	15 percent
Conference attendance	14 percent	29 percent	5 percent	48 percent
Training	21 percent	36 percent	5 percent	24 percent
Other	20 percent	9 percent	3 percent	64 percent

Table 7. Amount of personal funds invested in professional development.

How much of your own funds did you invest in your professional development in the last 12 months?	Percentage
$1–$250 USD	31 percent
$251–$500 USD	16 percent
$501–$750 USD	7 percent
$750–$1,000 USD	8 percent
$1,001–$2,500 USD	6 percent
$2,501 USD or more	5 percent

Time Invested

Professional development takes time: Time to attend conferences and meetings, participate in social media, and read publications. The census inquired about the amount of time that technical communicators invest in this activity. The census specifically asked participants how much time they spent per month in professional development activities. The largest group, 40 percent, spent one to three hours per month. The second largest group, 22 percent, spent four to six hours. Nine percent of participants spent 13 hours or more in professional development and nearly another 9 percent spent no time monthly in professional development.

Figure 3 shows the extent of participation in professional development by technical communicators.

What Does This Mean?

This basic analysis of the professional development practices of technical communicators suggests the following:

- Social media sites are the most widely visited sources of professional information, followed by blogs. Among census participants, STC publications still have great value, but interest in other publications is low. Wikipedia seems to be a more relied-upon source than the journals in our field.

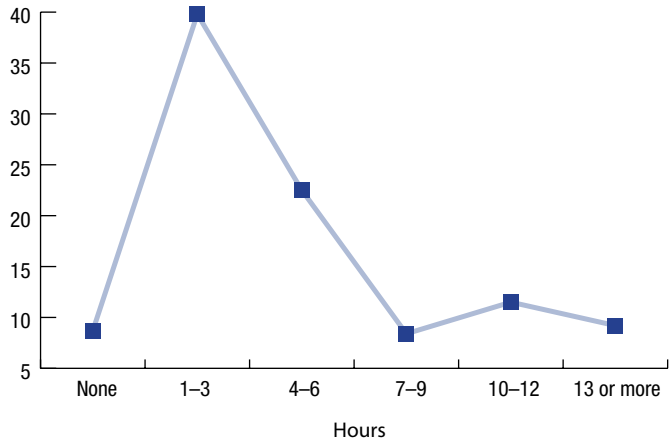


Figure 3. Time invested per month in professional development.

- Fewer than half of the census participants attend events. Of those who do, online events are among the most popular, especially webinars, which are the most popular types of events overall.
- Participants favor training and education from professional associations and private providers over academic programs. That finding seems reasonably consistent with the finding reported earlier that the population skews a bit older. Furthermore, the significant number of mentions of self-study options suggests that informal learning—a topic of great interest in training and development—is actively pursued by technical communicators.
- The extent to which technical communicators have certification or plan to become certified in the next few years seems consistent with research in the 1980s and 1990s, indicating that members of the field are split on this option. Within the industry in general, however, interest in certification is growing as a means for people to demonstrate their competence in a particular skill family.
- The levels at which technical communicators invest time and funds in professional development seems somewhat consistent with broader studies of the workplace. The Conference Board of Canada asked workers in general about the amount of time they invest in informal learning and the amount of funds they invest. Technical communicators are consistent with investments in professional development but invest a bit more time than the average worker (though the questions were asked differently, so that might explain the differences).

The census also suggests a major concern. Although many participants in the survey actively participated in professional development, large percentages indicated that they did not read much of the professional literature, attend events, or plan to pursue training in the coming year. If we believe that the field is constantly changing, sitting out of professional development for even a year or two could pose longer-term challenges.

Shutterstock/Black Salmon

Job and Career Satisfaction

Among Technical Communicators

By SAUL CARLINER | *STC Fellow* and YUAN CHEN

"I'M NOT A TECHNICAL WRITER ANYMORE," a former student told her professor.

"What do you do now?" the professor responded, expecting to hear that the student went into an entirely different line of work.

"I'm a content developer."

The professor asked her what she did as a content developer. As the former student explained, the professor thought, "Sounds like a tech writer to me."

In other words, some technical communicators (certainly some former ones) might have issues with how they are perceived, but that's just one type of perception issue faced by people in the field. Like most professions, technical communicators have perceptions about the resources provided to perform the work, the security of their jobs, their satisfaction with their current jobs, their long-term place in the profession, and their satisfaction with their careers overall.

The census explored these types of perceptions.

Perceptions of Resources to Perform the Job

One of the major concerns of all workers—regardless of what they do—is the availability of the key resources needed to effectively perform their jobs: staffing, time, and authority. When capturing perceptions of technical communicators, the census asked about these issues.

In terms of staffing, technical communicators appear to feel that their employers are staffing on the lean side. When asked about their agreement with the statement, "My employer provides sufficient staff to produce the content needed by our users," 25 percent disagreed and 13 percent strongly disagreed. Another 21 percent neither agreed nor disagreed.

Similarly, technical communicators feel somewhat pressed for time to complete their content. Twenty-one percent disagreed with the statement, "My employer provides sufficient time to produce the content needed by our users," and 6 percent strongly disagreed. Another 21 percent neither agreed nor disagreed.

By contrast, technical communicators feel they have the authority needed to perform their job, with 30 percent strongly agreeing and another 41 percent agreeing with the statement, "My employer provides adequate authority to make decisions regarding our content."

Similarly, technical communicators generally feel that their compensation is appropriate. Fourteen percent strongly agreed and another 41 percent agreed with the statement, "My employer pays me a sufficient amount of money for the skills and knowledge I bring to my job."

Table 1 summarizes technical communicators' perceptions of the availability of resources needed to effectively perform the job.

Perceptions Regarding Feedback

One of the most important aspects of technical communication is the feedback received on the work, so the census asked participants about their perceptions of feedback: whether they receive it and its helpfulness.

Technical communicators generally feel that they receive feedback on their work. Nineteen percent of census participants strongly agreed—and another 46 percent agreed—with the statement, "My superiors provide me with feedback on my work."

Technical communicators feel less strongly, however, about the helpfulness of that feedback. Only 15 percent strongly agreed and 40 percent agreed with the statement, "The feedback I receive from my superiors about my work is helpful." Table 2 summarizes technical communicators' perceptions of the feedback they receive.

Job Satisfaction

The next section of the census explored participants' satisfaction with their current jobs: satisfaction with resources

Table 1. Perceptions of the availability of resources needed to effectively perform the job.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
My employer provides sufficient staff to produce the content needed by our users.	7 percent	29 percent	21 percent	25 percent	13 percent
My employer provides sufficient time to produce the content needed by our users.	9 percent	37 percent	24 percent	21 percent	6 percent
My employer provides adequate authority to make decisions regarding our content.	30 percent	41 percent	13 percent	9 percent	4 percent
My employer pays me a sufficient amount of money for the skills and knowledge I bring to my job.	14 percent	43 percent	17 percent	15 percent	7 percent

Table 2. Perceptions regarding feedback.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
My superiors provide me with feedback on my work.	19 percent	46 percent	16 percent	11 percent	4 percent
The feedback I receive from my superiors about my work is helpful.	15 percent	40 percent	26 percent	10 percent	4 percent

for professional development, recognition of expertise, utilization of skills, and overall job satisfaction.

Human resources literature suggests that opportunities for professional development play a significant role in shaping job satisfaction. Technical communicators seem somewhat satisfied with the support they receive in their jobs. Fourteen percent strongly agreed and 29 percent agreed with the statement, "My employer provides sufficient resources for professional development (such as conference attendance, memberships to professional organizations)."

Technical communicators feel much more positively about the recognition of their expertise. Thirty-three percent strongly agreed and another 42 percent agreed with the statement, "My co-workers recognize my expertise in technical communication."

By contrast, technical communicators have split feelings about whether their employers effectively use their skills. Forty-two percent agreed or strongly agreed with the statement, "I feel underutilized in my job." Another 41 percent disagreed or strongly disagreed.

Technical communicators seem positive about their satisfaction with their current jobs. Thirty-one percent strongly agreed and another 39 percent agreed with the statement, "I am satisfied with my current job in technical communication."

Table 3 summarizes perceptions regarding satisfaction with the job.

Perceptions Regarding the Future

Over the past few decades, a number of issues have affected the jobs of technical communicators—outsourcing, new technologies, and the economy—so the census explored current perceptions of these issues. It specifically explored perceptions of the likelihood of outsourcing, digitization, and automation affecting participants' jobs.

Outsourcing

Since the 1990s, the outsourcing of jobs has preoccupied technical communicators. The issue was covered in industry magazines and at conferences and events, as well as in academic research. The census suggests, however, that outsourcing does not affect many technical communicators. Only 3 percent feel that their jobs will definitely be outsourced in the next five years and only another 12 percent feel it is likely. Table 4 presents technical communicators' beliefs about the likelihood that jobs will be outsourced in the next five years.

Table 4. Technical communicators' beliefs about the likelihood that jobs will be outsourced in the next five years.

I believe my job could be outsourced out of existence within the next 5 years.	Percent
Definitely	3 percent
Probably	12 percent
Probably not	42 percent
Definitely not	28 percent
I don't know	15 percent

Digitization and Automation

Many future-of-work experts warn that many jobs—including professional jobs—risk being automated through a combination of digitization and artificial intelligence. Technical communicators have already survived several transformations by technology in recent decades: the transition from traditional printing to offset printing in the mid-1900s, the transformation of print production through desktop publishing in the 1980s and early 1990s, and the move from print to digital publications in more recent years.

The census asked three questions that explored the extent to which digitization and automation have affected participants' jobs over the past five years and the extent to which they believe it might affect them in the future.

The first question asked participants about the extent to which technology has assumed tasks in their technical communication group that used to be handled by humans in the past five years. This has not happened much: only 1 percent feel this always happened and another 5 percent felt it happened often in the past five years.

A second, related question asked about the extent to which technology has replaced tasks that participants themselves used to perform during the past five years. Only 1 percent feel this always happened and just another 3 percent felt it happened often in the past five years.

Table 5 reports the extent to which technology now performs tasks in technical communication that humans used to handle.

Table 3. Perceptions of satisfaction with the job.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
My employer provides sufficient resources for professional development (such as conference attendance, memberships to professional organizations)	14 percent	29 percent	24 percent	17 percent	12 percent
My co-workers recognize my expertise in technical communication	33 percent	42 percent	14 percent	6 percent	2 percent
I feel underutilized in my job	14 percent	28 percent	14 percent	21 percent	20 percent
I am satisfied with my current job in technical communication.	31 percent	39 percent	12 percent	10 percent	4 percent

Table 5. The extent to which technology now performs tasks that the humans used to handle.

Over the last five years, technology has assumed tasks that used to be handled by humans	In my technical communication group	That I used to personally perform
Always	1 percent	1 percent
Often	5 percent	3 percent
Sometimes	39 percent	15 percent
Rarely	34 percent	31 percent
Never	27 percent	46 percent

A third question asked participants about their belief that their jobs could be automated out of existence by 2030, the year that many future-of-work experts use as the benchmark for automation affecting the workplace. Once again, few technical communicators have concerns about automation. Only 3 percent feel it definitely will affect them and another 10 percent feel automation will probably affect them. Table 6 reports the extent to which technical communicators believe that their jobs could be automated out of existence by 2030.

Table 6. Extent to which technical communicators believe their jobs could be automated out of existence by 2030.

I believe my job could be automated out of existence by 2030	Percent
Definitely	3 percent
Probably	10 percent
Probably not	40 percent
Definitely not	30 percent
I don't know	17 percent

Concerns About Job Security

Perhaps as a result of the perceptions that outsourcing and automation will have a limited impact on jobs, perhaps as a result of the good economy, technical communicators do not seem to have concerns about job security. Only 14 percent were extremely or moderately concerned by it. By contrast, 42 percent were not concerned at all. Table 7 reports technical communicator's perceptions of job security.

Table 7. Perceptions of job security.

I am concerned about my current job security	Percent
Extremely concerned	5 percent
Moderately concerned	9 percent
Somewhat concerned	11 percent
Slightly concerned	33 percent
Not at all concerned	42 percent

Future Jobs

Beyond fears that technical communicators may or may not have, what is their intention to stay in their jobs, and for those who plan to make changes, what changes do they plan? The census inquired about this.

Job Change Intentions

Most technical communicators plan to stay in their current jobs for a long time. Thirty-nine percent have no plans to leave their current job and another 13 percent plan to stay in their current job for five years or longer. But 11 percent plan to leave their job within the year, which is a bit higher than general turnover rates within the labor market. Figure 1 shows the job-change intentions of technical communicators.

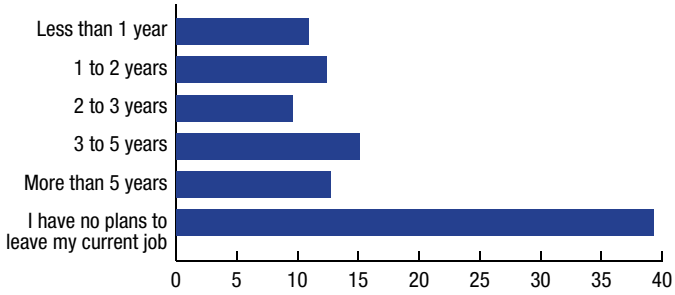


Figure 1. Job-change intentions of technical communicators.

Of those who plan to change jobs in the next five years, the majority (61 percent) plan to remain in the field, though a large group (39 percent of those planning to change jobs) plan to leave the field.

In terms of future jobs sought, the most widely sought positions are in management or project management and writer or writer/editor positions. The next most popular position is retirement. Figure 2 shows the types of positions sought by technical communicators for their next jobs.

Satisfaction with Career

In addition to the satisfaction with the current job, the census also explored broader satisfaction with participants' careers in technical communication.

The first question asked participants to assess the influence that technical communication holds within organizations by ranking a number of job titles regularly encountered by technical communicators at the level of an individual contributor or first-line manager. Some of the titles encompass roles within technical communication; other titles are from outside technical communication.

Of the job roles ranked highest, only one of the top five is related to technical communication: information architect. By contrast, all of the bottom five are technical communication roles, with technical editor ranked the lowest. This suggests that technical communicators do not feel they have much as much influence within organizations as other professions. Table 8 shows the rankings.

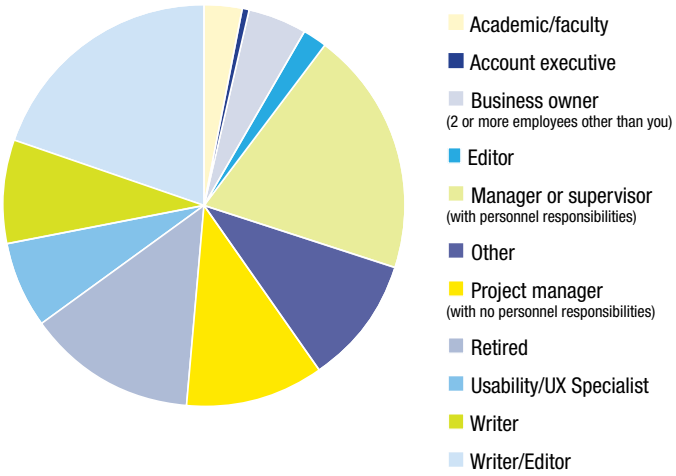


Figure 2. Types of positions sought by technical communicators for their next jobs.

Table 8. Rankings of professions by perceptions of their influence.

Rank and order these titles in terms of what you believe holds the most influence within an organization.	Weighted Score (weighting of the rankings)
Product Manager	8515
Engineer	7934
Business Analyst	7368
Programmer	6616
Information Architect	6278
Content Strategist	5750
UX Specialist	5327
Marketing Communicator	4858
Information Developer	4778
Content Developer	4239
Instructional Designer	4020
Technical Communicator	3638
Technical Writer	3210
Documentation Specialist	3096
Technical Editor	2853

Despite concerns about a lack of influence, however, technical communicators generally seem satisfied with their careers. Thirty percent strongly agreed and another 46 percent agreed with the statement, "I am satisfied with my career in technical communication." Table 9 shows perceptions of general satisfaction with the career.

What Does This Mean?

This basic analysis of the perceptions of technical communicators suggests the following:

- Although technical communicators feel that their employers could provide more staff and time to complete projects, they feel they have the authority to perform their jobs and are paid appropriately.

Table 9. Perceptions of general satisfaction with careers in technical communication.

I am satisfied with my career in technical communication.	Percent
Strongly agree	30 percent
Agree	46 percent
Neither agree nor disagree	14 percent
Disagree	8 percent
Strongly disagree	2 percent

- Technical communicators seem generally satisfied with the amount of feedback received on their work; the quality not so much.
- Technical communicators feel secure in their jobs and do not seem concerned about the impact of outsourcing or the effects of automation.
- Most technical communicators plan to stay in their current jobs for a long time. The majority of those who do plan to change jobs want to remain in the field.
- In general, technical communicators are satisfied with their current jobs and their careers in the field.
- Technical communicators feel that, within the organizational structure, they have less influence than people in other roles.

The results also suggest why the "former" technical communicator preferred to be labelled a content developer; she sensed that people in the field value that highly. Unlike others in the field, that affected her perception of her work. By contrast, most technical communicators seem satisfied and secure in their jobs and their careers.

STC's 2019 Election Preliminary Slate

THE STC NOMINATING COMMITTEE (composed of members Jackie Damrau, Jamie Gillenwater, MaryKay Grueneberg, Larry Kunz, and chair Alyssa Fox) is pleased to announce the preliminary slate of candidates for the 2019 Society election:

President
Ben Woelk will automatically succeed from the office of Vice President

Vice President
Craig Baehr
Alan Porter

Treasurer
Jim Bousquet

Director
(two positions to be elected)
Bethany Aguad
Kirk St.Amant
Laura Palmer

Nominating Committee
(two positions to be elected)
Sara Feldman
Li-At Rathbun
Jack Molisani
Kelly Schrank

Congratulations to the candidates, and thanks to all STC members who expressed interest in running for office. Note that the preliminary slate was prepared in accordance with the current Society bylaws. Individuals who meet the qualifications for Society office and engaged the nomination process, but were not selected for the slate, may choose to pursue nomination by petition of 5 percent of the voting members of the total membership as of 31 August of the calendar year preceding the election (see Article VIII, Section 2, Part D). Individuals who seek nomination by petition must submit the required materials to the Society office by 12 December 2018. The final slate for the 2019 election will include candidates appearing on the preliminary slate as well as any qualified individuals who are properly nominated by petition and approved by the Board of Directors. The Society election is scheduled to open on 25 February and close on 11 March 2019. To be eligible to vote, members must have paid their dues by 1 February 2019.

Stay at the Hyatt Regency Denver, the Official 2019 Summit Hotel

THIS YEAR'S TECHNICAL Communication Summit & Expo will take place 5-8 May 2019 in Denver. Located in the heart of downtown, Hyatt Regency Denver offers easy access to an incredible selection of arts and entertainment and prime attractions, like 16th Street Mall. The Hyatt features modern and inviting accommodations, personalized service, and an extensive array of amenities, making your stay productive and fun. STC has negotiated **a special conference room rate of $219** for single or double occupancy accommodations at the Hyatt (not including taxes). Wi-Fi is complimentary with all rooms in STC's block. Each room also has a safe large enough to store a laptop computer.

The importance of reserving a hotel room at the Hyatt Regency Denver cannot be stressed enough. STC makes every effort to keep participants' expenses, registration fees, and hotel rooms for the meeting as low as possible. We work hard to negotiate the best hotel rates and to make the best use of your registration dollars to keep the conference affordable. When anyone reserves a room with the official conference hotel, he or she is helping to support not only STC in 2019, but also contributing to its ability to negotiate the best rates for future conferences.

What are you waiting for? Book your room in STC's room block at the Hyatt Regency Denver. Hurry, because the best rooms will go quickly!

Please note: STC does not contract conference services companies, housing bureaus, or travel agencies to contact exhibitors or attendees to make their hotel reservations. If you are contacted by phone or email by any company representing itself as the official housing company/bureau/agency, do not respond. Their sole objective is to get your credit card information. STC does not sell exhibitor or attendee information to third parties for marketing purposes. The service providers that STC selects do not sell contact information to third parties. If you need assistance making a hotel reservation for the Summit, contact STC directly.

The *2017–2018 Salary Database* Is Now Available

THE *2017–2018 SALARY Database* is now available for download. All 2019 members receive a free copy in their membership confirmation email of the *Salary Database* PDF, which includes charts, maps, and an evaluation by an economist, as well as the Excel Workbook. Nonmembers may purchase the PDF for $125, the Excel Workbook for $60, and both for $185. Visit *www.stc.org/salary-database/* for full details.

The STC *Salary Database* is a tool that can be used to conduct more powerful job searches, make a strong case for a raise, or prepare department payroll budgets. The data in the *Salary Database* are drawn from the United States Bureau of Labor Statistics' (BLS) Occupational Employment Statistics (OES), the main resource of human resource departments across the United States.

Use the STC *Salary Database* if You Are:

- **An employee** looking for solid facts to back up a raise request
- **A manager** seeking salary figures to assist with setting budgets or bidding for projects
- **A freelancer** investigating average hourly fees for a different industry or city
- **A job-seeker** needing insight on what industries and what geographic areas hold the most new jobs
- **A global technical communicator** looking for rates to charge or pay for a project or consultant in the United States
- **Any technical communicator** in need of either annual or hourly wage information

Sponsored by

Adobe Technical Communication

Writing Assistance, Inc.
your source for writers

STC Society for Technical Communication

This year's data offers new insights into how the economy has and will continue to influence the demand for technical writers. In 2017, employment rates for technical communicators increased modestly, and 2017 now represents the highest employment level for the occupation since being individually tracked by the Bureau of Labor Statistics. "Technical writer" as a profession has seen employment growth every year since 2011, with an average annual employment increase of 1.9%. Globalization and export markets continue to be important to the U.S. economy, showing an increase in 2017 in translators and interpreters. The *Database* also highlights the largest and fastest-growing industries and geographic areas in terms of both wage growth and job growth.

2019 members now receive the Excel Workbook for free, which can be used to format, analyze, and manipulate the data easily. Visit https://www.stc.org/salary-database/ for more information on the Salary Database.

Jumping Back into the Job Market and the Essential Technical Communication Bookshelf

Shutterstock/Iryna Inshyna

BY KIT BROWN-HOEKSTRA | *STC Fellow* and **CINDY CURRIE** | *STC Fellow*

I've been out of the job market for a while and now I want to jump back in. What things should I be doing?

First, think about who you are: what your strengths are, what you enjoyed about your last job, where your interests lie now, what level of responsibility you want, and what industry you want to work in. Identify what your main skills are. Update your LinkedIn profile and résumé accordingly. Have a friend or colleague review both and give you feedback.

Read Jack Molisani's book, *Be the Captain of Your Career.* It will give you some practical advice for job hunting.

Start researching companies in the industry you want to work in. Do any of your contacts work at these companies? If so, schedule informational interviews with them (make sure you send a thank-you note afterward). Look at job boards for jobs that are similar to what you are looking for. Go to STC Summits or regional meetings and other professional meetings in your area. Attend webinars and workshops to bolster your skills. Get certified. Network, network, network.

Schedule time every day to work on your job search. Treat it like a major project. If a job sounds interesting, apply for it even if you only meet 80% of the requirements. If you lack knowledge in a tool, download the free trial, take a class, or go on YouTube and do the tutorials.

Practice self-care. Job hunting can be a disheartening process. Reward yourself for meeting goals and milestones. Take regular breaks, even if it's just taking a walk. Remember, every "no" is one step closer to a "yes."

What do you consider the essential bookshelf for a technical communicator?

To a certain extent, it depends on what area of technical communication you are interested in. Current areas that are fundamental to being a good TCer include having a basic understanding of how to interview subject matter experts (SMEs), structured authoring, content management, visual communication, instructional design, and localization. More advanced topics include gamification, controlled language, content strategy, and information architecture. Soon to be important are augmented and virtual reality topics.

Here are some books we recommend for getting started:

- *Technical Communication Today* by Richard Johnson-Sheehan
- *The Language of Technical Communication* edited by Ray Gallon
- *Managing Enterprise Content* by Ann Rockley
- *The Global English Style Guide* by John Kohl
- *The Chicago Manual of Style*
- *Don't Make Me Think!* by Steve Krug
- *Letting Go of the Words* by Ginny Redish
- *Every Page is Page One* by Mark Baker
- *Content Strategy 101* by Sarah O'Keefe
- *The Language of Content Strategy* by Scott Abel and Rahel Bailie
- Anything by Edward Tufte
- *A More Beautiful Question* by Warren Berger
- *For the Win* by Kevin Werbach
- *The Language of Localization* by Kit Brown-Hoekstra
- *The Simplified Technical English specification* (available from *www.asd-ste100.org*).

Ask a Tech Comm Manager is an advice column geared toward answering all those questions you have, but might be uncomfortable asking. We glean the questions from social media, forums, and most importantly, from you, dear reader. If we don't know an answer, we will interview experts and get information for you. Send us your questions to *kitbh.stc@gmail.com* or tweet them to *@kitcomgenesis* or the hashtag *#askTCmgr.*

Making Group Work Real

Shutterstock/MILKXT2

BY THOMAS BARKER | *STC Fellow*

THIS PAST HALLOWEEN, my university website featured some fanciful take-off books from the Goosebumps series. The books had humorous titles like *Battery Life, Too Much Coffee,* and *The Return of the Forgotten Quiz*. The one that most caught my imagination, however, had the title *The Group Project*. This gave me the chills. Isn't the group project the gold standard way to engage students, to introduce real-world cases, to contextualize instructional concepts in an active learning modality? So since when did the group project become associated with student horrors?

This column focuses on a broad range of practical academic issues from teaching and training to professional concerns, research, and technologies of interest to teachers, students, and researchers. Please send comments and suggestions to column editor Thomas Barker at *ttbarker@ualberta.ca.*

The pedagogical pedigree of "group work" in the technical writing classroom is, of course, rock solid. Few would disparage the practice of breaking up a classroom into groups for a little social learning. I have always seen group work as oases from the stress of teaching and a chance to pass the learning along to students, but while I'm up at the front of the room tidying up my papers or tapping my pencil thoughtfully, the students may not see group work quite the same way.

Why Is Group Work Dysfunctional?

Group work is controversial among students. Maryellen Weimer, in an article in *The Teaching Professor*, claims that her students "don't like group work." She recites the top ten reasons why, and among them is "group exercises mean we do the work and the teacher doesn't." That's not quite as revealing as "I can't sleep during small group exercises," or "I don't like the people in my group," but it points to something important that makes the practice look phony to students: it disingenuously offloads the learning onto the students.

Group work is not focused. One of the worst justifications for group work is the theoretical one. That argument goes like this: A lecture, as one-way communication, is tediously factual, and it overwhelms even the brightest student's ability to file facts away for recall in a meaningful context. Classroom group work provides that meaningful context. Students value other classmates' ideas, and to be effective in the group, students must articulate their ideas clearly. Doing so engages them with the ideas *actively* rather than passively. Students *experience* the ideas.

That experience, however, often seems to fall flat for lots of reasons. One being the inherent inequality in classroom group work. A former student at Vanderbilt said that some groups get a head start, because they already know one another. Or someone takes charge. Or no one takes charge. Domination or chaos. The student found both extremes to be "time-wasting." Chances are that productive, two-way conversation was limited in either case.

Equally interesting is the criticism this student made of another strong argument for group work: it fosters workplace communication or people skills. Teachers will sometimes justify group work therapeutically, claiming that disgruntled students will later thank them for forcing them to be social. Many students consider themselves to be pretty social already, and when you get right down to it, group work does not mimic workplace communication. Work meetings have subtle constraints of the workplace that you can't mimic by turning your desks to face one another.

Techniques to Improve Group Work

What can a teacher do to make group work work? Weimer claims that "Teacher design and management of group work on projects can do much to ensure that the lessons students learn about working with others are the ones that will serve them well the next time they work in groups." Weimer suggests ten techniques to improve group work.

1. Emphasize the importance of teamwork
2. Teach teamwork skills
3. Use team-building exercises to build cohesive groups
4. Thoughtfully consider group formation
5. Make the workload reasonable and the goals clear
6. Consider roles for group members
7. Provide some class time for meetings
8. Request interim reports and group process feedback
9. Require individual members to keep track of their contributions
10. Include peer assessment in the evaluation process

The design and management solution is also recommended by a number of the scholars reviewed in R. S. Hansen's 2006 article on the benefits and problems with student teams in the *Journal of Education for Business*. Hansen explores the literature on group work and comes up with a basic rationale for the technique: employers like it. Says one of Hansen's sources, employers like group work because it teaches teamwork competencies and skills.

Technical communication teachers take to this rationale like believers to a tent meeting. Whatever looks like it's responding to employer requirements is automatically in the teaching bag. When you look closely at it, however, this rationale has its logical flaws. For one thing, what about the gap between course content and professional skills? If I'm teaching document organization, for example, who said professional group skills should be an additional learning outcome? The problem may not be in the management and design of the group work, or the lack of teaching on how to do group work. The problem is that if I stick my head out of the classroom and look down the hall, I find that all the other teachers are trying to do the same thing.

Why the persistent dysfunctionality of student group work? My suggestion is that if it is phony from the start, no amount of design and management can overcome this flaw. More design and management for group assignments that don't really need to be group assignments make them even worse. I have tried it, and I get the stink-eye from my students every time. Now they have to report on progress *where there really was no progress.* Now they have to take on roles *but they don't really need to.* Now they have to assess their peers *when they just can't come up with anything positive about slackers.* It leads to what Martin Buber calls "inauthentic communication."

Take the Open Approach

My suggestion for making group work work is to ditch the micro-management approach and try to make it more transparent and authentic. Self-forming teams of students who share self-defined learning needs. Face it, students are social already, and the workplace will cover "how to do team work" in their first week on the job. Let them get the message there. Restore the classroom as a learning, not performing, environment. It's one thing to say, "I'm going to make sure you get this point," and it's another to ask, "Who wants to learn more about this?"

It helps to see group work as a failure of lecturing. The professor who can sense confusion is on the right track to learning. Nobody wants to make the students feel stupid, so making sure they get it should be a top priority.

Here is an example of how this approach can work. In the course of the day, look for troublesome ideas, student roadblocks, bottlenecks in understanding. Definitions are a good start. Terminology or meaning is always something students like to be clear about and often don't quite get. So terms like *reflexive modernity*, *rhetorical effectiveness*, and *systems thinking* are great candidates for a quick group discussion and clarification. "Who wants to make sure they understand this idea?"

Find these potentially confusing ideas and ask students if they would like to take some time to share this, or apply it, or otherwise try to make it clear to themselves. Try telling students that if they feel they understand something, we're moving on. But if they are confused, lost, befuddled, or otherwise not getting it, sharing their questions with other students can really be helpful.

The benefits of this approach may be that:

- Groups are self-forming based on real learning outcomes
- Students get to develop their person skills more authentically
- Fewer slackers who get credit for just sitting there
- Reporting of real accomplishments
- Spontaneous and genuine reporting of progress and learning

Group work is here to stay, but the design and management approach isn't the only road to making it less horrific than it already is. Taking an open approach to group work by letting students self-select based on instructional needs could make all the difference.

If your students shrink in fear of group work, maybe it's time to re-write the book.

RESOURCES

Hansen, R. S. (2006). Benefits and Problems with Student Teams: Suggestions for Improving Team Projects. *Journal of Education for Business*, 82:1, 11–19.

Weimer, Maryellen. (2017). "My Students Don't Like Group Work," *The Teaching Professor,* 12 July 2017. *https://www.teachingprofessor.com/topics/for-those-who-teach/my-students-dont-like-group-work/.*

Survey Reveals Top Tools, Trends, and Technologies in Use in Technical Communication Teams

Shutterstock/puruan

BY SCOTT ABEL | *STC Associate Fellow*

EACH YEAR, my firm, The Content Wrangler, surveys technical writers around the globe to identify the top issues impacting the creation, management, translation, and delivery of technical content. Our 2019 *Technical Communication Industry Benchmarking Survey* aims to spot the trends, tools, standards, and technologies in use in modern technical publications departments today. The findings should prove useful to practitioners, managers, vendors, educators, students, and employers.

Traditionally, information products created by technical communicators were consumed by customers after purchasing a product or service. Deliverables like end-user documentation; assembly, disassembly, maintenance, and repair instructions; and online help were often provided to customers only after they purchased a product or service.

Increasingly, 2018 was a year of discovery. More than three-quarters of technical communication teams realize that prospective buyers often seek out—and value highly—technical information, making it an essential ingredient in almost every type of business transaction. Seventy-eight percent of respondents say they recognize the role technical content plays in the conversion of prospects into customers; up from fifty-one percent in 2016.

About the Survey and its Participants

This article provides a high-level snapshot of the current state of the technical communication industry. It summarizes what we learned from survey data submitted online by 600+ professional communicators, more than half of whom are veteran technical writers, having worked in the field for 15 years or more. The respondents belong to teams of all sizes and configurations—40 percent work in a department with 10 or fewer co-workers, while 15 percent work on teams with 50 or more.

They are an optimistic and well-supported bunch, the majority (63 percent) of which say they are "super excited" by the future impact of advanced technologies on the way they live and work. Fifty-one percent have a favorable view of their workplace and say they believe their leaders value the contributions they make to the company.

They're a unilingual group, for the most part, with 61 percent fluent in only one language. Thirty-nine percent of respondents claim to be articulate in two or more languages. Interestingly, despite a lack of multilingualism, the organizations for which they work are often multinational (78 percent) and translate the content they produce into a variety of foreign languages (1–5, 21 percent; 6–10, 34 percent; 11–24, 18 percent; 25+, 11 percent).

Challenges Ahead: The Need for Continuing Education

No matter what problems they claim to face, 70 percent of technical communication team managers cite the need for continuing education as a critical factor in their future success. Tech comm managers say their staffers need additional—often specialized—continuing education to tackle several of the most common challenges they face. Documenting application programming interfaces (APIs) is one of the most in-demand skill sets (40 percent), while creating video

In the digital age, change happens quickly. This column features interviews with the movers and shakers—the folks behind new ideas, standards, methods, products, and amazing technologies that are changing the way we live and interact in our modern world. Got questions, suggestions, or feedback? Email them to *scottabel@mac.com*.

documentation (45 percent), crafting conversational content for chatbots and voice interfaces (42 percent), and developing and refining taxonomies (80 percent) are also high on the continuing education priority list.

Educational opportunities in these areas are often in short supply or of questionable quality, some respondents suggest.

The Big Challenges of 2019

The top challenges facing technical documentation teams in 2019 include: developing effective collaborative authoring processes (65 percent), overcoming issues relating to change management (75 percent), and measuring content performance (80 percent). While these challenges ranked highest, it's clear from the data that there are a host of additional, related problems facing modern tech comm shops.

Challenge: Lack of a Formal Content Strategy

As in previous years, the lack of a formal content strategy (68 percent) is the most significant contributor to the difficulties facing technical communication teams. For example, one in four technical communication departments lacks a formal content reuse strategy, making it challenging—if not impossible—for them to manage repurpose-able components of content effectively. The lack of a reuse strategy opens the door for content errors and inconsistencies across content distribution channels, makes governance impractical, and unnecessarily increases content production expenses.

The creation of inconsistent, inaccurate, and mediocre quality content is a common symptom of teams that lack a formal content strategy (88 percent). Organizations lacking in content strategy are four times more likely to produce content without a clear understanding of the value to the customer (and methods for measuring technical content performance).

Fifty-eight percent also report they do not have a systematic way to control terminology, leading to inconsistencies in source language content that result in customer confusion and contribute to unnecessary translation expenses.

Organizations that produce technical content in 20 or more languages are 75 percent more likely to have formal content reuse and terminology strategies in place. However, 33 percent of writers who work for organizations with content reuse and terminology strategies in place admit they do not always follow them.

Software Tools Need Improvement

Some of the biggest challenges facing tech comm teams today are related to the software they use to craft content. Many (78 percent) complain that technical communication software tools are poorly designed and painful to use. Tools created for use in a separate discipline (software not optimized for the types of work technical communicators perform) are increasingly put to work in tech comm departments, leading to inefficiencies and the need to devise clever workarounds, some technical communicators complain.

The tools they desire must be easy-to-use and understand, they say, and should present a simple user interface (with common functionality), and automate and performs tasks of value to writers. Software vendors, they complain, are too-often focused on adding more features on top of stale, outdated products, instead of working to reimagine how technical communicators work and building modern tools that improve the user/authoring experience.

Software vendors should look for ways to improve usability, add agentive capabilities to help communicators work more efficiently and effectively, and provide insight into content performance in the form of an analytics dashboard.

Top Three Most Commonly Used Software Applications

The most commonly used software application amongst technical communication teams is Adobe Acrobat. Sixty-eight percent of technical writers have a copy on their desktop (or in the cloud). Acrobat in the top spot should not be surprising when one considers that portable document format (PDF) files are the second most common technical content deliverable format. Eighty-seven percent of tech comm teams create PDF versions of their product documentation.

While the majority of documentation teams today currently provide technical content in PDF format, there is growing anecdotal evidence that suggests some teams are actively looking for ways to replace PDF versions and to deliver content in more flexible formats that don't come with the display limitations—and security challenges—PDF files introduce. Technical documentation department managers often listed replacing current PDF versions of documentation with more engaging forms of content—39 percent of those surveyed said the improvements they desire include producing dynamic, personalized, and interactive technical communication content to improve customer experiences with content.

The second most prevalent software tool used by technical writers is Atlassian Jira, an Agile issue tracking and project management platform designed for software development team collaboration. Sixty-five percent of those technical communicators say they rely on Jira to help them manage projects. While some writers wax poetic about the merits of the platform, others complain that improvements are needed to support the requirements of technical content developers.

The third most widely used software tool is TechSmith Snagit. The popular screen capture app has been a digital staple on the desktops of technical, marketing, Web, medical, and product information developers for many years, topping the list of

most used tools in our 2016 survey. Some users say Snagit is particularly useful because it makes screen capture image (and now video) creation—and editing—simple and fast.

Authoring Tools for Technical Documentation

While 47 percent of technical communication departments use Microsoft Word as their primary authoring tool, tech writers use a wide variety of software tools. For example, in tech comm departments that create multi-channel, multi-language content for highly configurable products or services, Adobe FrameMaker is the authoring tool of choice.

Twenty percent of all technical communication teams surveyed say they create documentation using the Adobe Technical Communication Suite (a package of several Adobe products, including Adobe FrameMaker, bundled into one solution). Twenty-nine percent of technical writing teams use FrameMaker as their primary authoring tool; while the majority (90 percent) of those teams also sometimes utilize sister products—Adobe Illustrator and Adobe InDesign—to help them craft technical documentation deliverables.

Other software tools technical communication teams use include Author-it (17 percent), Oxygen XML Editor (16 percent), Oxygen XML Author (14 percent), Arbortext (9 percent), MadCap Flare (5 percent), and Oxygen XML Web Author (3.5 percent).

Content Management Tools for Technical Documentation

The component content management system (CCMS) category of software has been dominated by several providers over the past decade. As structured, semantically rich content is increasingly recognized as a requirement, not a nice-to-have, more and more vendors seem to be making their way into the space. A CCMS is a content repository designed to manage relationships between content components at a granular level, helping technical communicators assemble publications and other content deliverables from a single source of content.

The most commonly used CCMS in technical communication departments is SDL Live Content, a system that is currently in use in 16 percent of all technical communication departments that create structured XML content. Jorsek CMS (formerly known as easyDITA) finds itself in second place with 8.5 percent of tech comm shops leveraging the platform to produce documentation and related content deliverables. Astoria CCMS commands 7 percent of the market, followed by Ixiasoft DITA CCMS (6 percent), and Vasont (3 percent).

New entries on our list of most commonly used component content management systems include: Dakota Content Platform, Schema ST4, and Ingeniux CMS, each the CCMS of choice for 1.5 percent of tech comm teams that produce structured XML content.

Software Tools that Are Growing in Use

Fifteen percent of tech comm teams govern terminology, voice and tone, grammar, and style using Acrolinx software, a machine-learning-powered tool designed to help teams ensure consistency in terminology, voice, and style. That's an increase of 2 percent from our 2016 survey findings.

The software product with the most impressive growth in the past two years is Atlassian Confluence, a technical documentation project and content management system, which 39 percent of technical communication teams use today. Contrast that to our 2016 survey when only 8 percent of tech comm teams were using the platform.

Another tool that has seen a significant increase in adoption by technical communication departments is the software development platform, GitHub. In 2016, GitHub was in use in only 7 percent of technical documentation teams. Today that number is 29 percent. While adoption of GitHub is increasing, the primary challenges technical writers report (it does not support the requirements of technical content developers) should not be a surprise. One look at the home page declaration—"Built for Developers"—and it's clear that technical writers are not the intended audience.

A new type of software—digital adoption platforms like WalkMe and WhatFix—are being employed to produce step-by-step guidance that helps to simplify the process of bringing a new customer onboard or helps existing customers to familiarize themselves with new functionality. Fourteen percent of technical commu-

Figure 1. A screen shot of https://github.com *taken 30 October 2018. Clearly not "built" for technical communicators.*

nication teams currently create walk-throughs, while 22 percent say they plan to in the near future. Thirty-seven percent of respondents say they do not plan to create them, perhaps because they believe the content they produce does not lend itself to such a delivery approach.

Trends in Technical Communication Content Delivery

Companies that produce highly configurable, complex products for an international audience often have some of the most demanding requirements for their technical content. Making sure that the right content is delivered to the right person at the right place, at the right time, in the right format, and on the device the of the consumer's choosing is the goal of most component content management projects.

XML authoring tools and component content management systems are a requirement in many of today's modern technical communication shops—but they aren't enough by themselves. Teams that create structured XML content for dynamic publishing require additional software to help them create relevant content experiences. Once such tool in use at 25 percent of technical communication departments is software that handles content delivery. Customer experience platforms like Zoomin Software help fill the void that content management systems alone cannot. Using taxonomy and metadata, these systems help us serve up the right pieces of content to the right person, when and where they need it, on the devices of their choosing.

Trends in Technical Communication Deliverables

Chatbots, voice-enabled assistants, and artificial intelligence top the list of emerging technologies about which tech comm pros say they are most excited. While this year's survey did not ask any questions specifically about the use of artificial intelligence or voice-enabled assistants, we can glean insight from the answers to questions we asked about training needs and most significant challenges facing today's modern tech comm shop.

Technical communication teams are increasingly creating explainer videos (49 percent), documenting application programming interfaces (56 percent), crafting conversational content (42 percent), architecting guided customer journeys, and using digital adoption platforms (14 percent) like WalkMe.

Trends: Creating Explainer Videos

Ever since technical communication mavens Lee and Sachi LeFever began creating their series of "In Plain English" videos in 2007 for their homespun explainer house Common Craft, video documentation production has been on the rise. Production of video documentation has increased dramatically since 2007 when only 11 percent of those surveyed created video documentation. Today, 66 percent of technical communication teams produce video documentation, but only for some of their products; while 19 percent of those surveyed say they craft video instructions for all of their products.

While creating video documentation is seen as increasingly important, less than half of tech comm teams localize video documentation; 47 percent localize "some" of their video documentation, while 23 percent adapt all video documentation, and 9 percent plan to in the future.

Trends: Chatbots for Customer Support

More than half of tech writers (62 percent) say they believe adding a chatbot to their technical support website might help them improve the customer experience. Chatbots are increasingly being employed to deliver customer-facing technical content or to guide a website visitor through their knowledge-seeking journey.

Despite their potential for enhancing technical content discovery and improving customer experiences, one in four tech writers say they believe chatbots aren't useful; opinions developed after having previous negative personal experiences with a chatbot (23 percent), or because their team lacks the knowledge and expertise to craft a useful chatbot content delivery channel (43 percent).

The chatbot revolution is already upon us. Ten percent of technical communication teams already produce technical content delivered by chatbot. Fifty percent of technical communication teams expect to launch a chatbot by 2020; 35 percent are looking to learn how to create conversational technical content before they launch their first bot; and 40 percent are excited to see if chatbots can be configured for internal use—to help tech writers work better, smarter, and faster.

Trends: Going Global by Thinking Local

Localization is the act of adapting content to make it more meaningful, appropriate, and useful for a particular culture, locale, or market. Seventy-four percent of technical communicators work for global, multinational organizations that localize their technical content; that's up from 72 percent in 2016. Twenty percent of tech comm pros work for companies that deliver documentation in 2–5 languages, while 19 percent make technical content available in 6-10 languages. Thirty-four percent provide support in 25 or more languages.

While localization of text-based technical documentation is typical, less than half of tech comm teams localize video documentation. An increasing number of technical communication shops are recognizing the need for localizing video, and 9 percent say they plan to develop a strategy to localize video documentation in the future.

Trends: Outsourcing Technical Documentation Projects

An increasing number of technical communication teams are leveraging off-shore labor to help them produce

technical documentation deliverables. Twenty-five percent of all organizations outsource "some" of their documentation projects; 3 percent say they outsource everything. While 66 percent do not currently outsource tech comm creation, 7 percent of those respondents say they are considering options for outsourcing some technical writing duties in 2019.

The most common reasons for outsourcing technical communication labor include reducing the amount of time it takes a team to create deliverables and augmenting teams that are attempting to move toward a new approach to content creation. For instance, one firm reported using outsourced contractors to help them transition to creating structured, XML DITA content. The team used off-shore laborers to continue documenting an existing product line (helping to move an existing project forward), while the onsite staff received training in structured XML authoring, DITA, creating topic-based content, writing for reuse, and learning to use new authoring tools and a component content management system.

The most common reasons for not outsourcing technical documentation are previous bad experiences with outsourcing (6 percent), security concerns (19 percent), company policy (16 percent), and government regulations (11 percent), with 20 percent of respondents admitting they do not know why their organization does not leverage outsourced talent to create technical communication deliverables.

Trends: Documenting Application Programming Interfaces

Documenting application programming interfaces (APIs) requires specialized knowledge, purpose-built software, and experience many technical communicators lack. APIs are becoming ubiquitous and, as such, there's an increased need for the creation of API documentation.

Fifty-eight percent of technical communication teams surveyed say they currently document APIs; 10 percent plan to in the future. The biggest challenges facing groups that document APIs include difficulties using software tools not optimized for ease-of-use or writing efficiency, and lack of experience.

Trends: Continuing Momentum Toward Topic-Based Content

The trend toward the creation of modular, semantically rich, consistently structured, reusable components of topic-based content is continuing in technical communication teams around the globe. Fifty-one percent of technical communication teams surveyed report using XML to craft deliverables, with the Darwin Information Typing Architecture (DITA) being the most commonly used XML schema (55 percent). Custom XML schemas are in use at 11 percent of technical communication shops, while 10 percent leverage an industry-specified XML document type definition to craft deliverables.

The types of information products that technical communication teams hope to generate from DITA content has expanded over the past few years as more tech comm shops refine their DITA skills and find new ways to leverage the standard. The types of content technical communication departments want to create from DITA include: product documentation in HTML5 (40 percent), product documentation in PDF (38 percent), training materials (23 percent), sales and marketing materials (13 percent), step-by-step video documentation (20 percent), and slide decks (11 percent).

Documentation produced by technical communication teams that use structured XML is most commonly delivered in HTML5 format. Conversely, 22 percent of technical communication teams that produce unstructured content (do not use XML) claim to deliver all of their technical content in HTML5. Thirty-five percent of teams that produce unstructured content claim they can deliver some of their technical content in HTML5.

Organizations that aren't using structured, topic-based XML content say they either don't require the capabilities XML content can provide (12 percent) or their organization does not understand the positive impact (22 percent) that XML authoring can provide the organization they serve.

Trends: Markdown as a Productivity-Enabler

Markdown is a lightweight markup language (which is confusing, right?) that allows writers to provide formatting instructions in plain text syntax that is later converted to HTML and other formats. Eighteen percent of technical communication teams say they use Markdown to help them craft technical content. The reasons for using the technique are almost always framed as a benefit to the person writing the content (writers say they find using Markdown easy-to-use (34 percent), quick to learn (33 percent), flexible (14 percent), and extensible (11 percent). In many of the shops that leverage Markdown, developers may actually be writing the documentation, not dedicated technical writers.

While Markdown is a favorite tool for some content creators (18 percent), the majority of technical communication departments (56 percent) do not use Markdown to create documentation content. 15 percent of those we surveyed did not know what Markdown is, nor why they might use it.

The Future Is Bright

The future is bright for technical communications professionals who invest in learning new tools and techniques, and who make time to understand the value and application of innovative technologies to the way we work.

The technical communication industry is undergoing many of the same challenges that other content producing-departments

are experiencing at organizations around the globe. Increasing pressure to produce more content in more languages and formats, for use in multiple channels—and with fewer resources—combined with the fast-changing technology landscape (artificial intelligence, machine learning, autonomous vehicles, 3-D printing, the Internet of Things, blockchain)—make starting with a content strategy one way to manage technical content production and delivery efforts that scale.

The challenges many technical communication shops report are not usually caused by technology, although selecting the wrong tool for the job is often cited as one of the primary reasons such problems exist. Tool selection should be based on a solid set of measurable business goals and actionable data.

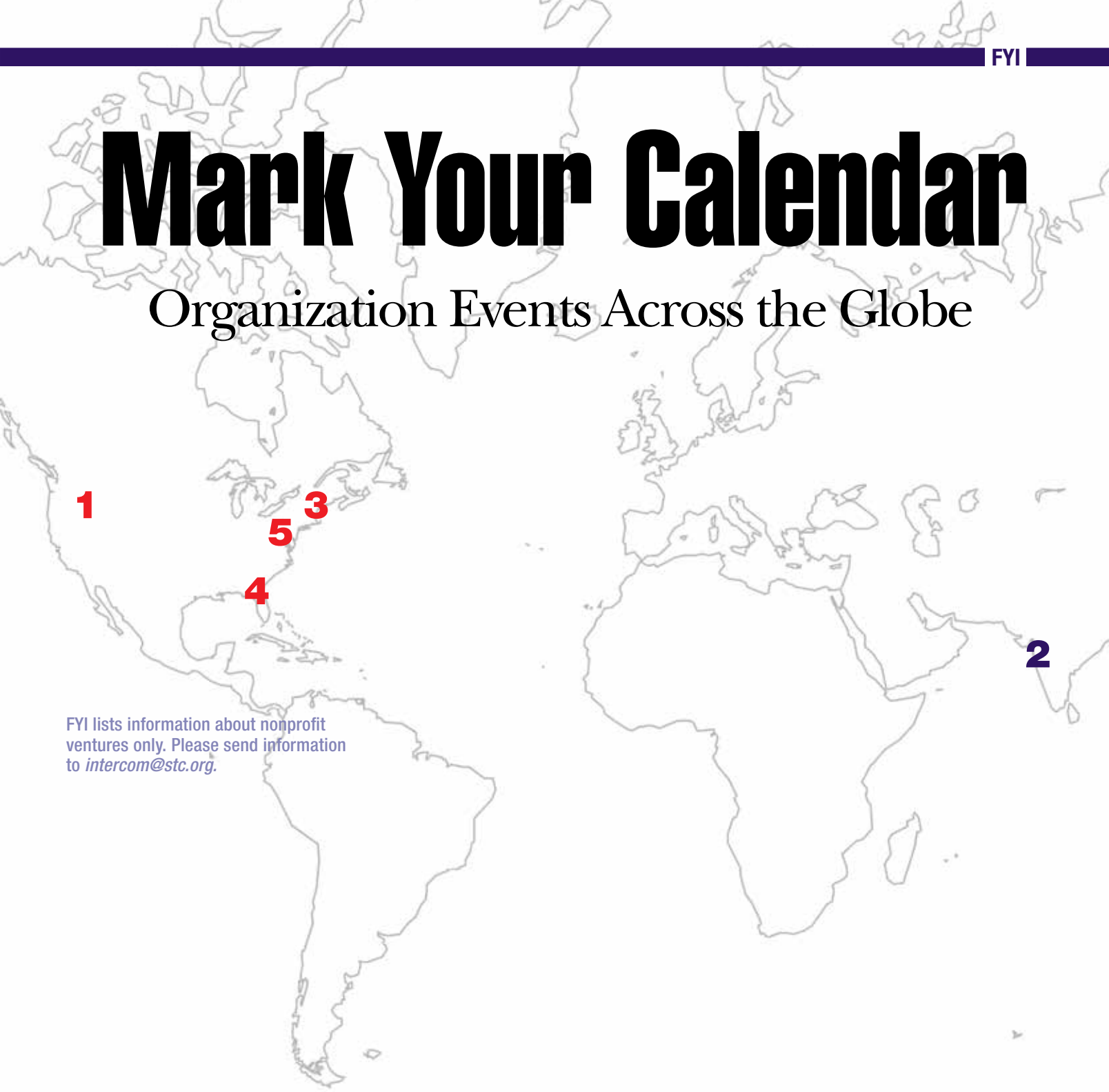
Technology aside, the methods, strategies, and standards we adopt—and how we chose to implement and use them—also impact our ability to efficiently create, manage, translate, and deliver content to those who need it. Forward-thinking organizations that value their content as a business asset invest in the right tools, technologies, and education for those whose job it is to craft customer experiences with technical content.

Trends aside, the importance of high-quality content has never been more important. Ridding our production processes of unnecessary waste (and automating as many tasks as possible) is fast becoming a requirement among organizations seeking to compete in a world of disruptive innovation.

There's no better time to be a technical communication professional. As our benchmarking survey results indicate, opportunities for interesting and rewarding technical communication work are available in nearly every industry sector. Leveraging your technical communication know-how—and your natural curiosity and communication skills—will help you to secure a bright future.

Mark Your Calendar

Organization Events Across the Globe



FYI lists information about nonprofit ventures only. Please send information to *intercom@stc.org.*

1 3-5 Dec
The **State Science & Technology Institute** (SSTI) will hold its 2018 Annual Conference 3-5 December in Salt Lake City, UT.
https://2018.ssticonference.org/
contactus@ssti.org

2 7-8 Dec
The **India Chapter of STC** will hold its 20th Annual Conference in Mumbai, India. For more information, contact STC India.
STC India
https://stc-india.org/conferences/2018/
conference@stc-india.org

3 3-6 Jan 2019
The **Linguistic Society of America** will hold its 93rd annual meeting 3-6 January 2019 at the Sheraton New York Times Square.
https://www.linguisticsociety.org/event/lsa-2019-annual-meeting
drobinson@lsadc.org

4 28-31 Jan 2019
The annual **Reliability and Maintainability Symposium** (RAMS) will be held 28-31 January 2019 at the Bay Lake Tower at Disney's Contemporary Resort, Lake Buena Vista, FL.
http://www.rams.org/rams2019@rams.org

5 14-17 Feb 2019
The **American Association for the Advancement of Science** (AAAS) annual meeting will be held 14-17 February 2019 at the Marriott Wardman Park Hotel and Omni Shoreham Hotel in Washington, DC.
https://meetings.aaas.org/meetings@aaas.org

* STC-related event

In Memoriam: Tom Warren

BY AVON MURPHY | *STC Fellow*

DR. THOMAS LEO WARREN, a longtime force in STC and other technical communication organizations, and one of the founders of modern-day technical communication, passed away.

Tom earned a PhD in English from the University of Kansas. He went on to teach at Central Missouri Residence Center, the University of Missouri at Kansas City, the University of South Dakota at Springfield, and finally Oklahoma State University (OSU), from which he retired in 2009. Under his 32 years of leadership, OSU established the BA, MA, and PhD technical writing programs and became a top-tier university in technical communication. Many STC members might not realize that because of his devotion to international collaboration, he also spent 20 summers lecturing at the University of Paderborn, Westphalia, Germany.

His many teaching and research interests included technical communication pedagogy, international issues, research methods and design, the history of technical communication, science writing, and visual communication. Not surprisingly, his publication output included four books and dozens of articles, not to mention the papers he presented at the STC Technical Communication Summit & Expo and other venues. Many STC members will recall that over the past several years, his book reviews appeared in almost every issue of *Technical Communication*. Perhaps his crowning achievement in scholarship is his 2006 book *Cross-Cultural Communication: Perspectives in Theory and Practice*.

Tom took his commitment to professional organizations very seriously. STC conferred upon him the rank of Fellow and the Jay R. Gould Award for Excellence in Teaching. Non-STC awards included Fellow, Association of Teachers of Technical Writing; Distinguished Service Award, Council for Programs in Technical and Scientific Communication; and the Hockley Award, the Institute of Scientific and Technical Communicators (he was the first non-U.K. citizen to be so honored). He was, in addition, President of INTECOM, an international organization of technical communication societies.

Active consulting work informed his research and teaching. He was a contract and coordinating editor for PenWell Publishers and the American Society of Petroleum Geologists. He led workshops for American Airlines Maintenance, Reda Pump, Conoco-Philips Research and Development, the American Society of Agricultural Consultants, the American Society of Farm Managers and Rural Appraisers, The Principal Financial Group, Southwestern Bell, and the Tulsa District Army Corps of Engineers, and he advised the Research and Testing Department of the Association of American Railroads.

A personal quality that Tom extended to everyone from student to longtime veteran was his willingness to share information. Stories abound of his sharing teaching materials, mentoring neophytes as they attended conferences, introducing people to new contacts, and providing assistance on publications. When I was preparing my last book, he kindly stepped in to write our chapter on the history of the field and helped write the annotated bibliography.

Outside his professional life, Tom enjoyed his family, played several musical instruments, participated actively in his local Masonic lodge, and relished good German beers.

It was always a pleasure to talk with Tom in person and on the telephone. In addition to getting some serious work done, we exchanged humorous observations on the current state of our field, history both ancient and modern, and our personal lives.

Tom's was a life well lived. I was grateful to be able to call him both colleague and friend.

AVON J. MURPHY *(*avonmu@comcast.net*) is a Technical Editor in western Washington. A retired college professor and government writer, he is an STC Fellow, a contractor, and principal in Murphy Editing and Writing Services, specializing in computer and Web technologies. Avon served as book review editor for* Technical Communication *for 17 years.*

Experience Professional Growth with STC Education!

STC offers a wide variety of online education options throughout the year. Whether you need an introduction to a subject, an in-depth review, or just a brush-up, STC has what you need. Advance your career with STC's varied collection of online education.

Live Weekly Webinars

Multi-Week Online Courses

Recorded Webinars

Free On-Demand Seminars
(Members Only)

Visit stc.org/education