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2019 Society for Technical Communication Summit

Overview

The 2019 Technical Communication Summit takes place 5–8 May at the Hyatt Regency Denver in Denver, Colorado. This 66th annual Summit offers more than 100 education sessions over three full workdays with topics covering all aspects of technical writing, editing, graphic design, information design, usability, project management, and publication production. Practitioners, professors, researchers, and students at all levels of experience convene to learn from expert presenters and from each other.

Conference Committee

The Conference Committee builds the conference program by managing the call for proposals, reviewing the proposals, and selecting speakers who can present information on a wide variety of topics of interest to attendees.

Nicky Bleiel  
Conference Co-Chair

Cindy Currie  
Conference Co-Chair—Project Management, Leadership, and Career Development Track Manager

Alan Houser  
Tools and Technologies Track Manager

Aiessa Moyna  
Content Design and Delivery Track Manager

Liz Pohland  
STC Chief Executive Officer

Kevin Siegel  
Training Development and Delivery Track Manager

Claudia Ventura  
STC Education Manager
What Leaders in Industry and Academia Think About Technical Communication Training and Education

Rebekka Andersen, PhD, and Carlos Evia, PhD

We highlight preliminary results of a multi-staged, multi-year research project that examines the skills that students and early-career practitioners need to lead and innovate in the changing profession of technical communication. Strong technical writing skills are still important, but professionals in the 21st century rarely can build and sustain a career on them alone. We report on skills and competencies that in the contemporary workplace are as important as the more traditional skills in rhetorical analysis, writing, and design associated with the discipline.

Introduction

Several trade and scholarly publications have offered preliminary assessments of skills and competencies expected of technical communication students and early-career practitioners (see Andersen, 2014; Batova & Andersen, 2018; Bailie & Urbina, 2013; Dicks, 2009; Evia, 2018; Evia & Andersen, 2018; Evia et. al, 2015; Rockley & Cooper, 2012). Following those conversations, we decided to conduct a study with the goal of developing strategies for preparing students and early-career professionals to conduct meaningful knowledge work in the changing profession. As part of that study, we have been conducting workshops at conferences (2 as of this writing) and interviews (25 thus far) with industry leaders and university administrators and educators. Preliminary findings from our workshops and interviews point to needed changes for technical communication education at various levels, from degree-granting undergraduate programs to certificate programs to industry onboarding practices.

In this paper, we share what we have learned from our interviews to date. In future publications, we plan to address implications of the results of our larger research project for students and early-career professionals, as well as for hiring managers, educators, and trainers.

Methods

To advance from informal conversations to properly documented evidence, we designed a multi-stage, multi-year research project. We are gathering qualitative and quantitative data that will help technical communicators understand current career paths and challenges in the profession. Our project is guided by the following question:

What can industry leaders, university administrators, educators, and recent graduates contribute to the development of curricula that prepare students to be leaders and innovators in the rapidly changing profession of technical communication? (Evia & Andersen, 2018).

We ventured out to study the skills and competencies that students need after graduating from college. We started the project by organizing workshops with industry leaders and university administrators and educators (stage 1).

So far, we have conducted two workshops:

- At the Association for Computing Machinery Special Interest Group on Design of Communication (ACM SIGDOC) conference in August 2017 (28 participants—mostly from academia)
- At the Best Practices conference of the Center for Information-Development Management in September 2017 (15 participants—the majority of them from industry at a managerial level).

Based on input collected at the workshops, we created a series of interview questions and have been talking via video chat applications with individuals identified as leaders and innovators in the academic and workplace facets of technical communication. As of this writing, we have talked to 25 experts and plan to conduct 10 additional interviews in the late spring and early summer of 2019 (stage 2).
Thus far, the interviews represent the opinions of fourteen workplace experts (8 male and 6 female) and eleven academic experts (8 female and 3 male). Of the workplace experts, five also have an active presence as educators or college-level instructors. From the academic experts, eight are currently in administrative positions as directors or deans.

For the third stage of the project, we plan to conduct a series of interviews with recent alumni from undergraduate programs in technical communication who are now working full time in areas related to the discipline. We want to learn about their experiences applying for jobs in the field and the extent to which their undergraduate training prepared them for particular content roles and activities in their current organizations. The final stage of this project will include a survey of industry professionals and a survey of administrators, educators, and researchers.

Preliminary Results

At a high level, we are asking each interview participant the following core questions:

- What does it mean to be a technical communicator today?
- How do you see technical communicator roles and activities changing? At the entry level? At the advanced level?
- How do you see hiring needs changing, particularly at the entry level and particularly for content-focused jobs?
- What do you see as implications of changing roles and hiring needs for education in technical communication?
- What should be covered at the technical writing 101 level today?

Based on an initial round of structural coding of transcripts, we have identified several themes in response to our research questions. We highlight these themes below. After completing all interviews, we will conduct a more extensive analysis of the transcripts.

Changing Roles and Activities of Today’s Technical Communicator

When asked what it means to be a technical communicator today and how roles and activities are changing, participants talked mostly about the following two topics:

- The different kinds of products that technical communicators now produce. Writers now are not just writing books. They are writing structured content for reuse and multi-channel publishing, scripts for videos, conversational content for chatbots, and much more. This is a type of writing that requires a good understanding of how to categorize and tag information so that people can find it. One workplace expert suggested that technical communicators produce what she defined as “human usable contextualized data.”
- The many hats that technical communicators must wear. They are seldom just writers anymore; they assume many roles such as information architect or taxonomist and engage in a wide range of activities. One workplace expert commented that years ago there were specialty roles like editors, graphic artists, and instructional designers; now, these roles are often merged together.

Technical communicators still write and must be excellent communicators, but because they now produce many different kinds of products supported by increasingly complex, technical processes and tools, they need more technical knowledge and know-how than was once required. The chair of a department of communication that offers a BS and BA in technical communication summed up the need for technical knowledge and skills in this way:

I don’t think many roles today will allow you to not be technically savvy, so even though you may not be the developer and you may not be writing the code that goes into the software product, you have to know enough technically about the product that’s being created in order to be able to talk to the developers. I think frankly the way we’re delivering information means you have to know enough about the back-end of how information is transmitted, collected. So, I’m thinking about things like structured authoring or the fact that you might need to know enough about building websites so that you can be the person who puts the information that customers are going to need. You build the website. Maybe you’re not dealing with the SQL server and whatever else, but you know enough HTML and CSS to at least present information.

To keep up with the profession, noted several workplace experts, technical communicators have to understand a considerable amount of technological
applications and workflows that communicators and writers in other professions do not have to understand.

Changing Hiring Needs

According to all of our workshop participants and interviewees, strong written and oral communication skills, as well as interviewing skills, are as important as ever. But organizations hiring for entry-level technical communication positions are increasingly looking for additional skills and qualities that align with their current or anticipated content development environments. Most participants noted that organizations need people who are not afraid to learn new tools and processes, who can get up to speed on a project quickly, and who are curious and adaptable.

Workplace experts particularly emphasized changing expectations regarding tool familiarity. Many organizations now expect people applying for entry-level positions to have exposure to structured authoring and have the ability to use the right tools, whatever they are, to create well-written, well-structured content. When asked how technical communicators can move into more strategic roles in their organizations, many of these experts noted how it is not realistic for students to be hired into more advanced positions. More strategic roles require substantial technical expertise, or an in-depth understanding of business goals, processes, and content needs, or in-depth understanding of the product lifecycle, or advanced audience analysis skills (i.e., the ability to collect data on and analyze different markets, demographics, and experiences).

Despite their recognition that hiring needs are changing, some academic and workplace experts commented on the wide variety of skills and tool knowledge that they have noticed in job descriptions, from proficiency in Microsoft Word and strong writing skills as preferred qualifications to the more advanced business, technical, and content strategy skills discussed above. The range suggests that many organizations still produce traditional technical products using traditional desktop publishing tools, and there remains a need for writers who use tools for producing unstructured content.

Implications of Changing Roles and Hiring Needs for Education in Technical Communication

Some implications that participants tended to discuss frequently focused on the need for academic programs to be aware of industry trends, if not be responsive to them, and direct students to resources for learning about those trends. Both workplace and academic experts touched on the need for programs to require technical courses as part of their technical communication curricula. And more than half stressed the need for students to understand the importance of separating content from form and be familiar with at least some processes, tools, and standards for doing this.

One academic spoke on the importance of viewing the technical communication curriculum as a dynamic product. An important implication of all the changes in the profession, she suggested, is that programs need to think about the lifespan of individual course offerings and be ready to redevelop courses in response to changing technology and business needs.

To prepare students to become leaders and innovators in the profession, workplace and academic participants commented on the need for programs to encourage academic minors and electives in business and leadership as well as a technology-focused discipline, such as computer science. Many workplace experts spoke of the need for programs to prepare students for working in business environments, to focus more on business processes, agile development, and product lifecycles. One academic expert touched on this as well: When alumni of her program were asked the question, “What were you least prepared for,” they talked most about the business context and technical knowledge.

Workplace experts also tended to talk about the need for professionals who can lead content reuse and integration initiatives. One prominent consultant noted that many organizations are hiring people with library science degrees to categorize and tag content, a skill set that she suggested students in technical communication should be developing as part of their curriculum. Hiring managers, she claimed, should not have look elsewhere for this type of skill. Several other consultants felt that technical and content standards, taxonomy development, and semantics should be central to any training program.

Reflecting some agreement between the workplace and academia sides of the field, some of our faculty interviewees talked about curricular changes responding to trends and changes that most of our industry experts emphasized. Some academic programs are rebranding to focus more on user experience, content management, or project management.
and less on the aspects of writing and rhetoric that most technical communication programs housed in English departments in the United States have traditionally embraced.

**Perspectives on What Should Be Covered at Technical Writing 101 Level Today**

In our workshops, participants told us that regardless of what roles and titles become in the future, technical communicators need to be skilled in *technical writing 101*: the fundamentals required to start in the profession. But when we asked what should be covered at this level, we received very different answers. Therefore, we decided to explore that concept in our interviews and ask our participants about the technical writing 101 level. Some of the opinions we have gathered focus on the following two sets of skills and competencies:

- **Traditional skills.** Write clear and concise prose, collect and analyze primary data, use that data to demonstrate or argue a particular value or case, have strong interpersonal and collaboration skills, use proper style and grammar.

- **Competencies that reflect changes in the profession.** Study contemporary approaches to organizing information, learn how to structure and tag content for reuse and multiple use in different deliverables and platforms, implement principles of minimalism.

An industry expert summarizes the technical writing 101 level in the following sentence: “At the most fundamental level, you need to understand what you’re trying to do and how you’re trying to communicate.”

**Preliminary Conclusion**

The future of education in technical communication depends on the extent to which the discipline is able to reflect on the changing profession and adapt its educational goals accordingly. The need for effective writing skills across disciplines and professions will certainly not go away; however, to lead and innovate in the profession, one now needs technical and business knowledge and skills in addition to the more traditional humanities-based skills in rhetorical analysis, writing, and visual design.

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Docs as Code and DITA

George Bina

Treating Documentation as Code and using similar tools as developers and trying to integrate and synchronize the documentation with the code is a trend known as “Docs as Code” that gained a lot of attention and adoption in the recent years. The choice for the documentation format however, is advised to be a plain text markup like Markdown, reStructuredText or Asciidoc, which work ok but they do not feature functionality that we find in more elaborate languages like DITA: reuse, semantic markup, profiling and so on. In general, DITA is seen as part of a CCMS integrated solution and incompatible with the agile approach promoted by Docs as Code ideas. The reality is that DITA is well suited for the Docs as Code approach, it provides a lightweight flavor that is a good starting point for contributions, then, if more advanced functionality is needed, one can use the full DITA support. More, if specific custom functionality is needed one can develop and use their own flavor of DITA, a DITA “specialization,” so DITA gives a full range of choices for all possible needs. DITA is based on XML, so it is also a plain text markup but the lightweight DITA can be written also in Markdown or HTML.

Motivation

The “Docs as code” approach is usually associated with source formats like Markdown and Asciidoc while DITA (Darwin Information Typing Architecture) is associated with a heavy, old, monolithic CMS, as if DITA implies that CMS. In reality, this is not the case. DITA is a perfect fit for “doc as code” solutions and it is actually used as such in a number of projects. It provides also many advantages like semantic tagging, built-in reuse functionality, validation frameworks for both structure and business rules and more.

Docs as Code

The documentation reflects an existing product and thus it cannot be separated from the product. As the product evolves in time, so does the documentation, reflecting the updates to the product. Because the documentation evolves together with the product it makes sense to have the product and the documentation development integrated, thus making sure the documentation is synchronized with the actual product it documents.

Docs as code ideas provide a solution for creating documentation and integrating the development of the documentation with the product development, as it inherits or uses similar workflows and tools as the ones used for software development.

Typical systems built around the Docs as Code ideas include the following components:

- Non-proprietary/easily editable source formats
- Issue tracking tools
- Concurrent versioning systems
- Continuous Integration/Continuous delivery (automated publishing)
- Automated tests

The source formats are usually text based formats, easily editable in a text editor, like Markdown, Asciidoc or reStructuredText. XML also fits well in the requirements, XML being text and easily editable with any text editor. Conceptually, XML defines only a few concepts, elements containing text or other nested elements and having associated key/value pairs in the form of attributes.

DITA as Source Format

From the XML-based standard vocabularies, DITA is probably the most used language for technical documentation. DITA is an open standard defined and maintained by OASIS, created by IBM in 2001, the current version of DITA being DITA 1.3.
Docs as code requirements for the source format match very well with what DITA provides and the modular development of modern products fits perfectly with the built-in DITA modularity and reuse functionality.

Docs as Code with DITA

Easily Editable

DITA is expressed in XML which is text, so it can be edited with a text editor. However, there are many options for XML-aware editors, both for the DITA source as well as visual editors, from open source, free to commercial, from desktop to web-based editors.

A new flavor of DITA called Lightweight DITA was created to make it even easier for people to start working in the DITA ecosystem, by focusing on a base profile and relaxing the actual encoding format. This means that Lightweight DITA has an abstract model that is compatible with DITA, it is simplified so that it is easier to learn, and its model can be expressed not only in XML but also in alternative formats, including Markdown and HTML.

Multi-Format Support

In DITA, with the addition of Lightweight DITA it is possible to combine content in different formats, XML, Markdown and HTML, for example.

Additional open source plugins for DITA-OT, the main DITA publishing engine, allow support for other formats, like Excel sheets, so if you have information in Excel you can use that directly in DITA, without a pre-conversion to the DITA format.

Concurrent Versioning Systems

DITA, being text and not a binary format, works without any issues with all concurrent versioning systems, including Git, Mercurial, Perforce, Subversion and others. Concurrent versioning systems that conceptually store revisions as snapshots of the entire working copy are better suited for DITA than managing revisions individually for each file, because of the modular nature of DITA that may contain multiple modules assembled in deliverables defined by maps.

One related function to version management is the diff and merge support. Text diff and merge works reasonably well for XML, being a text-based format, but XML-aware diff and merge tools are also available. These provide better support to ignore parts of the document that are just a different syntax to express the same model, or to present the content in a more user-friendly way, for example a visual diff.

Automated Tests

Testing and quality assurance are very important and while manual tests are useful, they can be practically applied only as an initial review, while tests should be automated to be able to trigger them at any time and repeatedly, as the documentation changes.

It is important also to detect problems as soon as possible because the cost associated to fixing them increases as we move away from the moment a problem was introduced. For example, it is immediate to fix an issue if we detect that at authoring time compared to finding a problem once we went with the documentation public.

In the XML ecosystem, there are many standards and tools to check and test the documents, from structural validation to business rules and integrity checks.

DITA defines XML schemas to define the structure of a DITA document, this being available in DTD, XML Schema or Relax NG, the last one being the normative schema language for the latest version of DITA, DITA 1.3. Checking a document against the schema can be done using scripts triggered from command line but they are also integrated into XML editors, so authors can get immediate feedback as they create the content. Also, these schemas can be used not only for validation but they can be used also to guide the user on what they are expected to do in specific parts of the document, for example in a task body the users can see that they may insert steps, and annotations of elements and attributes can be presented next to an element or attribute, so the user can better understand its use.

Another type of validation, different from the structural validation, is focused on detecting different patterns in the document and asserting certain conditions. The standard that provides this pattern-based validation is called Schematron and it is an ISO standard. Schematron can check both structural rules and language rules, or constraints on the text content. Usually it encodes rules that cannot or it is difficult to express in structural schemas as well as rules specific to a project.
Detecting a problem is useful, but in some cases, there are possible solutions that may be applied to solve the detected problem. Schematron can be enhanced with Schematron Quick Fix to not only detect possible issues, but also provide one or more possible solutions the user can to choose from to automatically apply a proposed fix.

In DITA we can also know the language of the document, or of specific parts of the document, which may be in a different language than the rest of the document; this is done using a specific attribute that can appear on any element. This allows us to perform a more intelligent spell checking validation, automatically switching the spell checker dictionary to match the content language.

More advanced tools are also available to perform different types of integrity checks, for example verifying that referred images are available, that the target of cross references exist and are not excluded by the conditional processing, if conditional content is used, and so on.

Automated Publishing in Multiple Formats

DITA-OT is an open-source project and the main publishing project used with DITA. It can perform DITA publishing to many different formats. Additional conversions are possible with the addition of other open source and commercial plugins, and there are many of those available.

The DITA-OT to HTML output is basically a static site generator and DITA-OT can also publish Markdown, so any publishing platform used in Docs as Code setups that use Markdown/HTML can be used also with the DITA-OT generated Markdown/HTML from DITA sources, thus the publishing options are not limited in any way, we get the reunion of everything that is available in the DITA world with everything that is available in the Markdown/HTML world.

Review Support with Tracked Changes and Comments

XML formats allow comments and processing instructions along with the main structures formed by elements, attributes and text, and these can be used to layer track changes functionality and discussion threads.

DITA also provides specific revision markup, like draft comment elements, revision attributes, or metadata associated with topics, all which can be used to manage review functionality.

Modularity and Reuse

Many modern products are built by assembling different components and take advantage of reuse. As documentation follows the product it documents it is useful to be able to reflect similar modularity and reuse in the documentation. The lack of standardization in formats like Markdown results in ad-hoc solutions, basically some conventions that are applied for a project. Sometimes these conventions are targeting the source, other times they are set on the output scripts or publishing templates.

DITA on the other hand, has modularity and reuse at its core, being one of the main design goals. The structure of DITA is around maps and topics, maps being the assembly that organize the topics. Reuse functionality ranges from variable text and conditional content to content references, indirect references through keys for variables, content and links, and even being able to modify and reuse content through the DITA content push support.

Topics can be large or small, so you can encode in a topic a full document or just an idea, and together with the extended metadata support it is very easy to layer on top of DITA concepts like molecular content, for example. The encoded metadata may be used to implement automatic linking between topics and other advanced functionality as you can extend the existing metadata structures through DITA specialization with your own semantic elements.

Docs as Code and DITA Available Projects

DITA is already used in Docs as Code projects and at the DITA-OT Day 2018 event several sessions where presented covering exactly this topic. Some of the projects are private, but there are also open source or generally available projects that use DITA as the source format for Docs as Code projects. We will describe a couple of such projects further.

DITA-OT Documentation

DITA Open Toolkit (DITA OT) is an open source project that implements the DITA standard providing a plugin-based architecture for publishing DITA to different output formats.
DITA-OT documentation is managed in an open source project on GitHub (https://github.com/dita-ot/docs/) using DITA as the source format and Git as a versioning system and GitHub to host the Git project and provide additional functionality, like web access, diff, issue tracking, workflows like pull request management, etc.

Travis, which is used for continuous integration, is setup to automatically build the project using Gradle whenever a new commit is pushed on the develop branch, the branch containing the current version of the documentation. If the build passes the output is deployed on the dita-ot.org website.

For publishing the dita-ot.org website the project uses GitHub Pages (planning to move to Netlify) and integrates the HTML generated for documentation from the DITA source with additional HTML and Markdown for the other parts of the website using Bootstrap and Jekyll.

Because the source of the documentation is generally available, the current development version of the documentation is enhanced with Edit this page links that allow immediate editing of the content and submitting a pull request. Then acceptance of the request will trigger the automatic republishing of the content, so the documentation can be updated similar to a wiki, but in a more controlled manner: only a controlled list of users can directly commit or accept pull requests.

In terms of a bit more advanced functionality, the project uses multiple audience values for profiling content, like novice and expert. The DITA subject scheme to control the audience values takes advantage of indirect references through keys, uses variable text (for example, for the current version, XML mention domain for semantic markup), and modifies topics using content push.

**oXygen XML Editor Documentation**

Syncro Soft provides oXygen XML Editor as well as other related XML tools, like oXygen XML Author, oXygen XML Developer, oXygen XML Web Author and so on. The documentation for these tools is created using Docs as Code ideas and DITA as the source format. Because all these tools are related, the documentation takes advantage of the DITA profiling and reuse functionality to manage all the products within a single DITA map.

The documentation is available as an open source project using Git and hosted on GitHub. Being a commercial product there are two documentation repositories, one public and one private, the private one containing the development version of the documentation before a new release. The private development branch is merged into the public master branch when a new release is made generally available. Then, a tag and a maintenance branch is created for the released version, with the format hotfixes/version.

Although the documentation project is using GitHub, for issue tracking Jira is used, because that is used also for product development issue tracking and the product and documentation development are integrated. The Jira default workflows are modified to include documentation and documentation review within the product issues, so whenever a new functionality is added or changed in the product, the documentation team will have a formal step in the process to determine if there should be changes to the documentation to reflect the changes to the product. Once those changes are applied, the developers involved in the issue will be required to review the documentation updates made in response to that issue. To enable that, we have an integration between Jira, GitHub and our staging server for documentation, in the form of a script that monitors commits on the development branch and injects automatically messages about the corresponding Jira issue, pointing the developers to review documentation changes associated to that issue, offering them immediate access to the diff of the changes, the published HTML version of the modified content and edit links to immediately access the source of the modified content.

Jenkins is used to automate publishing, and we automatically publish the development version to be accessible for review, like the QA team or developers that review the updates made to the doc for the issues they were involved in, and we also publish automatically when changes are pushed on any of the hotfixes/version branches and publish again on an internal staging server. Pushing the hotfixes update on the actual website is semi-automatic, because we want yet another review process before making the documentation generally available.

The published version of the documentation includes Edit this page links to allow the support team to immediately provide feedback to the technical documentation team, but also to allow the product users to provide feedback. Anyone accessing that link can edit the content and when saving they will be able to submit a pull request, suggesting a change to the documentation.
For testing, the project uses in addition to the structural validation also Schematron to check many business rules, for example that images should not be scaled dynamically from the DITA source, and that code examples may not be beyond a certain length to avoid very long lines, and so on. Schematron Quick Fix is also used in some cases to offer automatic fixes the writer can choose to solve detected problems.

Publishing is done in multiple formats, including responsive HTML5 WebHelp, PDF, JavaHelp, Eclipse Help, Windows Compiled Help, and for multiple deliverables (products). Content is reused also via indirect references using DITA keys both for variable text and for common blocks of content, managed in warehouse topics storing the reusable components, like website links, shortcuts, installation requirements, etc.

**Final Notes**

Although DITA is perceived as complex and linked to old, closed, monolithic CMSes, the reality is completely different, and DITA can be as simple as you need it to be. You can use it with modern tools and as part of any modern workflow.

With DITA you can always start simple and grow as needed, but in case of DITA you can grow in a controlled, standard way and not invent conventions on the spot. For example, if you want to start with DITA at the same level as Markdown you can choose Lightweight DITA, possibly using Markdown as its format. As needed you can move to XML DITA, add some reuse functionality, extend that as needed, explore the benefits of validation and enforcing business rules, add a few rules, increase the number of rules as you need, and so on.

On the publishing side, you can just go to plain HTML or Markdown and use whatever tools you would have used with HTML and Markdown, but at the same time you can also explore what is available in DITA land for publishing, and there are many options.

It is true that a full DITA implementation covering a complex project may be expensive, but that will be expensive irrespective of the technology or documentation format that you will be using. It will be probably a lot more expensive using other technology, and when we compare DITA with Markdown or other formats we should compare them on the same task, not when doing something else, which is the case almost every time I have seen such a comparison. Choosing DITA as the source format in a Docs as Code approach is the best option someone can make for technical documentation!

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**Resources**


How We Build and Maintain the DITA Open Toolkit Project Website. [https://www.dita-ot.org/colophon](https://www.dita-ot.org/colophon).


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**Author Biography**

George Bina is one of the founders of Syncro Soft, the company that develops oXygen XML suite of XML editing, authoring, development, publishing and collaboration tools. He has more than 20 years of experience in working with XML and related technologies, bringing many innovative ideas to reality and contributing to XML-related open-source projects.

He has presented at many XML, DITA, and technical communication conferences, giving passionate presentations and challenging the technological status quo, trying to get the audience to think outside the box, and re-imagine the future.
The Value of the Polymath Communicator

Alisa Bonsignore

Technical communicators were once thought to be single-subject experts. Today we realize that the most successful among us are truly polymaths, bringing together subject matter expertise with our knowledge of multiple media channels, content strategy, user experience, and of course, writing. Yet for all of the skills we bring to the workplace, we’re often uncertain about how to best communicate our value to management.

Do you identify as a polymath? I am, though I didn’t know such a thing existed until I was an adult.

As a child, I had a diverse set of interests. I was an avid reader. I loved science. I had an innate understanding of mathematics. I enjoyed music. Yet every teacher told me that I needed to specialize, focus, and find the one thing that interested me. How could I choose just one thing when I was interested in everything? I didn’t realize at the time that my diverse interests were actually a good thing. I wasn’t unfocused; I was a polymath.

The Hallmarks of Polymaths

While researching this talk, I discovered that not many people self-identify as polymaths. Many don’t even know what a polymath is, and when they research the topic, they’re given names of world-renowned geniuses. Here are just a few prominent polymaths from history:

- Leonardo Da Vinci was a painter, sculptor, architect, mathematician, engineer, and writer, to name just a few of his many talents.
- George Washington Carver was a painter, singer, and piano teacher. He developed hundreds of uses for various crops and introduced crop rotation to poor southern farmers whose soils had been depleted by the cotton boom.
- Alan Turing integrated math, programming, biology, and of course codebreaking to change both the future of computing and the outcome of WWII.
- Marie Curie was a physicist, chemist, teacher, and writer who used new tools and techniques in her pioneering research on radioactivity.
- Thomas Edison was an inventor and businessman known for electric light, sound recording, motion pictures, and early telecommunications.

But what do technical communicators have in common with these geniuses?

“Learning never exhausts the mind.”—Da Vinci

Like Leonardo Da Vinci, most polymaths find learning invigorating rather than exhausting. And as technical communication evolves, we have lots of opportunities to learn.

In the last recession of 2007–2009, I saw the era of the single-subject expert change. Layoffs—especially in Silicon Valley—were rampant. Departments that once had one highly specialized writer per product now had to share one writer across four or more product lines. And those writers not only had to be knowledgeable about the subject matter, but they also needed to understand how their users consumed the content that they created so they could present the information more consistently and more efficiently. They no longer had the time or resources to create one-off tools to support both sales and technical support. Who were the ones who weathered the storm and came out stronger? The polymaths. The ones who could draw from their extensive index of knowledge.

The most successful among us draw from our disparate interests, just like the geniuses who came before. George Washington Carver said, "From a
child I had an inordinate desire for knowledge, and especially music, painting, flowers, and the sciences.” This is the hallmark of the polymath. We tend to be voracious, self-directed learners, absorbing vast amounts of information and inspiration from a variety of sources.

The example that springs to mind is the 1957 film “Desk Set” starring Spencer Tracy (Sumner) and Katharine Hepburn (Bunny). She’s a librarian and he’s a computer scientist. Even though Sumner is developing this amazing research computer—a revolution in 1957—he’s amazed by the connections that she makes when he gives her a complex problem. He asks her how she arrived at a particular conclusion and Bunny says, “I associate many things with many things.” Bunny was a polymath. No wonder I always liked her.

Being a Generalist Is a Good Thing

Humans, by nature, are generalists. We’re not animals that have one specific task to complete. As humans, we’re expected to be able to do a wide variety of physical and mental tasks: drive a car; walk; use a computer; write a letter; dig a hole; cook a meal; balance our accounts; write coherently. Each of these skills is job-agnostic. You should be able to perform any of them as an adult, whether you’re the CEO of a business or operating the till at McDonalds.

And yet, in spite of this, we encourage our children to become experts in a field of thought. I still hear people use “jack of all trades, master of none” to critique people for not being specialized enough in a single field. I’m also told there is a Chinese version of the saying: “Equipped with many knives, yet none are sharp.” This one is particularly striking. It implies that your skills are dull because you’re not a specialist.

But there’s a difference between learning about a topic and dabbling in it. There’s a middle ground between the deepest dive and the superficial skim. No one would accuse Da Vinci of not being good at what he did or being dull.

Liz Coleman, former president of Bennington College in Vermont, says we’ve lost our desire to be interested in many things. We live in an age where the single-subject expert is king. She says, “It’s not easy [for the polymath] when a system is built on that version of accomplishment, when narrowing your sights is treated as a virtue.” This is evident in the popularity of Malcolm Gladwell’s Outliers, which advocated for 10,000 hours of deliberate practice to master a skill.

Let’s put this into context. Let’s say 40 hours a week, 48 weeks a year (once you subtract holidays and our two weeks of American vacation days). That’s a little more than five years to become a deep-dive expert, or monomath. But how does that set Bob apart from Mary? There are plenty of people with depth of knowledge. What about breadth?

Information vs. Knowledge: Turning Data into Meaning

There’s a difference between knowledge and information. Information is data organized into meaningful patterns. In just one of the many studies about knowledge and its applications, Fritz Machlup explained in 1982 that “Information is a component part, but not the whole of knowledge.”

So what, then, is knowledge? In 2000, Ching Chyi Lee explained that “Information is transformed into knowledge when a person reads, understands, interprets, and applies the information to a specific work function.” So true knowledge is about the breadth of information. Lee went on to say that

One person’s knowledge can be another person’s information. If a person cannot understand and apply the information to anything, it remains just information. However, another individual can take that same information, understand and interpret it in the context of previous experience, and apply the newly acquired knowledge to make business decisions or redefine a laboratory procedure. Yet a third person may take the same pieces of information, and through his unique personal experiences or lessons learned, apply knowledge in ways that the second person may never have even considered.

Information is a component part, but not the whole of knowledge.

And yet, we universally encourage focus. “The progression of today’s college student is to jettison every interest except one,” explained Coleman in her excellent TED Talk. “And within that one, to continually narrow the focus, learning more and more about less and less.” Yet breadth is what sets the successful apart.
There’s often the perception that other conference attendees are your competition. Not true! Or it shouldn’t be. Two technical communicators may have the same information, but the most successful are able to transform that data into unique knowledge for the benefit of their organization.

Skills of Successful Technical Communicators

There are a variety of skills that are common across successful polymath communicators. I’ll touch on a few of them here.

Varied Interests and Intellectually Intensive Avocations

Successful technical communicators have more than one interest, particularly in adolescence, which sets the foundation for adulthood interests. In fact, in 1993, Milgram and Hong noted that “Career success in any discipline is better correlated with one or more intellectually stimulating and intensive avocational interests than IQ, grades, standardized test scores, or any combination of these.”

In fact, they said that “Intellectually intensive avocations among adolescents are an excellent predictor of career success in any field.” And that’s great for us, because technical communication spans multiple industries, and even subspecialties, from writing to strategy and beyond.

“[Polymaths are]...endowed with an abundance of restless imagination,” said Santiago Ramon y Cajal in 1951. I can relate to this. As a kid I could get lost in a library, as one question led down a rabbit hole to another, and I’ve heard similar stories from other polymath communicators. And let’s not even talk about all of the open tabs on my browser, or in my adult brain.

Subject Matter Knowledge

Successful communicators have a solid knowledge of the relevant topic. This doesn’t mean that the communicator knows everything there is to know about the topic—the Gladwell expert—but that they know enough to competently and confidently know which questions to ask. They understand where their strengths and weaknesses lie, and how to bring together the specialists to help get the job done.

“Most people have no concept of how an automatic transmission works, yet they know how to drive a car,” said Steve Jobs. “You don’t have to study physics to understand the laws of motion to drive a car.” Our driving manual doesn’t need to include lessons in the mechanics of the internal combustion engine. Successful communicators know what the user needs to know, how to provide the right information, and how to fill in the gaps.

Communications Skills

Of course, most of us are writers. But that’s only one aspect of communications skills. This ties back into knowing our strengths and weaknesses and knowing where to get the answers that we need. It’s our ability to work across departments and silos to achieve the goal.

When I worked at Juniper Networks, I was in a project management role uniting a cross-functional group. I quickly figured out who had the information that I needed, and how to best encourage (bribe) them to cooperate. Knowing who to reach out to—and how—is a deeply valuable skill.

A Knowledge of Channels

How and where does your audience consume information? Do your customers need the information in depth? Do they need bullets to walk them through quickly? Do they need a video tutorial to guide them? This all depends on the type of product, and the type of user.

Remember that there are time and place constraints. Let’s say that your customer is a hospital. It’s a very different scenario to walk through the relatively low-pressure setup for an MRI within the radiology department. It’s an entirely different scenario to help troubleshoot a problem at 3am during a natural disaster.

It’s important to know the best format for information delivery, and how to avoid information overload. We need to understand the channels for clean and simple delivery of content. If we don’t give our users exactly what they need, when they need it, it’s just spam.
Content Strategy
We’ve reached a content tipping point. Every organization has so many words out there. How many are current and relevant? How many of them address the right people? How many sources do customers need to visit to get what they need?

Is the content consistent across channels, in voice and tone?
Do the pre-sales tools and help tools sound like they’ve come from the same company?
Does the content address the right user persona?
Are we addressing the right audience?

As communicators, we’re responsible for making sense of this jumble. We turn the raw material into something usable.

User Experience
Successful communicators save their customers time and reduce the costs of help desk calls. How? By understanding and empathizing with the user.

Do they need the resources to be available online or offline? Mobile or print? Is there a walkthrough or troubleshooting process contained within the device or tool itself? Is the experience seamless and easy, from start to finish?

One of my clients sells ventilators to hospitals. You can get detailed information from their website, but you can also walk through a troubleshooting tutorial on screen. The information is the same, but the format is very different.

Successful Communicators Bring These Skills Together
Some of the most successful ventures have brought together seemingly disparate approaches, philosophies, and ideas. George Washington Carver said that, “When you do the common things in life in an uncommon way, you will command the attention of the world.”

And no corporate story is quite as compelling as the story of the early days at Apple. Steve Jobs said that

Part of what made the Macintosh great was that the people working on it were musicians, poets, and artists, and zoologists, and historians. They also happened to be the best computer scientists in the world. But if it hadn’t been computer science, these people would have been doing amazing things in other fields. We all brought to this a sort of “liberal arts” air, an attitude that we wanted to pull the best that we saw into this field. You don’t get that if you are very narrow.

With polymaths, we’re already many things. Just one person may bring together the computer science, history, and art. And that’s not only important to the product that’s being made; it’s important to the people who interact with it.

Last year at Maker Faire, I exhibited across the aisle from a really nice guy who designed building blocks from MDF—the particle board that Ikea uses for furniture. Bill was really cool, very interesting, lots of fun to talk to on setup day. He knew about computers and tools and art and sailing. Absolutely a polymath. When he finally put up his booth sign the next day, my husband was in awe. This guy invented the graphical user interface. This is the kind of person Steve Jobs was talking about.

Polymaths are radical collaborators within their own brains. For example, my background in healthcare and network security has proven very effective with the security constraints surrounding HIPAA, the U.S. healthcare privacy requirements. Polymaths are in a unique position to effectively explain, educate, and inform clients in a way that few monomaths can.

Roadblocks to Our Success
Thomas Edison said that, “We don't know a millionth of one percent about anything." We are our own roadblocks. I think that for most polymaths, there’s a great deal of imposter syndrome. The more you know, the more you realize how little you know. It’s the opposite of the Dunning-Kruger effect.

This is great for the sake of inspiring learning, bad for the sake of selling ourselves to management. We shortchange ourselves. We know that others have more or deeper knowledge than we have. And plenty of places value the monomath over the polymath.

If we don’t look for a more effective way to position ourselves, we’ll lose to them.

We have a large toolkit to bring to any job—we’re the Swiss Army Knife of any organization. But not everyone sees the value in a multitool when they’re
looking specifically for a metric hex wrench, and that can make it difficult to find an identity within a group.

**Challenge: Exercising Our Polymathic Abilities**

We have difficult career choices. When you have diverse interests, specializing is hard.

Do you only want to write documentation about widgets for the next two years? Do you only want to work on web content strategy? Or would you rather redefine the user experience across channels, by creating content and a content structure that works for the customer?

Many prefer the latter, but that’s not always the role that’s being advertised.

“Polymathy provides the set of skills, knowledge, and experiences to become creative, but talent, opportunity, persistence, environment, and other factors determine whether that polymathic ability becomes manifested creatively,” according to the Root-Bernstein study of 2009. We need to exercise our polymathic ability.

**Solution: Leveraging Our Strengths**

We need to look at new and interesting ways to show who we are, and why we’re valuable to an organization.

As polymaths, we have two choices: struggle to fit in, or play up our differences as a value. And a lot of what we choose will depend on personality. The more introverted we are, the less likely we are to self-promote.

It seems socially ostentatious to admit to knowing a lot about a lot. This leads to a lot of polymaths feeling “not understood” within their organizations.

Marie Curie said that, “Now is the time to understand more, so that we may fear less.” We can’t force them to understand us, of course, but we can set ourselves up for success by looking for the right environment.

- Find a smaller organization: Smaller groups have more flexibility, less rigidity in the responsibilities. The more your office looks like a cubicle farm, the less flexibility you’ll find in your role.

- Find an understanding supervisor: Some people just “get it.” And if they get it, they’ll help you achieve. Because they’ll understand—or at the very least appreciate—what you need.

- View every role as a learning opportunity: Approach each opportunity with curiosity and wonder. This will further develop strengths that you can apply elsewhere in the future.

**Challenge: Demonstrating Our Value**

“It had long since come to my attention that people of accomplishment rarely sat back and let things happen to them,” said Leonardo Da Vinci. “They went out and happened to things.”

We bring a growth mindset; everything is an opportunity for learning. That’s beneficial to us, of course, but an employee who’s actively growing and learning is of tremendous value to the organization as well.

**Solution: Demonstrating our Knowledge**

We make valuable connections across modalities or subjects, bringing ideas together for a new approach. We often achieve competence in three or more domains and bring together that knowledge into something greater than the sum of its parts. We need to not only solve the problems but show how we got there to prove our unique capabilities.

**Polymaths Are the Future of Technical Communication**

Alan Turing said, “We can only see a short distance ahead, but we can see plenty there that needs to be done.” Polymaths want to make it happen.

Take the opportunities to show that you have more to offer than a narrow skill set. Our broad skills help us to not only advance our own careers, but to be valued representatives of the profession as well.

The future belongs to those of us who can put the pieces together.

**Resources**

Information about Polymaths via Assessment Psychology Online.  
http://www.assessmentpsychology.com/polymath.htm


The USC Sidney Harmon Academy for Polymathic Study. https://polymathic.usc.edu/

https://hbr.org/2012/05/in-defense-of-polymaths


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https://www.ted.com/talks/lizColeman_s_call_to_reinvent_liberal_arts_education?language=en


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Alisa Bonsignore clarifies complex ideas from her office in the San Francisco Bay Area. More than just a writer, Alisa’s extensive research experience is applied to all of her client work. She analyzes competitors and industry trends to gain the strategic insights needed to place each project into a broader context. Her experience spans several industries over more than two decades. She has long specialized in healthcare and network security, and is increasingly involved with sustainability communications—helping organizations tell their sustainability stories in a way that benefits both people and the planet.

She is a frequent speaker at conferences and workshops and is serving her second term on the board of directors for the Society for Technical Communication.
Cultivating a Design Mind

John Bowie

Twenty-three years ago, I was working for the corporate Design for the User team at HP, an internal consulting group that invented and evangelized a new user-centered design methodology to HP product teams throughout the world. We called this approach Information Engineering. In May 1996, I wrote a short article for STC’s Intercom magazine describing how information can be used—not merely to document the complexity of products—but to drive the design of products toward increased simplicity and usability. As this design approach evolved, I followed up the first article with two more (Intercom October 1996 and November 2003). In my talk at the 2019 STC Summit, I described how Information Engineering has evolved into Outcomes-Driven Design, and how I and others have transitioned our careers from traditional technical communication roles into experience design (XD) and beyond. As a way of providing additional background and concepts, following are excerpts from the three Intercom articles.

Information Engineering (IE)

Information Engineering (IE) is a philosophy and a supporting set of methods that attempt to return the technical communication profession to its true mission. Emphasizing user-to-product communication instead of writing, IE empowers technical communicators with new tools, new responsibilities, and new approaches to solving the problems that originally gave rise to our calling.

The Mythical User

It’s time to stop using the “U” word. To me, calling someone a “user” implies that this person’s identity is derived solely from the product, that this person’s purpose in life is none other than to use this wonderful product we’ve sold them. It’s a subtle complaint, I know, but the term has given rise to an entire culture of user-centered design which, at the risk of being burned at the stake, I suggest has led us down as many detours as its techno-centric predecessor, the Let’s-Build-Something-Fun-and-Throw-It-Over-the-Wall school of product design.

Instead of focusing on who uses the product, IE encourages the design team to focus on Job 1, a term we use to describe the core goals and activities of our customers. Job 1 for a nurse is caring for and monitoring the condition of a patient. Job 1 for a writer is authoring, editing, and producing documents. Job 1 for a civil engineer is designing bridges and roads.

Job 1 Results Systems

Before you can transition from technical writer to information engineer, you must learn to view the world differently. This change in mindset must occur before you can perform your job differently.

Technical communicators view products as fixed in design, while users are malleable receptacles for all the information they produce. Products do what products do, and user behavior must be reshaped to conform to the demands the products place upon them. Users must learn to use the products; to learn, they must read the documentation, search online help systems for the answers to their questions, and commit time to learning how to use the product through various training and e-learning offerings.

Information engineers view users as fixed in design and attitude (or nearly so), while products are seen as candidates for infinite design innovation. Users are what users are, and what they are is fed up with reading manuals, searching for information, and trudging through monotonous training programs.

Information engineers view the product and the user as components in a system for achieving Job 1 Results. Job 1 Results are achieved as the user and
product components each perform actions; each action moves the system one step closer to the Job 1 Result. In order to act, each component must be programmed with instructions for performing its assigned actions. Product components are programmed at the factory with their instructions, but user components often lack the instructions they need to perform actions that have been assigned to them. This is why technical communication exists: to program users with missing instructions, through the vehicles of documentation and training.

The question before us is this: are documentation and training effective solutions to the problem of programming users with missing instructions? Because if they aren’t, the user component cannot perform the actions assigned to him or her. And if the user component fails, the Job 1 Result cannot be reached. And if the Job 1 Result cannot be reached, the entire system fails, and the product is useless.

This is perhaps the primary difference between a technical writer and an information engineer: the technical writer accepts responsibility for writing user programs, but the information engineer accepts responsibility for the entire Job 1 Results System and works to ensure all components can function as intended.

**Principle 1: There Are No Users, Only People Who Want to Get Something Done.**

Job 1 is not installing software, configuring computer interfaces, reading manuals, learning operating system commands, wading through CBTs, etc. These are Job 2 tasks which inadequate product designs impose upon people, often as prerequisites to completing Job 1. We often assume through our arrogance that Job 2 tasks are essential and even important.

We often spend the brunt of our documentation efforts explaining and supporting Job 2 tasks. In task analyses and usability tests, we often assess and refine these Job 2 tasks without stopping to ask whether these tasks are relevant to the user—we just assume they must be done. Instead of refining or documenting irrelevant tasks, IE says we should design them out of existence.

**Principle 2: Job 2 Product Design Defects Manifest Themselves as Information.**

Measuring a product’s information requirements is not a simple matter of counting pages of documentation, however. Measuring a product’s information requirements is not a simple matter of counting pages of documentation, however. The information requirements for each major Job 1 task must be broken down, categorized, and then analyzed according to the following three criteria:

- How relevant is the information to the human being’s Job 1 goals?
- How accessible is the information to the human being?
- How much human effort is required to understand the information and put it to use?

Once the information is analyzed in this way, it’s usually easy to identify areas of the product design that impose the largest information burdens upon the customer.

**Before You Write, Design**

...and I don’t mean design the manual.

I mean design the product.

From the beginning, technical communicators have complained about the futility of trying to patch an awkward or complex user interface with a manual. Here’s where you stop complaining and start doing something about it.

"But," you say (or perhaps someone says it for you), "designing the product is not my job." Of course it is. A poor design generates information, does it not? And aren’t you responsible for communicating that information? It’s not such a stretch, then, to say that you are empowered to select the medium for communicating that information. And one medium you can choose is product functionality.

Whoa! Product functions are a medium for communicating information? Are you saying I should be writing code and developing circuits? No, but I am saying you should be deciding whether a function is assigned to the product or to the human being. Here’s why....
Principle 3: Information Is Neither Created nor Destroyed, It Simply Changes Ownership.

Einstein rewrote the laws of physics in his special theory of relativity. The most famous law—The Law of the Conservation of Mass and Energy, or \( e=mc^2 \)—states that mass and energy are equivalent. In a nuclear explosion, for example, a small amount of mass is converted into an enormous amount of energy.

Similarly, information engineering’s Law of the Conservation of Information and Functionality states that a product’s information requirements and functionality are equivalent:

\[ i=f c^2 \]

In other words, information is neither created or destroyed, it simply transmogrifies between product documentation \((i)\) and product functionality \((f)\).

By measuring the relative costs of information ownership on both sides of the product/customer scale, product design teams can more easily make decisions about which functionality and information should be assigned to the product, and which should be assigned to the customer.

Information Engineering uses information to drive these design decisions. For example, when a company decides it’s less expensive and more beneficial to replace a difficult installation process with a new, automatic process that requires no external documentation and little user intervention, they have, in effect, decided to shift responsibility for the installation information from the human being to the product. From the IE perspective, the information has not been eliminated; it’s just changed ownership.

Principle 4: Before You Provide the Answer, You’d Better Know the Question.

IE provides a methodology for organizing wizards, coaches, cue cards, mini-tutorials, simulations, GUI objects, and other recent additions to the technical communicator’s toolbox into an information delivery architecture that satisfies the variety of ways human beings might want to interact with a product. Again, the point is to broaden the traditional view of information and communication from a limiting paradigm of static manuals and online help systems to include all of the possible ways a product and a person can send and receive information.

The New Technical Communicator

The information age requires a new brand of technical communicator—one that can distinguish between information that is relevant to his or her customers and information that is not. One that sees the poor design of a product interface as just as much a technical communication problem as a double negative in step 2 of an installation procedure. One that never loses sight of his or her true mission and will not allow the artificial boundaries of corporate politics or the limits of antiquated job descriptions get in the way of achieving that mission. One that views communication between the product and the human being—in all its forms—as the most critical problem (and opportunity) facing product development today.

Are you so entrenched in the manual business that you have forgotten your true mission? Are you passing up a chance to solve the core challenges of technical communication because you fear the solution might render your precious manuals—your business—obsolete?

Instead of worrying about finding new ways to entice people to read your manuals, why not invest your efforts in designing products that don’t need manuals...or online help systems...or computer-based training...or telephone support? That’s right—why not work yourself out of a job?

There’s a better one waiting—if you have the courage to accept it.

Resources


References

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During his twenty-five-year career in high-tech, John has worked in a variety of customer-facing positions including R&D, marketing, technical communication, experience design, performance support, and management. As a management consultant and change catalyst, John has inspired hundreds of clients in a variety of industries to design products that are both easier to use and more profitable to produce and support.

John has collaborated with forward-thinking organizations throughout the world, with clients that include Microsoft, IBM, HP, GE, UnitedHealth Group, and the Economic Development Board of Singapore. He is the author of three books and several articles on artificial intelligence, technical communication, and executive leadership. He is currently the Director of Experience Design at Edmentum, a pioneering education technology company, whose team is responsible for designing innovative, yet simple, products to improve the lives of students and educators.
Turn on a Power Tool to Create Highly Functioning Remote Teams

Pam Estes Brewer, Fellow

It is common for today’s organizations to rely heavily on the work that takes place in remote teams. However, most organizations don’t prepare these teams to produce to their potential. In fact, most organizations don’t know how to prepare these teams to realize their potential. In this tutorial session, Dr. Pam Estes Brewer instructs you in using one of the power tools that supports highly functioning remote teams. She will take you through the why’s and the how’s of using this tool so that you can increase productivity in your remote teams and give team members an increased sense of buy-in, control, and satisfaction—whether those team members reside in Denver or Beijing. Join her as she provides you with a valuable teaming tool and gives you the opportunity to practice using it during the session.

Introduction

It is common for today’s organizations to rely heavily on the work that takes place in remote teams. However, most organizations don’t know how to prepare people who work in these teams to produce to their potential.

Consider some facts and predictions that affect remote teaming:

- By the year 2050, China, India, the U.S., Indonesia, and Brazil are projected to be the world’s largest economies (Martin, 2019). The global flow of products, including communication products, will require the coordination of remote teams.
- Right now, “70% of people [or more] around the world work remotely at least once a week” (Browne, 2018).
- Statistics show a steep increase in the number of remote workers in the United States, with more than 60% of U.S. companies offering telecommuting benefits (“2017 Employee,” 2017).
- To close the “skills gap,” companies are hiring more remote workers (“17 Stats,” 2018).

The opportunities in the world of remote teaming are limitless; however, so are the challenges to working effectively in remote teams. For example, making sure that remote workers feel like a part of team, and making sure that remote teams are progressing successfully toward team goals are just two of the more obvious challenges. The opportunities and challenges of remote work are confirmed in a big way with any Google search on remote teams. You will receive hundreds of pages of indexed articles, books, programs, consulting organizations, and so on. Remote work isn’t going away, and companies that harness it well are at a competitive advantage.

Amazingly, most organizations do not train their employees to work successfully in remote teams, nor do they have policies for these employees/teams (Brewer, 2015; “17 Stats,” 2018). In Figure 1, you can see that in one study of engineering professionals, only 7% of participants claimed that their organizations successfully prepared workers to succeed in remote teams.

Metacommunication Is a Teaming Power Tool

Metacommunication refers to communicating about communication expectations.

Why is Metacommunication Important to Teams?

Metacommunication is a power tool that supports highly functioning remote teams. With metacommunication, you can increase productivity in your
remote teams and give team members an increased sense of buy-in, control, and satisfaction.

**Activity 1**

In an activity we perform in this Summit session, attendees are asked to define what they mean by certain probability and time terms such as “soon” and “asap.” Attendees learn that what each person means by these terms can vary widely, illustrating the value of metacommunication.

By understanding and expecting such differences, teams can plan their communication to accommodate the team itself, and thus, prevent most misunderstanding and error. This applies to any type of team: colocated, remote, international, etc.

**How Can You Apply Metacommunication to Support Teams?**

Team members should communicate about their communication expectations before a project begins and document their expectations in a team charter for use throughout the life of the team. They can also revisit these communication standards and make changes at any time during the life of the team as long as there is buy-in from the entire team.

**Activity 2**

At this point in the presentation, attendees are given the following scenario and list of questions to help them practice metacommunication:

With the people around you, form a team. Role play such that you are a newly formed team that is not regularly colocated. You have been tasked with establishing a procedure for onboarding new employees. You are likely to work together for up to 6 months while you draft the procedures and take them through review and testing. Use metacommunication to establish communication expectations for your team so that you can work remotely and successfully over the next six months.

Here are some questions to get you started:

- What technologies will you use to support your team?
- What will you do to prevent misunderstanding of word use?
- How does your team define common words of probability, time, and quality?
- What do you consider to be an effective turn-around time for regular correspondence? For urgent correspondence?
- How will you handle criticism?
- How will you monitor the progress of your team?
- What are your goals for the team? Professional? Personal (as applicable)?
- What else do think it is important to discuss?

**Session Takeaways**

Metacommunication is a power tool for teaming if you know how and when to use it. Creating team buy-in for communication expectations and mediations decreases miscommunication and increases productivity. In addition, effective metacommunication establishes a map for your team’s communication so that people know where they are going and can focus on the goals instead of communication problems.

**References**


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Many of us have presented our ideas and knowledge to an audience at meetings or conferences, typically with slides of some sort. Although some slides may contain simple animations or videos, most are probably static slides with text and graphics and are typically not interactive. But what if we could create an interactive presentation and turn any white board, screen, or even a blank wall into a smart board to engage the audience? We can. By combining built-in PowerPoint features, good design practices, and third-party hardware tools, we can create engaging and interactive presentations for our next meeting or conference.

The Problem

There are many bad presentations out there, and PowerPoint is often the blame. But PowerPoint is simply a tool for the presenter and should be used to enhance the presentation, not “be” the presentation. There are several reasons presentations fall short: too much text on slides, poorly planned or irrelevant graphic elements, and too many bullets. How can we use PowerPoint as a tool to make our presentations better? The key is to create a presentation that keeps the audience engaged and does not distract from the message.

PowerPoint Features

PowerPoint contains several features that can make a presentation more engaging and enable us to control the presentation instead of PowerPoint controlling (or ruining) the presentation. Inexpensive hardware tools and good design practices, combined with these features, can turn any bland presentation into a truly interactive learning experience. When used properly, the following features can help you create dynamic and interactive presentations:

- animations (graphics and text)
- animation triggers
- action buttons and hyperlinks
- hidden slides
- kiosk mode
- videos
- 3D graphics (depending on your version of PowerPoint)

Animations are great features that add visual interest to the presentation. Animation triggers allow the presenter precisely control when and which animation will occur. Action buttons and hyperlinks, which are very common in functionality, allow the presenter to jump to specific slides in the presentation without being limited to a linear flow of the information. Action buttons are pre-programmed buttons typically used for basic slide navigation. Hyperlinks are navigation links assigned to practically any graphic or text element on a slide and are not usually pre-programmed. By hiding slides and running the presentation in kiosk mode, typical navigation methods, such as the arrow keys, space bar, or presenter (clicker) device will not advance the slides. We can navigate to the hidden slides using action buttons and hyperlinks. When using action buttons and hyperlinks to navigate to other slides, consider adding additional action buttons or hyperlinks to return to the original or previous slide. Videos are a great way to enhance a presentation if the video is relevant to the topic. Videos should be short in length. Long videos are larger file size and can make the presentation “sluggish” or even freeze up. If it is necessary to use a long video on a slide, consider linking the video instead of embedding it. PowerPoint 2016 takes advantage of 3D graphics, including animated 3D graphics. This feature is relatively new to PowerPoint and allows for new ideas in creativity for presentations.

Good Design Practices

Before creating the first presentation slide, it is a good practice create the master slides. PowerPoint comes with many built-in master slide layouts, but to create an interactive presentation, we need to create custom master slides. The master slides should include any graphics or text elements that appear on more than one slide. Slide navigation buttons (such as next slide, previous slide, and home), hyperlinks, animation
triggers, and company logos are good examples of elements that could be on the master slides.

Other design concepts to establish before creating our presentation slides are the color scheme, fonts, and graphics styles. The choice of colors should be intentional and consistent throughout the entire presentation. PowerPoint has many built-in design themes, or we can create our own based on a color scheme from our company branding requirements. Use sans serif text fonts and no more than three font styles and sizes throughout the presentation.

**Inexpensive Hardware Tools**

There are many inexpensive, as well as expensive, hardware tools you can use with PowerPoint. Although the most popular is the wireless presenter device (clicker), usually equipped with a laser pointer, there are other tools available that can help make the presentation more interactive. Those tools include, but are not limited to, the eBeam edge+ and the IPEVO IS-01. Both tools can turn an ordinary presentation screen into an interactive smart board. Both have advantages and disadvantages, but the IPEVO IS-01 is the least expensive at $149.

When a PowerPoint presentation is set up with navigation buttons, hyperlinks, action buttons, hidden slides, and used with kiosk mode, we can control and interact with the presentation using the IPEVO IS-01. You will need to set up and calibrate the IPEVO IS-01 each time you use it, but it only takes a few minutes to set up and calibrate the device. The IPEVO IS-01 allows us to draw on the presentation slides, switch between the presentation slides and a white board for drawing and save all our drawings and notes made during the presentation. The saved drawings can be printed or emailed as needed.

**The Process**

Figure 1 shows the basic process for creating an interactive presentation.

Create the master slides with slide navigation buttons first. This makes building the rest of the presentation slides much quicker and easier and ensures a consistent look to the presentation. Next build the slide presentation using the master slides created in the beginning. Hide slides and set the presentation to run in kiosk mode to prevent inadvertent navigation with the space bar or arrow keys. Set up action buttons and hyperlinks as needed to create branching to specific slides. Finally, set up the interactive smart board (inexpensive hardware tool), and we now have an interactive presentation.

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**Figure 1. The Basic Process**

1. Create master slides with slide navigation buttons
2. Build slide presentation
3. Hide slides to prevent inadvertent navigation
4. Set up slide show to run in kiosk mode
5. Use action buttons and hyperlinks to create branching
6. Set up and calibrate interactive smart board tool

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Resources

The following references list several software applications, hardware tools, and support services available to help create more engaging and interactive presentations.

eLearning Brothers. https://elearningbrothers.com

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Chuck’s passion is learning and mastering new technologies, then teaching those technologies to others. He is always looking for new ways to engage learners, including eLearning, gamification, and other training methods and technologies.
Unexpected Manager: Learning to Lead When I Didn’t Expect It

Christine Christensen

Don’t think management is for you? Neither did I—until I became the manager of a group of technical writers. Whether or not you are in management or even think it could be possible, join me for a look at my journey down this unexpected career path. We’ll look at how to discover your management style and find mentors who can bring out your best. We will discuss personality types and how to use that information to better understand yourself, your motives, and your employees and explore how this can help you be a better manager. Learn how to identify your strengths and weaknesses and use that information to gain a greater understanding of your management style and improve on your weaknesses. Finally, we will discuss the harder parts of management, like change management or personnel issues, and how to approach those through the lens of your management style and personality type. All this while being authentic to yourself—the unexpected manager!

Introduction

This presentation explores the resources and tools you can use to become a better manager or prepare yourself for a move to management. You will learn how to discover your personality type, leverage your strengths, make peace with your weaknesses, and define your personal management style—all so that you can lead in a way that is most authentic to yourself.

Mentorship

A mentor is an invaluable resource as you begin your journey into management. You can gain a greater understanding of yourself and have the benefit of someone with more experience and an outside perspective to your work.

When looking for a mentor, it is important to consider someone in your organization who understands your role and the company culture, as well as someone outside your organization who can provide a fresh perspective or unique insight.

Look for a mentor who has similar interests as you, such as management, so that you can pursue those interests together. It is important to make sure you and your mentor have the same expectations for the outcome of your mentoring relationship. It is also very important that you trust your mentor so that you can be honest and open with him/her and so that you know you are getting honest and open feedback in return.

Professional Groups

Professional groups are a great resource for growing your management skills. You can connect with others in similar positions as yourself, network, ask for advice, overcome a fear, or learn something new. You might even be able to find a mentor by joining professional groups.

If there is not a professional group that suits your needs, consider starting one for others who are in the same position as yourself.

Personality Types

The Myers-Briggs Type Indicator (MBTI®) is a personality inventory created by Katharine Briggs and Isabel Briggs Myers and it is based on the research of psychologist Carl Jung. They came up with 16 possible personality types. There are two websites where you can take free personality assessments that are modeled after the MBTI: 16Personalities and HumanMetrics. The free ones are not as detailed but are a good place to start.

Keep in mind that it is not uncommon to receive different results from the two websites. If this is the
case, read through both and decide which one fits you the best.

Once you know your personality type, you can begin to apply it to situations in your life. If you are a manager, consider asking the people in your group to also take the assessment and share their results with you so that you can apply what you learn about their personality types to your interactions.

Strengths and Weaknesses

All personality types can be great managers, but you need to learn what your strengths are so that you can take advantage of them. You also need to learn what your weaknesses are so that you can be aware of them and learn to work around them. Confronting weaknesses is an uncomfortable exercise, but one that is crucial in becoming a better manager.

Management Style

Once you understand your personality type and your strengths, you can define your management style. Your management style is a list of personal characteristics and responsibilities to yourself and your coworkers and it defines who you are as a leader. Having a defined management style that incorporates your personality type and strengths is validating and empowering. When you encounter difficulties at work or situations where you are unsure how to proceed, your management style will serve as a reminder of the leader you want to be and validate your decisions.

Challenges

Being a manager is challenging. Challenges can include things like becoming a manager to your peers, change management, and personnel issues. There will also be challenges specific to your personality type and weaknesses. Learn to address challenges in a way that is true to who you are.

Conclusion

In your journey to management, it is important that you are true to yourself and that you honor your personality type and management style. Be open as you learn about yourself and be willing to confront some uncomfortable topics, such as your weaknesses. Being open and willing to learn about your innate personality traits will empower you to grow and be the best manager you can.

Resources


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Maintaining a Healthy DITA Project

Radu Coravu

There are lots of aspects necessary to have a happy and healthy DITA project. Project structure, version control, work-flow, custom validation rules, an internal style guide, tools to perform batch modifications, automation of the publishing processes, automation of the project-wide validation checks, ways to quickly ask and receive feedback from engineers, ways to request and receive feedback from end users. When implemented all these aspects lead to more consistent outputs, reduce the technical writers’ stress and lets them focus on the task at hand.

In this presentation we will go through various implementation aspects which when considered contribute to a successful Technical Documentation Project based on the DITA standard:

- Storage
- Workflow
- Collaboration
- Constraints (validation constraints, common terminology, common spell-checking dictionaries)
- Structure (defining the project structure, optimizing this structure for reuse)
- Translation
- Publishing

Collaboration

Discuss various possible interactions between collaborators and technical writers:

- Types of collaborators:
  - Colleagues
  - Subject matter experts
  - Outside collaborators (end users)
- Practices to allow collaborators to give feedback either on published output (HTML-based or PDF) or directly on DITA content

Constraints

A team of technical writers need to share various similar constraints when working on a DITA project:

- Define file naming conventions.
- Define special folders containing reusable content.
- Develop a common style guide containing a list of internal best practices.

Structure

The project structure may play a big role in the flexibility of your DITA-based solution:

- Define file naming conventions.
- Create special folders containing reusable content.
- Define project-wide strategies for linking and reusing.
Translation
When you make the decision to translate your DITA project there are lots of factors to take into account:

- Content reuse makes translation more difficult.
- Ideally the translation agency has experience and can directly translate DITA projects.
- Translation best practices influence the way in which you reuse content at paragraph level.

Publishing
Ideally a DITA project would contain the following publishing-related features:

- Publishing would be done automatically on an integration server or CMS.
- Project-wide validation would be an automated process which would be done before publishing the project.

Resources


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Author Biography
Radu Coravu started working more than 10 years ago as a software developer for Syncro Soft Ltd., the manufacturer of the popular Oxygen XML Editor. During the last years, his focus has been in the development of the visual XML Author editing environment and the specific-DITA support provided by Oxygen. He provides support for complex integrations and helps steer the product in the right direction, all this with some development on the side.
Mastering Your Website 101
Timothy Esposito, Fellow

Feeling intimidated about running your own website? Don’t know the difference between your HTTPS and your PHPs? Want to learn some tricks and tips for streamlining your web presence with social media? Then this is the session for you. We’ll go over the basics of creating and running a website using WordPress and cPanel, along with some additional tools designed to make your web mastering easier for you.

Within the past two decades the internet has shifted from a technological interest to an everyday necessity. Gone are the days where people created websites on GeoCities just to fill screens with animated GIFs of dancing hamsters. Now that the internet has matured a little, people are learning how to create sophisticated websites without writing the pages manually using Notepad and HTML tags. While knowing some HTML and CSS basics can always be helpful, those skills are no longer needed to create a website from scratch.

Today, a variety of companies offer website management software. They make it easy to create visually appealing websites with minimal web-building skills. WordPress is one of the most powerful, versatile platforms for website creation. With WordPress, you can heavily customize your website construction process, or keep it simple, according to your needs. Before using WordPress, there are a few steps to complete first. After you create a domain and find a host for your content, you can install WordPress and begin designing your site. The hosting company may provide additional tools that will further help you in maintaining your website.

Establishing a Domain

Before you start creating your website content, you should register the name of the website. Formalizing a name, such as www.stc.org, is known as web domain registration. Many different companies offer domain registration; GoDaddy.com is one of the most recognized companies based on their Superbowl ads. On such a site, you pay to register a specific URL and make it your own. Some domain registration sites also offer domain hosting for a separate cost, but you are not obligated to use your domain registration site as your hosting company. Shop around and find the best deal that fits your future website’s needs as well as your annual budget.

After you register your domain URL, you need to tell the domain where your content will be stored. As noted above, this may be at the same company as where you registered, but it often is not. You configure where your domain will look for your website content by defining name servers. The name servers tell your domain registration service where your hosting company is located on the internet (See Figure 1). When you set the name servers for your hosting company and you go to your domain’s URL, it directs all URL hits to go to the name servers indicated, and to look for a website there.

Hosting the Domain’s Content

Web hosts are where your content and files are stored. They control what servers hold your information and provide a toolkit to help run your website. Often, this toolkit is a package of utilities called cPanel, but each hosting company may offer more tools. You maintain complete control of your website and content, and these are the servers on which that information is stored.

Setting Up WordPress

Once you’ve registered a domain, picked a hosting company, and pointed the domain to that host, you’re ready to start with WordPress.

WordPress comes in two styles:

- www.wordpress.com for their free blogging site.
- www.wordpress.org for the software installed on your hosting site.
Every domain requires a set of nameservers to allow visitors on the Internet to reach it. Normally, you should not need to change your nameservers from the defaults. If you do need to change your nameservers, you may do so below.

Update Name Servers

<table>
<thead>
<tr>
<th>Use default name servers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nameserver 1</td>
</tr>
<tr>
<td>ns1.dotler.com</td>
</tr>
<tr>
<td>Nameserver 2</td>
</tr>
<tr>
<td>ns1.dotler.com</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use different name servers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nameserver 1</td>
</tr>
<tr>
<td>ns1.supercp.com</td>
</tr>
<tr>
<td>Nameserver 2</td>
</tr>
<tr>
<td>ns2.supercp.com</td>
</tr>
<tr>
<td>Nameserver 3</td>
</tr>
<tr>
<td>ns3.supercp.com</td>
</tr>
<tr>
<td>Nameserver 4</td>
</tr>
<tr>
<td>ns4.supercp.com</td>
</tr>
</tbody>
</table>

Add More

Figure 1: Defining name servers for your domain.

The hosted form from www.wordpress.org is more powerful. We will assume you are using that for the purposes of this article.

While you might create basic websites using HTML, WordPress uses a dynamic database, called PHP (a scripting language), to generate site content as needed. When opening a website written in PHP, the script is processed with data being pulled from a MySQL database, and then the page is rendered. This is different from an HTML-only website, where the pages are each stored as separate HTML files.

Figure 2: XKCD uses meta-humor to explain meta-humor. https://xkcd.com/917/

The name is self-referential, essentially "(Personal Home Page) Hypertext Processor". You probably will not be editing any PHP, but you should be aware that the pages are not stored as HTML on your webserver. Therefore do not expect to edit HTML web pages with Notepad.

If your hosting company does not set it up for you, you can install WordPress from the cPanel toolbox (more on that later). Alternatively, you can download installation files from www.wordpress.org, but it is easier to use cPanel’s Softaculous Apps Installer to install it.

Applying the Visual Basics of WordPress

Now you’re ready to create your content using WordPress. To sign into the dashboard of your website, go to your website, with /wp-login.php appended to the URL. For example, https://www.example.com/wp-login.php. Once you sign in, you’ll be taken to the Dashboard, which is the heart of the WordPress system. A menu appears on the left side of the Dashboard. Let’s go through each item in this menu.

Posts

“Posts” are the lifeblood of a WordPress site. They are timely updates pushed to feeds, such as the homepage, of your site. Examples include blog posts, event announcements, and newsletter articles.

Use “Categories” to sort and control in what feed the posts appear. Feeds are controlled through menus. You can set the main page to automatically be a feed, as a true blog would be.

Consider using “Tags” to further detail posts beyond the category. If you click on a tag in a post, all posts with that tag appear. For example, your category is Events, and each event post is tagged with a type of event: networking, educational, workshop.

When you edit a post using the WYSIWYG editor, you can see the published state, control the visibility, and see previous revisions. You can select Categories and add tags.

Pages

Unlike Posts, Pages are for static content, and define your website’s structure. Pages can have a hierarchy reflected by indenting the title.

Much like a post, you can control the publishing information. However, you can control the page hierarchy instead of using categories and tags. A well-structured website is a well-organized website, so take some time to create a plan for the site’s hierarchy. Your website visitors will thank you.

On both pages and posts, you can switch from WYSIWYG to a basic HTML editor by clicking the
“Text” tab. Some sites, like Google Analytics, may ask you to paste code. Use the HTML editor to clean up formatting if the WYSIWYG editor is being clunky with styles, especially if something was copied from another source and brought in to style definitions for each tag.

**Media**

The Media library lets you organize any attachments that appear on the website, whether they are images or PDFs. You can sort by media type and can even see what media is not being referenced by the site.

Groom your library so you do not have duplicate images or files. By clicking on each piece of media, you can see where they are referenced. You can also sort by unreferenced media to see if you can remove it from your site.

When you click on a media item, you will see the URL to where the server has stored the file. Additionally, you can give it a useful title, a detailed caption, a description, and apply an Alt text caption for screen readers.

- The caption automatically appears when you insert the image into a page or post.
- The Alt text is what is shown if the photo does not display, or the page is accessed by a screen reader.
- The description helps other website users determine when to use the photo.

On a post or page, you can click the “Insert Media” button to see a list of available media items for use. Each selected item’s details appear on the margin where you can add customizations, if needed. Additionally, you can control what happens when someone clicks on the media. It may just open the image in greater detail, take them to a page for that image, go to a custom URL, or do nothing.

**Appearance**

Appearance lets you customize your website’s look and feel.

- **Themes**: Manages downloadable packages that ensure a consistent look and feel for the site.
- **Customize**: Edits custom settings to your theme and site.
- **Widgets**: Controls the sidebar items that appear on your site. For example: search bar, social media icons, recent post lists, RSS feeds, custom HTML, and categories.
- **Menus**: Lets you structure your menu system.
- **Header**: Allows you to edit the header, which is the top section of your site, typically the title for the page.

**Appearance: Themes**

“Themes” control your website’s look and feel. Are there two columns or three? A large image at the top, or just text? What color and font scheme do you want? Some themes are meta themes which create a framework for subthemes that are designed to work similarly. Genesis is a meta theme example.

WordPress has free themes named after each year, such as Twenty Seventeen. Themes are sometimes updated, and you should update them and stay current. This usually does not cause any issues and can prevent security breaches.

**Appearance: Customize**

You can customize your site and theme. The customization level varies by theme, but they generally have these options. The site identity lets you control the website title and set a custom icon. The Homeage setting lets you set a static page as the homepage, or a feed of posts.

**Appearance: Widgets**

“Widgets” are defined by WordPress and by your theme. Widgets vary, but common ones are Custom HTML, Images, Categories, and Text. You customize them and drag them to various sidebars and footers, where they will be displayed on the website. The theme controls the valid locations on your website to place widgets. If you drag the widgets to a different order on the editor, they will automatically change how they are displayed on the live page.

**Appearance: Menus**

“Menus” are how you group your posts and pages on the site so visitors can easily find content. On a menu, you can link to a page, a post, a feed of posts designated by a category, or a custom URL to another site.
In the editor, select the menu items from the groups on the left and add them to the menu. Once in the menu, drag the object up, down, left, or right. Indenting it makes it a submenu item. Save the menu to make it live on your site.

Feeds
Use categories to group posts into feeds. Your home page can be a series of all your posts, so it is always the latest news, much like a true blog. Sticky posts are locked at the top of a feed.

- **Pro Tip**: Create menu items that are feeds instead of pages, so you do not need to maintain those pages. For example, create a menu for events, and make it a feed showing only your posts with the category “events”.
- **Pro Tip**: Use a sticky post to create static text on your homepage, with a feed of posts appearing below it.

Plugins
“Plugins” are little pieces of specialized code you can install into WordPress. Examples are:

- One that creates a button letting you duplicate an existing post
- An image optimizer
- A cache to speed up your website
- A security plugin that alerts you about updates and possible attacks on your site

Be careful with the plugins you select. If you find you are not using a plugin, remove it. Keep your plugins updated to help prevent security breaches.

Users
“Users” are a list of people who can access your website’s control panel section. WordPress comes with several default user roles. Each has different powers.

- **Administrator**: someone who has access to “all” the administration features for a single site
- **Editor**: someone who can publish and manage posts including the posts from other users
- **Author**: someone who can publish and manage their own posts
- **Contributor**: someone who can write and manage their own posts but cannot publish them
- **Subscriber**: someone who can only manage their profile

When defining a user, you must create an unchangeable user name. For the Administrator, do not choose “Admin” as that will be subject to hack attempts. Create a Nickname for yourself and use it to control how your posts are displayed on the site. It can be your real name or whatever you like. Do not make your Nickname the same as your Username, as that also gives hackers an advantage.

Settings
“Settings” contain low-level configurations. Most do not need to be set; you can accept the defaults. Do review the General settings, like Media setting so your media is NOT stored in folders based on the year/month you uploaded them.

Managing Website Background Details
While WordPress is a handy front-end to your website creation, you also have access to powerful behind-the-scenes tools. cPanel is one of the most common toolsets that hosting companies provide. Your hosting company will provide you with a URL and logon credentials for your site’s cPanel. cPanel is very powerful and should not be taken lightly.

We’ll go through some of the more popular cPanel features.

Email Forwarding
A popular feature is to create an email forwarder. A forwarder lets you create a fake email using your domain’s address, such as @cac-stc.org. Whenever a message is sent to that address, it is forwarded to a real monitored email account. That way you can put these accounts as links on your website, and if the person receiving the emails stops working with you, you just change the forwarder to point to the new person’s address. To the public, there is no change in address. Additionally, you can assign multiple addresses by duplicating the forwarders. This is handy if you want to be copied on all incoming correspondence to another public email address. It also saves you from making personal
email addresses public on a website, potentially reducing spam to those accounts.

**Backup**

You should have a regular backup schedule established for your webmaster, such as the first of every month. You can do a Full Backup, which is designed for moving your site to another server. I recommend downloading backups of your home directory, your MySQL Database, and your email forwarders. Those offer easy-to-restore options in case something fails on your site.

**Conclusion**

Website creation and management is not as difficult as in the past. By using WordPress, you can streamline the work it takes to run a successful site. The opportunities to customize your WordPress installation are nearly endless, but take care to select only useful Plugins that are actively maintained. Security plugins have become a necessity for keeping your site safe from hackers. Here are some quick tips for every burgeoning webmaster:

- Pick a theme that works for your site.
- Update the theme regularly.
- Update WordPress regularly.
- Update and review plugins regularly.
- Backup the website at least monthly.
- Manage user access.
- Maintain email forwarders in cPanel.
- Update the copyright date for your site.
- Maintain domain registration.
- Groom your media library so duplicate files are removed.
- Ensure post categories are clearly used so feeds work.

**Resources**


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Intro to S1000D™: Authoring to Support the Civil Aviation and Defense Industries

André Evans

Companies are always interested in reusing information to make documentation more affordable. The following presentation introduces you to S1000D—an international specification that uses XML to author, manage, and deliver content for the defense industry in support of the Digital Twin.

Introduction

Since its inception, S1000D™ has established itself as a revolutionary way to develop technical documentation in the defense, civil aviation, construction, and shipping industries. Along with multinational industry representatives and customers, the following organizations collaborated to develop the specification:

- Aerospace and Defence Industries Association of Europe (ASD)
- Aerospace Industries Association of America (AIA)
- Air Transport Association (ATA)

Simply defined, S1000D™ is a specification that uses Extensible Markup Language (XML), in a hierarchical structure, to author technical manuals using individual data elements known as Data Modules (DMs). Unlike Darwin Information Typing Architecture (DITA), the concept parses data into reusable sections. Unlike DITA, the structure is more complex and scalable, associating logistical metadata to a mechanical assembly (or part) to aid in both the authoring of the technical manual and sustainment of the mechanical assembly throughout its logistic life cycle.

Document Types

The S1000D™ specification is helpful as it adapts to authoring documents for different audiences within the defense industry and supports multiple products such as air vehicles, surface vehicles, tactical missiles, sea vehicles, and the support and training equipment used in support of these products.

Additionally, a variety of document types are developed in support of these products, most commonly being operation and maintenance manuals, which sometimes include an Illustrated Parts Breakdown (IPB). Other types of information sets, or documents, developed using the specification include:

- Theory of Operation
- Wiring Data/Fault Isolation
- Maintenance Planning
- Loading Information
- Maintenance Checklists
- Storage

Data Module (DM) Types

There are several types of data modules used to create specific types of technical manuals. To publish a specific document type, the S1000D™ specification enables authors to arrange a variety of DMs that are either required by the specification or identified in the technical manual contract requirements. Some primary DMs include:

- Operation
- Examinations, tests, and checks
- Disconnect, remove, and disassemble procedures
- Package, handling, storage, and transportation

Data Element Types

Data elements used to create a DM vary, depending on the type of DM authored. Data elements are XML tags used within DMs and are used to structure the information required for a specific DM.
Examples of data elements include:
- `<modelVersion>`
- `<sourceMaintRecoverability>`
- `<usableOnCodeAssy>`
- `<electricalEquipConnection>`

**Publishing Process**

DMs are typically authored and stored in a Common Source Database (CSDB). DMs are self-contained units of data and therefore can be reused to develop different document types. To publish, DMs are arranged in accordance with the specification to publish an S1000D™ document. This arrangement is known as a publication module. Publication modules are used to generate an Interactive Electronic Technical Publication (IETP) or a paper publication (.PDF).

**S-Series Specification**

S1000D™ is one of several specifications contained within the S-Series suite of specifications used to develop data for Integrated Logistic Support (ILS). In addition to technical publications, the S-Series specifications provide guidance for other ILS disciplines such as training, material management, preventive maintenance, and Logistics Support Analysis (LSA). SX000i is an international ILS guide that provides guidance to ensure data is standardized throughout the logistics process. It serves much like a roadmap, identifying key data elements shared across most ILS disciplines. This standardization significantly increases the opportunity to exchange common data from support-centered organizations to other organizations, such as engineering.

The S-Series specifications provide a standardized approach to create common data exchange files. The data used to create these files serve as the backbone for a variety of ILS work products. Increased attention and desire to support the digital twin in some industries has pushed the S-Series specification working groups to baseline these specifications to meet both customer and industry demands. Using S-Series specifications as a guide and participating in the development and/or stewardship, provides technical communicators an opportunity to pioneer a method that establishes a standard link between the physical model and its corresponding virtual twin.

**Note:** S1000D is a trademark owned by the AeroSpace and Defence Industries Association of Europe ASD.

**Resources**


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Lightweight DITA (LwDITA) is a simplified version of the Darwin Information Typing Architecture (DITA) standard. LwDITA allows authors to create content in XML, HTML5, and Markdown, and it enables production, collaboration, and publication across those markup languages. Traditional approaches for teaching the DITA standard to technical communicators focus on adopting “best practices.” LwDITA has a diverse universe of potential audiences. Those audiences include current DITA users, bloggers and marketing content specialists, software developers, subject matter experts, and casual contributors to content repositories. Therefore, focusing on usage-based workflows could be a better approach for LwDITA adoption than the traditional best practices associated with the DITA standard.

For example, in the same company a technical writer can create procedural topics in XDITA (based on XML) while a marketing professional writes product descriptions in HDITA (based on HTML5), and an engineer uses MDITA (based on Markdown) to create a reference for a specific command from the research and development laboratory. All their topics are LwDITA topics and can be processed with DITA content and take advantage of the standard's reuse, filtering, and single-sourcing capabilities.

Teaching LwDITA Without Best Practices

Swarts defines a best practice, in the context of technical content, as a form of documentation “where the aim is to instruct users about the customary or proper way to complete a task and how to make the software behave as designed” (2018, p.102). Since its publication seven years ago, *DITA Best Practices: A Roadmap for Writing, Editing, and Architecting in DITA* (Bellamy et al., 2012) has become a popular resource for technical communicators new to the DITA standard. From the book’s introduction, Bellamy et al. promise to address “What best practices have many of us in the technical writing community established?” *

*DITA Best Practices* undoubtedly delivers what its title announces, and I have used it successfully for many years to teach introductory DITA to college...
students at Virginia Tech and industry trainees through the Virginia Tech office of Continuing and Professional Education. However, the best practices model has not been that effective when teaching introductory LwDITA.

LwDITA covers multiple authoring formats and usage scenarios that go beyond the single responsibilities of a technical writer. Additionally, as a standard that is still under development, there is no “customary or proper way” to create content in LwDITA.

LwDITA Authoring Workflows
According to Lockridge and Van Ittersum, a workflow is “a set of repeatable steps enacted with particular tools for accomplishing recurring tasks.” In the particular case of writing workflows, Lockridge and Van Ittersum focus on the description of a process for completing a literate activity and the tools used in that process. Following their definition, the concept of a workflow can provide an appropriate perspective for teaching LwDITA to content authors from diverse backgrounds and levels of expertise with technical communication.

Instead of promoting best practices from experts in one discipline, LwDITA authoring workflows are based on scenarios that document the many potential uses of the proposed standard. These scenarios focus on repeatable steps that depend on contextual markup languages and authoring formats, deliverable expectations, and tools associated with different groups of LwDITA users.

Some of these introductory LwDITA workflows are based on examples from the book Creating Intelligent Content with Lightweight DITA (Evia, 2018) and document the versatility of the proposed LwDITA standard for structuring and publishing information.

References


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Making Agile Work for YOU
John Garison, Associate Fellow

Agile is a development-centric methodology increasingly used in software companies developed by programmers to give them control over their working environment. Instead of project leaders and arbitrary delivery dates, Agile allows the teams that do the actual work to control and determine how and when that work is done. A smoothly running Agile development environment provides predictability based on proven metrics, allowing companies to accurately set delivery expectations and timing. Since Agile empowers all team members, it also empowers technical communicators by ensuring they can participate fully in all aspects of product development. Understanding how Agile works and learning how to leverage Agile practices and components allows technical communicators to become more efficient and more integrated with their teams, and to better control their work experience.

What Is Agile? And What’s So Special About It?
Agile was developed in February 2001 at Snowbird, UT by 17 programmers who wanted to find a better way to develop software. The result was the Agile Manifesto (http://agilemanifesto.org) which includes these four principles:

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

The net result is a team-centric series of structured activities where the product—not just the code—is iteratively designed, developed, tested, and integrated. The team—which includes techcomm—determines what they can and will do:

- Everything is identified, assessed, and discussed by the team.
- The team decides its own metrics.
- The team determines its own practices.
- The team decides what they will deliver, and when.

Since everything is so dependent on the team’s decisions, no two Agile teams do things exactly the same way—even those within the same company.

One big Agile myth needs to be dispelled: “Agile means we don’t need documentation.” Agile does say that we don’t need complete design specifications for everything we’re going to develop in a release before we start coding, but it does not say that we don’t need user documentation.

Milestones, Concepts, and Meetings
Agile provides a framework for defining and building software:

- **Releases**—A release is a collection of epics and stories that are delivered together at the same time. They may or may not be related to each other. How often the team releases is immaterial. Defining what will be released is critical.
- **Epics**—An epic is a complete implementation of a feature or enhancement. Occasionally it may be a component of a mega-epic. Epics are almost always completed in a single release.
- **Sprints**—A sprint is a fixed amount of time—usually two or three weeks—where the team focuses on developing, implementing, and if possible testing the stories they commit to deliver during that time.
• **Stories**—A story is either a component of an epic, or a single feature or enhancement that can be completed in a single sprint.

• **Tasks**—A task is a portion of a story that is assigned to a specific person.

Agile, being team-based, requires a lot of communication, much of which happens in meetings. This can result in a lot of meetings, especially for people who are on multiple teams.

The most important concept new in Agile is the metric affectionately abbreviated as “fib.” Each story is assigned a number in the Fibonacci series: 1, 2, 3, 5, 8, 13, or 21. This single all-encompassing team-specific figure represents not just the level of effort a story will take, but it also factors in risk, complexity, connections to other applications, and so forth. Over time, teams discover the number of fibs that can be accomplished during a sprint, and this becomes the team’s velocity. Having a proven velocity allows teams to accurately and reliably predict how much can be accomplished in a sprint or release.

As technical communicators, we can use these meetings to our best advantage by actively participating in the Agile process. As members of the development team, we should speak up and offer our expertise where it can be most useful—such as screen text, error messages, terminology, and workflows. Agile meetings are our opportunity to advocate for end users throughout the development process and to use our skills and deliverables to make a difference. They also afford us an opportunity to develop closer relationships with other team members.

• **Backlog grooming**, scheduled before releases and sprints, lets the team determine what they commit to deliver during that time. The team discusses content and scope, rationale and importance. They determine priorities. They discuss why and how they will resolve issues. And they often do preliminary “t-shirt” sizings: S, M, L, XL, XXL. The product team usually leads this meeting.

• **Sprint Planning** starts every sprint and lets the team determine what stories they will commit to deliver during that sprint. They discuss details and risks. They assign fibs to each story. They identify and assign story tasks as needed. The team agrees to deliver what they promise.

• **Scrums** happen daily and are often 15-minute stand-up status meetings where team members discuss what they did yesterday, will do today, and point out any problems that they have or anticipate.

• **Reveals** happen at the end of each sprint and the team members how what they have done during the sprint. They should be recorded for later off-line review. They are great for seeing components work, to take screen shots, and to ask detailed questions.

• **Retrospectives** happen at the end of a release and provide the opportunity for a post mortem review. The team assesses how the release went by examining three criteria:

  - What to **start** doing to make improvements
  - What to **stop** doing to reduce/eliminate problems
  - What to **continue** doing that is working well

**Make Agile Agile**

Agile is, itself, agile. If things aren’t working for your teams, change them so that they do! That’s what retros are for. My company has identified and implemented several home-grown changes to make our lives easier—some of them at the suggestions of technical communicators:

• Phase Zero—UX/UI review and design pages and workflows

• Post-scrum—Discussions as needed following daily scrum

• Mini-groom—Short grooming discussion for ‘hot’ issues

• Melting Pot—Generic story container for small (< 2 hours) tasks

• New Tracking/Planning Fields—including “Requires end-user documentation”

• Story Types—Feature, Enhancement, or Technical

• SuperHero—a developer assigned to handle all customer issues during a sprint

• Spikes—Tasks that require research and investigation before grooming

We have also begun enhancing the information we record in our Agile management tool (we use JIRA) so that anyone who can see the project can understand what it’s about:

• Elevator pitch (Epics): 30-second description of a new feature that explains both the problem and the solution
Business value (Stories): What’s in it for the users—internal and external

Descriptions (Stories, tasks, bugs): All the detail necessary to understand the problem and the solution. Point out possible risk areas. Include steps to replicate bugs and how they were fixed. Indicate the desired result. List non-goals, too

Open questions: List unknowns and undecideds

Documenting in an Agile Environment

It’s not THAT different than any other software documentation. Agile calls for less design documentation, not less user documentation.

Documentation is as much a part of the product as the code. You are a team member like everyone else.

How you document isn’t much different than usual: Document as close to the time it’s being developed as makes sense, but it’s often more efficient to wait until things are all sorted out. When mapping unknown territory, stay on dry ground and avoid quicksand that will suck you in to a bottomless pit.

It is exceedingly rare to need ‘ready to ship’ documentation at the end of every sprint

There is an Agile documentation standard: ISO/IEC/IEEE 26515:2011

A Little Truthiness

Agile works best if it’s supported from the very top of the company to the bottom. The more senior management support there is, the more successful you’ll be. That said, not every agile implementation is successful.

Agile CAN work for you—sometimes it takes time and patience. It’s kaizen engineering … gradual improvement. The more you participate, speak up, and voice your concerns, the more likely you are to make a difference. Just like STC—the more you contribute, the more you get in return.

The path is not always smooth, though. It’s not easy to get developers to listen to you, but if you point things out and explain how and why your ideas are important, you begin to earn the respect of your teammates. They will eventually start coming to you when they see something you can help with. You may have too many meetings, so you’ll be faced with determining how to spend your time. Try to make time for planning and grooming meetings, as well as reveals and retros—they happen less frequently, and they have more important content.

What Can I Do?

Do your job the best you possibly can. In addition, the following are also helpful:

- Participate actively and advocate for the end user.
- Volunteer to work on things like testing and reviewing external communications.
- Offer to liaison with other groups such as customer support or professional services who work directly with users to get their insights and input.
- Build alliances with other teammates, especially the quality assurance folks (they can make your life a lot easier by letting you use some of their testing accounts).

So … How Do You Know When You’re Doing It Right?

Your team is truly agile when things are continually getting better.

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John is an STC Associate Fellow and taught technical communications for 15 years at Harvard University and the University of Massachusetts, Lowell. Despite living on a dead-end dirt road in rural Vermont, his gigabit fiber optic internet lets him keep up with the real world and telecommute to New York City.
Digital content has created opportunities to earn additional income through various methods, including courses, podcasts, and more. If you are considering developing residual income streams, it is important to think about what experience, skills, and delivery methods best suit your goals and your audience’s needs.

The relationships between employers and employees continue to shift and layoffs can happen with little notice due to mergers, acquisitions, and cash shortages. The gig economy continues to ramp up as services are provided directly to consumers by contractors, reducing the risk for small businesses. Tenure, experience, and flexibility do not guarantee job security.

It is easy to depend on a single stream of income, but it can make it difficult to build a financial safety net and handle regular expenses in an emergency or life transition. If you work as a contractor, the ebb and flow of work is often unpredictable and can make it difficult to make long-term financial plans.

By diversifying your personal income, you can increase your stability and increase your spending power. As a technical communicator, you are already in a unique position to build these income streams.

Assessing Your Technical Communication Skills

If you decide to pursue one of these residual income streams, it is important to take into consideration what skills you bring to the table. As a technical communicator, you already have a set of core competencies, which includes project planning, audience analysis, and content development. Odds are that you excel in a few of those core competencies while you might need to build skills or outsource certain tasks to a virtual assistant or niche company.

For example, I enjoy developing course content and assessing the best tools for my projects. However, I lack skills in creating sales funnels and ensuring I promote consistently on my social media platforms.

If you are going to approach developing a residual income stream alone, it is important to assess what potential roadblocks you might hit. Have a plan for learning new skills, such as LinkedIn Learning or Codecademy. Solicit help from mentor to bounce ideas around. Consider trading editing services with a peer to get a fresh set of eyes on your projects.

Selecting a Topic and Delivery Method

Once you’ve assessed your technical communication skills, you want to think about the domains in which you might qualify as an expert. These can be your favorite hobbies, areas of study, work experience, or other personal interests. Consider what unique perspective you can bring to that topic that others aren’t sharing with the world. Who could be exclusive guests that fit within the theme of a podcast? What can your students expect to be able to accomplish that they couldn’t accomplish before completing your course?
Once you determined your niche, consider your audience. What type of experience and perspective are they bringing with them to your content? Where are they most likely to access your content? Would they read it, watch it, or listen to it? Does your audience expect interaction with you or others in your community?

As you determine your topic and audience, you can think about the delivery of the content and how to organize it. At this point, you can follow a typical content development cycle to include drafting, organizing, editing, and publishing.

With your final content in place or an editorial calendar scheduled, you can begin building the community, positioning yourself as an expert, and developing a sales funnel. As you develop marketing content for your course, podcast, or blog, ensure you are communicating clearly and in a way that reflects your branded content.

Ensuring Your Success

As you develop your content, it is important to understand yourself and how you operate. Consider whether you are internally or externally motivated. I am externally motivated, so I develop partnerships with other professionals who have complementary skill sets.

Be aware of the continuous workload that comes with residual income streams. Although most of the work will be required as you kick off your project, some maintenance, promotion, and networking will be required to keep sales up.

Finally, once you’ve developed your content, make sure you are open to feedback and continually improve your content and project. This action will ensure that you keep a steady stream of customers and maintain a positive reputation in the communities you establish.

Resources

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Jamie Gillenwater is a Senior Technical Writer at DataStax, Inc. She is also the cofound of www.CPTCtraining.com. She brings a varied technical communication skill set to each project, which includes graphic design, editing, and leadership.

Jamie’s top strengths including working strategically, maximizing results, and including others in projects. She is an INFJ, but as a remote employee seems like a social butterfly at conferences.

Jamie lives in Greenville, SC, where she enjoys spending time outdoors with her husband, Mat; daughter, Maya; and their dog, Charlie.
Architecting Your Team’s Career Path

Megan E. Jensen and Brian Fish

The workforce frequently changes based on industry needs and the evolving expectations of emerging employees. Millennials are driving a shift in workforce expectations for more recognition, quicker promotions, and more challenging tasks. Below are tips for gaining buy-in from both leadership and team members alike as they experience shifts in professional growth opportunities. This also includes an example of how one organization revamped its technical writer role to better align with the changing workforce.

Overview

Defining a career path for your team is difficult. Professional goals can vary from individual to individual, with each person seeking different levels of engagement and visibility. While some thrive on in-depth discussions around content strategy and design, others might prefer the autonomy of focused writing. In addition, the makeup of the American labor workforce continues to adjust for the expectations of the next generation that is steadily taking over the workforce population from Generation X and the Baby Boomers: The Millennials, those born between 1980 and 1996. Millennials are projected to make up nearly 50 percent of the American labor workforce by 2020. According to Gallup studies, Millennials in the workforce are not as motivated by money as they are by work that has purpose, allows them to develop their skills, and recognizes their strengths.

Whether you are defining a career path for a new organization or updating your team’s current options, you can use the following steps to help guide you through the process:

1. Understand your organization’s culture.
2. Define the roles on your team.
3. Review industry standards.
4. Gain buy-in from your team and leadership.
5. Align team members with the roles that best fit their strengths.

Understand Your Organization’s Culture

Your organization’s culture will set the tone before you even begin contemplating career trajectory for your team. Whether your organization’s culture identifies as more modern or traditional will influence how you define and name the roles on your team. A creative organization will be more receptive to unique job title names that fall outside of current industry standards, while a more conventional organization will lean toward traditional industry role names (such as technical writer).

If you are unsure of your organization’s culture, look at other teams at your company. How are they structured? Are their job titles aligned with industry standards, such as engineer, software architect, and so on? Engage with other managers and your Human Resources (HR) partner to gather feedback on how they landed on their teams’ job titles and reporting structures.

Define the Roles on Your Team

The most critical part of creating a career path for your team is to determine which roles are necessary to ensure that deliverables are completed on time and with high quality. Remember to think future state and not current state: what is the ideal workflow for these roles and the functions they should perform? Likewise, ensure that you are creating roles that serve a purpose, not just an opportunity for a promotion. Once again, Millennials want positions that provide value and grow their skill sets.

1. Identify all the tasks that your team performs. Creating a comprehensive list of your team’s activities (Table 1) will ensure that you create roles that accurately reflect the work they are expected to complete. While defining the tasks your team completes, use this as an opportunity to propose any changes (such as starting or stopping work on certain tasks). Depending on how
much visibility you have to your team’s day-to-day tasks, this may require input from your team members. As you request feedback on their tasks, be transparent that you are using this information to help create a well-defined career path for them so they might have longevity in their roles at your organization.

2. **Categorize the tasks by type.** Categorizing the tasks will help you determine the different roles you might need for your team and ensure that the tasks are aligned with the right roles in the future. A common categorization of task types includes Functional, Process, and Quality. You might find that some of the task types overlap; for example, one task might be considered both a quality and process type of task. This is to be expected and can be addressed as you start to align the tasks with specific roles.

3. **Categorize the tasks and functions by which roles should perform them.** Once you have identified the tasks and categorized them, determine whether the same role should perform the tasks. For now, you can classify them as Job 1, Job 2, and so on. As you start thinking through what the scope for each job, keep in mind what capacity looks like if one role performs all tasks.

4. **Categorize the tasks by the level of experience required.** The core responsibilities of each job generally will be tasks that both entry-level and experienced employees perform. However, certain tasks or assignments may require more in-depth knowledge of processes, tools, or standards or greater competency with other skills like consulting, mentoring, or design. You can then use these experience-based tiers to define additional job levels, such as Senior and Lead positions, offering your team additional promotion opportunities.

**Review Industry Standards**

Once you identify the different jobs needed for your team, you will need to create titles for each job. This is where understanding your organization’s culture will play a key factor: selecting job titles that align with the company’s culture and how you want to portray your career growth to employees moving forward.

The Society for Technical Communication’s Salary Database and Job Bank are two leading resources that you can use for selecting job titles on your team. STC’s database is comprehensive and offers a current and unbiased representation of jobs in the technical communication industry. Other professional and social media resources, such as LinkedIn, Glass Door, and recruiting websites, provide ideas as well. You can use LinkedIn to network with other technical communication managers from similar companies to get more information around the roles in their organizations.

<table>
<thead>
<tr>
<th>Task</th>
<th>Type</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author content</td>
<td>Functional</td>
<td>Job 1</td>
</tr>
<tr>
<td>Work closely with engineering</td>
<td>Functional</td>
<td>Job 1, Job 2</td>
</tr>
<tr>
<td>Work closely with consulting</td>
<td>Functional</td>
<td>Job 2</td>
</tr>
<tr>
<td>Define content strategy</td>
<td>Process</td>
<td>Job 2</td>
</tr>
<tr>
<td>Maintain templates</td>
<td>Process</td>
<td>Job 2, Job 3</td>
</tr>
<tr>
<td>Review for style</td>
<td>Quality</td>
<td>Job 3</td>
</tr>
<tr>
<td>Review for grammar</td>
<td>Quality</td>
<td>Job 3</td>
</tr>
</tbody>
</table>

Table 1. An example list of tasks performed by a team. The list should include all the tasks that you expect your team members to perform.
As you create your new positions, keep in mind that industry-recognized roles like technical writer are easier to align with salary and promotion recommendations. When you start deviating from industry standards to create your own job titles, it can become more difficult to find the corresponding job. This can cause challenges if you want to make the business case for your organization to adjust salary ranges in the future. Industry-recognized job titles also make it easier for employees to describe their jobs to others or list them on their resumes.

Table 2 shows the final jobs for Cerner’s technical communication roles. Solution Documentation leadership looked to industry standards and team responsibilities to design jobs that meet the needs of its associates and align with the organization’s culture. Each job profile contains five to seven additional expectations that differentiate one role from the other.

Gain Buy-In from Your Team and Leadership

The key to implementing the new career path (Figure 1) for your team is not only to have buy-in from your leadership but also from your team as well. After all, it is your team that will be the most invested in the future state of the career path.

Transparency goes a long way with employees. Share with them your proposed job title changes and ask for their feedback. Do the jobs and titles align with their expectations? While you cannot accommodate every career aspiration, gathering their feedback reinforces that they are valued members of your team. In most scenarios, using traditional industry job titles and career paths (such as technical writer to senior technical writer) will be met positively. For job titles that are more creative, anticipate more discussion and perhaps hesitancy.

Buy-in from your team on the new career path also helps sell proposed changes to your leadership. When you present the proposed changes to your leadership, focus on the benefits of having a revamped career path for your team:

- Clearly defined roles and work expectations can help associates understand their purpose while also understanding how to meet work expectations.
- A career path with longevity can increase employee retention.
- Alignment with technical communication industry standards can make it easier to align salary ranges with roles and relevant work experience.

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Job Description</th>
<th>Experience Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Writer</td>
<td>Authors and edits various forms of technical documentation for a variety of audiences.</td>
<td>Entry level (minimal to no experience)</td>
</tr>
<tr>
<td>Documentation Architect</td>
<td>Develops the vision for technical documentation and advises others on the development of documentation strategy.</td>
<td>Prior technical writing experience</td>
</tr>
<tr>
<td>Documentation Quality Analyst</td>
<td>Performs quality reviews of technical documentation and develops quality standards.</td>
<td>Prior technical writing experience</td>
</tr>
</tbody>
</table>

Table 2. The final jobs for Cerner’s technical communication roles.
Align Team Members with the Roles That Best Fit Their Strengths

After the roles on your team are defined and approved for application, aligning your employees with the roles that best fit their strengths is central to the success of your team and employee job satisfaction. Individuals are more likely to find satisfaction in jobs that allow them to be positively challenged and in which they feel like they are doing well. For example, those Cerner employees who are detail oriented and considered experts at writing, grammar, and style are aligned with the documentation quality analyst path, while those employees who have a thorough understanding of process, strong project management skills, and who are considered “thought leaders” are placed in the documentation architect role.

Conclusion

Whether you are defining a career path for a new organization or updating your team’s current options, implementing a rejuvenated career path into your team structure can help your organization stay current with evolving workforce expectations and appeal to both new hires and experienced employees.

Resources


References


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Megan and Brian are lead documentation architects and comangers of a team of 65 technical writers, documentation architects, and documentation quality analysts at Cerner Corporation. Megan and Brian define the content strategy and processes for Cerner’s solution-labeling documentation. With more than a combined total of 30 years of technical communication and 20 years management experience, Megan and Brian are self-proclaimed word nerds who enjoy sharing their passion and enthusiasm for technical communication. Megan has a B.A. in Journalism and B.B.A in Marketing from The University of Iowa and a graduate certificate in Instructional Design from Avila University. Brian has a graduate degree in English from Northwest Missouri State University.
Technical Writers for Good: Humanizing Proposal Writing Through Nonprofit Grants

Elisabeth Kramer-Simpson

Remembering to discuss the human impact of a proposal is an important element of persuading grantors to fund a project. In the nonprofit sector, grants are concretely focused on the human beings served by the grant; for profit grants are focused more on efficiency. 14 funded nonprofit grants and 2 interviews with funders were analyzed for emergent themes. The need and goal sections of grants were found to contain overt references to human beings served. Also, small foundation grants ask specifically for human impact in the population served and community support sections of the grant. Benefits to the community, the organization and the grant writer demonstrate that this humanizing of grants can be helpful in being specific, concrete, and concise in grant writing.

Identifying the Human Impact Factor

When partnering with a civil engineering proposal writer on a conference presentation, I noticed that the successful for-profit proposal from her institution was focused heavily on establishing the credibility and accomplishments of the company, but at the cost of showing much of what I am calling the “human impact factor.” I define the human impact factor as showing the consequences to real people, or emphasizing the people served by the projects proposed.

In the case of the Engineering proposal, it is understandable that much of this grant laid out the technical elements of implementing the proposed project. However, I felt it could have capitalized more on elements such as utilizing local contractors from the community, or discussing the people in the community who would benefit from such a project. I saw this human impact factor much more obviously in the nonprofit grants that I worked on.

In this article, I discuss 14 funded nonprofit grants and 2 interviews with grantors that I analyzed for the human impact factor. I argue that nonprofit grants have helped me as a proposal writer in being more specific and concrete in my grant writing. Further, it has benefitted the local community and increased services to impoverished and homeless persons in a four-county area of New Mexico. I encourage other proposal writers to find a passion for helping the local community with grant writing and I forecast that it will in turn enhance their own writing abilities to identify and write the human impact of proposals.

A Corpus of Nonprofit Grants

I analyzed 14 funded nonprofit grants written to small foundations in New Mexico in support of a local homeless day shelter: Puerto Seguro. I wrote these grants with my students in Technical Communication classes between 2014 and 2018. The grants were written to six different funders in New Mexico. Often, the grants were renewed annually for different projects and so some of the text was reused. Also, as all of these grants were written in support of the homeless day shelter, many of the statistics are repeated across the grants. The grants included: The Frost Foundation (2), The Episcopal Diocese of the Rio Grande (4), The Archdiocese of Santa Fe (4), New Mexico Community Foundation (1), Wells Fargo (1), and the Catholic Foundation (2).

I recursively analyzed the texts from these grant narratives to identify sections of text referring specifically to the human beings impacted by the grant. Sections varied in length, from 7 sentences for some of the need paragraphs, to 1 sentence for the identification of the goal. My codes initially were obstacles, need, community buy-in, population served, sustainability, lives changed and past success. I then abstracted a category called human risk and a category called benefits from the need section. Past success was a small category as was
lives changed. Human risk and benefits were also smaller sections. After more recursive analysis, I settled on 5 strong categories with 10 or more examples from different grants: Goals (10 excerpts from 9 grants), Need (13 large chunks from 7 grants), Community Buy-In (18 examples from 10 grants), and Sustainability (13 examples from 8 grants). The results from the textual analysis of the 14 grants are triangulated with responses from two 30-minute interviews with grantors: one from the Catholic Foundation and one from the Episcopal Diocese.

Results and Discussion from Grant Analysis

Finding 1: Placement of the Human Impact Factor

The categories abstracted from the grants reflect a tendency for the human impact factor to be written into particular parts of the grant structure. Initial establishing of the need and the goal of the project included much discussion of the people impacted and the challenges they faced in their daily lives. For example, in the 2018 goals statement to the Catholic Foundation requesting new washers and dryers, we stated “Puerto Seguro-Safe Harbor, a day shelter for the homeless and impoverished, helps to provide more access to clean and sanitary clothing.” This sentence describes the vulnerable population we serve, and the impact of the new washers and dryers on our clients through the phrase, “access to clean and sanitary clothing.” This is one sentence, yet it conveys the human impact factor of laundry facilities on our clients.

The need sections of the grants were also focused on human impact, sometimes in qualitative ways and other times using quantitative statistics. A section describing qualitative need was written by Jade Baca, a student in our most recent Episcopal Diocese grant from 2018:

Impoverished persons often must make compromises in their standard of living, for instance, skimping on food in order to keep the water running, or sacrificing heating in order to afford medication. Consequently, many people in our community use the assistance provided by our day shelter, Puerto Seguro, to feed their families and maintain their homes.

This section described the choices a human being who is impoverished may make in the course of daily life, and it describes how the funds are needed to better assist in covering living expenses such as utility bills which was the goal of the grant.

A section describing the quantitative need shows the contrast of our county to the rest of the state in poverty from the 2016 Frost Foundation grant:

According to 2013 census data from the New Mexico Coalition to End Homelessness, the state demonstrates an 18.2% poverty rate. In Socorro county, PS-SH’s center of operation, that rate is 28.1%, significantly higher than the rest of the state. In the vicinity of PS-SH, there are no other poverty relief and aid facilities that include our range of services.

Specifically referring to the shelter as “poverty relief” and “aid facilities” shows how we benefit the people, and it is important that we are the only facility in the county. The statistics also tie to the population served by the grant and the rate of poverty in our county. I wouldn’t have initially counted statistics as examples of the human impact factor, but they were mentioned in both grantor interviews as being persuasive elements in our grants that showed the impact of the need on human beings.

Other parts of the grants like the project plans and evaluation sections showed less of the ‘human impact factor’. Even the sustainability sections, of which there were 13 examples from 8 grants that discussed the human impact factor, often held mostly financial information and very little discussion of the humans impacted by the grant proposal. The discussions of human beings were brief. Consider the example below from the Wells Fargo 2016 grant: “By increasing our meal service in particular, we will be able to reach more people in Socorro County and surrounding communities and help them once again become self-sustaining.” (Wells Fargo, 2016)

This sentence is not really explaining how these people will become self-sustaining, but argues that the meal service will reach more people.

Finding 2: Nonprofit Grantors Ask for the Human Impact Factor

Another key finding was that specific prompts in many of the grants for the foundations asked for discussion of the people served. These small, nonprofit
foundations directly requested discussion of the human impact factor. Population Served was one of the largest categories pulled from the grants with 18 examples from 10 different grants. This category ranged from reflecting demographic information to discussing unique individuals served by the grant. In this category, the rhetorical appeals were more word choice or careful phrase selection rather than the large sections as seen in the need category.

One example below provides a section from the Catholic Foundation grants from 2017 and 2018 that the grantor identified as being particularly persuasive:

Puerto Seguro-Safe Harbor works to support the homeless and impoverished within Socorro County and operates within a combined area of nearly 23,000 square miles, with an estimate of 575 clients. Puerto Seguro supports veterans, Native Americans, elderly, and children in Socorro, Lincoln, Sierra, and Catron counties in New Mexico. (Catholic Foundation, 2018 and 2017)

This is a discussion of both quantity of individuals served as well as underserved peoples impacted by the grant. It further discusses the scope or reach of our human impact. In an interview, the grantor commented that in “population served, you addressed who you’re serving and the numbers. That’s a huge thing too, when they [the board] see numbers. When they see statistics and listing your counties.” This member of the Catholic Foundation thought the scope of impact was particularly persuasive because no other organizations in our surrounding area had applied for funds. This allowed the Catholic Foundation to claim a larger impact on the state through funding of our grant.

Another section of these grants asking for human impact was the community buy-in section(s). An important part of the religious organization grants (of which there were 10) was identifying participation by the local congregation in efforts to sustain the nonprofit homeless day shelter. Thus, 10 of the 14 grants analyzed held a section in the application specifically asking about financial and in-kind donations or support of the organization applying for funding. This was an important element of the grant in that it showed that stakeholders in the project were also potentially involved in the religious organization funding the shelter. Below is a polished excerpt that was used in the last three years of the Episcopal grant:

Further, several members of Epiphany Episcopal Church, such as JoAnn Powers and Cindy Madrid, have volunteered their time and skills towards helping Puerto Seguro with fundraisers, grants, and management of the shelter through service on the board. Many congregation members ring the Salvation Army bell during the holidays to bring in donations for Puerto Seguro. Marie Glendenning and Elisabeth Kramer-Simpson, who are members of Epiphany Episcopal Church, have also dedicated their time as board members of Puerto Seguro. (Episcopal, 2016, 2017 and 2018)

In most sections of the grant, the information changes annually, but in this particular section, the information remained constant across years and it allowed some amount of “boilerplate” text (contrary to the advice of Writing Proposals by Johnson-Sheehan). In this particular example, we mentioned names of congregants involved with the shelter. Further, we emphasized the involvement of people by discussing how members rang the Salvation Army bell. The grantor was particularly excited by knowing both who had participated and how in maintaining the shelter. The Episcopal Diocese of the Rio Grande grantor commented,

One of the questions was to describe the participation in the ministry of the program by the sponsoring church, by the congregation. And so many [of the other applications] unless it was specifically a ministry of the church like food pantries are, some people just ignored the question or didn’t understand how to answer it. And this one answered it perfectly. Perfectly saying, "Here’s what Epiphany does."

This grantor compared our application to 39 others and found that we most comprehensively answered the question of congregation and community buy-in.

Finding 3: Writing the Grants Benefits Both the Grant Writer and the Community

It is my belief that everyone should have clean socks, a clean body and a nutritious hot meal at least once a day. I believe that should be a basic human right. In a few cases each year, this support of basic need at the shelter extends beyond just band-aiding the problem. This last year, someone kicked a drug habit and found a job laying cement and no longer needs support from the shelter.
Another client left an abusive relationship and re-established an independent household. Another year, the shelter helped a group of clients acquire welding skills necessary for a career in that field. I believe the shelter helps people in a sustainable way, but that it is difficult for many people to overcome the obstacles to starting a sustainable, independent life.

The grants have helped our organization almost double the number of hot meals served on the days we are open because the kitchen works, the tables and chairs are durable and we can now store extra food in a large container next to the shelter building. These improvements were grant sponsored with 10,000 from the Frost Foundation for kitchen refurbishing, 5,500 from the Catholic Foundation for a shipping container, and finally 1,700 from the New Mexico Community Foundation for chairs and tables. The rest of the grants also helped improve access to client services, from the plumbing for the showers to the electrical for new washers and dryers.

I believe I am a better grant writer because of the practice I get writing grants for the homeless shelter. I am required to be very specific in these foundation grants, and give the impact on society from the project plan I propose. Most of these small foundations have specific question prompts and word limits that help me focus my text. This helps when I have to write 15 page narratives for NSF with only a paragraph prompt as a guideline. The small foundation grants are also short, which helps me work them into the regular work schedule without too many problems.

Most importantly, writing the small foundation grants for a nonprofit helps me see the human impact of my writing, as I am there to follow up on the projects. For example, I know that of that 46 of the 48 households helped with utility bills in the last two years were unique; these families only used the shelter for one-time aid. I can actually go in and see the clients. The human impact factor in these small foundation grants for the nonprofit is concrete in a way that my education grants at the university are not. It is hard to definitively say what students learned from a project, or what the long-term impacts of my small research discoveries are. However, with grants for the day shelter, I see the impact on people almost immediately, and this motivates me to improve on my writing even more.

Resources

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Elisabeth Kramer-Simpson is an associate professor of Technical Communication at New Mexico Institute of Mining and Technology (NMT). She published a chapter in 2018 on nonprofit grant writing in Citizenship and Advocacy in Technical Communication, a Routledge publication. She has also published in journals such as Journal of Technical Writing and Communication and IEEE Transactions on Professional Communication. She actively works with other faculty to submit grants, teaches the grant writing course for graduate and undergraduate students at NMT, and has started a book about partnering with nonprofits co-authored with Steven Simpson (NMT) and Angelica Perry (Carnegie Mellon University).
Building a Tech Comm Team
Jessica Kreger, Senior Member, STC

You can marry modern best practices in human resources and business with the latest techniques of technical communication management to grow and optimize your technical communications team. Build a plan for expanding your team using proven processes for recruiting and hiring, onboarding and training, and marketing your team. Enhance your efforts with links to expert references for more information to hone your team-building skills.

Building a plan for growth
If you have the exciting opportunity to grow your technical communications team, there are five key steps that you’ll want to include in your plan, as depicted in Figure 1.

Let’s focus on how to use your skills to grow your team by recruiting, onboarding and training new hires, and marketing.

Recruiting and Hiring Talent
As technical communicators we can use our writing acumen to craft targeted job descriptions to reach qualified candidates, and advertise via our professional networks to find the best talent. Our information architecture skills help us to quickly identify job seekers with scannable resumes and customized cover letters—the kind of content creators we’d like to hire. Each year Money magazine posts resume templates that you can use as a reference point when hiring. The Society for Technical Communication’s Intercom magazine offers more tips on what to look for in Richard Rabil Jr.’s article, “How to Be an Amazing Tech Comm Job Applicant: Tips from a Tech Comm Hiring Manager.”

Our research expertise will come in handy as we collect multiple data points for assessing prospective employees beyond the resume and our intuition. While asking candidates for samples may yield mixed results that don’t apply to our positions, we can level the playing field by assigning the same tailored editing and writing exercise to each final candidate. Then, during the interview we can assign a proctored writing exercise to perform in-house, and give the same structured interview to every candidate.

Figure 1. The steps to building a technical communications team range from finding talent, to establishing your team, and then promoting it for further growth. (Graphic created by Tony Pavone, TradeStation.)
candidate to standardize the process. When it comes time to extend an offer, we can partner with our human resources department for guidelines.

Onboarding and Training New Hires

You can also take your chops in writing instructions and your deep knowledge of the job and corporate objectives, and translate them into an onboarding plan for new hires. An onboarding plan should include projects, goals, and deliverables for an employee’s first year on the job, with assignments designed to foster process, product, and institutional knowledge.

Providing training and support for your new hire is vital to ensuring their smooth transition and motivating them to improve the status quo. But it is not enough to simply train employees on your company, your product, and your documentation tools—to truly engage them you must facilitate their professional development early on. Marketing executive Oded Ilan offers guidelines for supporting younger workers in his Intercom article, “Onboarding Millennials: From Instructive to Supportive Employee Training.”

Marketing Your Team

Once your team is established, choose the right channels to promote your new and ongoing services. Marketing your technical communication team is essential, because raising your profile can help you gain valuable resources for further growth.

Learning and communication expert Saul Carliner provides a template for marketing technical communication teams on his website, “The Commerce of Content.” He offers valuable insight in his collection of posts, “Managing People, Projects, and Business on Training and Communication Projects.”

As your team expands, you’ll want to invest in continuously upgrading your employee’s skills and your own. Take advantage of the plethora of resources offered by the Society for Technical Communication for all levels of practitioners.

References


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Jessica Kreger leads the technical documentation team at TradeStation to publish information that empowers active traders around the world. With 20 years of experience in communications, she has worked at Dell, the University of Miami, Carnegie Mellon University, and Alcoa. Jessica is passionate about creating optimal user experiences. She earned a M.A. in Professional Writing from Carnegie Mellon and a B.A. in English from Penn State. She is a Senior Member of the STC, belongs to the Technical Editing SIG, and is a Certified Professional Technical Communicator.
Should There Be an App for That? Incentivizing Reality Through the Gamification of Everyday Tasks

Kelsey Loftin

When businesses are creating mobile applications that use gamification principles to incentivize behavior in the real world they should take into account users’ rights and best interests. Some apps use overt game mechanics and others use subtle game mechanics to incentivize behavior. Some apps encourage users to build positive habits while others encourage negative or neutral habits. Others entice users to complete actions that benefit the business rather than the user. The combination of gamification and the behavior it motivates determines the ethical standing of the app.

How Is Gamification Used?

Most of the literature that discusses gamification focuses on its ability to help people become addicted to positive behaviors, such as better financial planning, recycling, energy conservation, healthy living, and education. Gamification has been proven to persuade and incentivize behavior. Because people are directly affected by the effects of game mechanics, what you gamify matters.

There is a clear research gap in understanding the negative impacts of gamification. We cannot continue to argue the power of games to teach and engage people on one hand while ignoring the other side of the coin. Games are the most powerful source of non-coercive influence in the world, and they are frequently designed with mild addiction in mind. We need to take responsibility for the potential for people to become addicted to—and substantially influenced by—gamified experiences.

What Are the Ethical Implications of Gamifying Apps?

Mobile app developers are making use of game mechanics by applying them to everyday activities and creating an augmented reality that persuades people and influences their behavior. This practice of incentivizing reality can have either positive or negative ethical implications, and it is important that when developing apps, someone takes responsibility for the user and acts as user advocate to ensure the apps are designed ethically and do...
Table 1. Common game mechanics and their definitions

<table>
<thead>
<tr>
<th>Game Mechanic</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement</td>
<td>A virtual or physical representation of having accomplished something.</td>
</tr>
<tr>
<td>Appointment dynamic</td>
<td>A dynamic in which to succeed, one must return at a predefined time to take some action.</td>
</tr>
<tr>
<td>Behavioral momentum</td>
<td>The tendency of players to keep doing what they have been doing.</td>
</tr>
<tr>
<td>Countdown</td>
<td>The dynamic on which players are only given a certain amount of time to do something.</td>
</tr>
<tr>
<td>Endless games</td>
<td>Games that do not have a defined end.</td>
</tr>
<tr>
<td>Fixed interval reward schedule</td>
<td>Fixes interval schedules provide a reward after a fixed amount of time, say 30 minutes.</td>
</tr>
<tr>
<td>Loyalty</td>
<td>The concept of feeling a positive sustained connection to an entity leading to a feeling of partial ownership.</td>
</tr>
<tr>
<td>Micro leaderboards</td>
<td>The rankings of all individuals in a micro-set.</td>
</tr>
<tr>
<td>Status</td>
<td>The rank or level of a player.</td>
</tr>
</tbody>
</table>

Issues of ethics come into play when the app’s purpose is discovered to serve the company behind the app rather than that of the people using the app. Mobile applications that use gamification techniques in their design do so to persuade people to do something, but are all of these apps ethically grounded? Are the incentives fostering a behavior that is beneficial only to the user, the company, or both?

**Case Studies: Are These Examples of the Ethical or Unethical Use of Gamification?**

These four case studies explain what each app offers users, the game mechanics used to gamify the app, and if available, information on the app’s economic impact.

**Nike+ Run Club**

Nike+ Run Club is an exercising app for smartphones and smartwatches that provides users with community, guidance, and motivation geared toward helping them reach their running goals. The app offers users:

- Helps individuals and societies achieve their true potential, acting consistently with their values and interests (Zichermann, 2012).
- Does not obscure the use of game mechanics with intent to deceive users about the purpose of the system (Zichermann, 2012).
- Does not incentivize behavior that is physically, mentally, or financially harmful to the user.
• audio-guided runs with famous athletes
• coaching modules to set and meet goals
• community challenges
• personal record challenges and badges
• leaderboards and rankings

The app has a dedicated section for users to access the Nike Running Shop, where they can buy products that have been curated for their running needs.

Achievements at the end of every mile or a certain amount of time reward users while on their run, which pushes them to complete their goal. These achievements come in the form of cheers or tips from famous athletes that play through the users’ headphones.

Micro leaderboards are used to connect users and challenge them to beat their friends. Games like tag, where the person with the least miles run is “it,” challenges users to compete with one another, which pushes each toward higher achievement. There is also a status aspect to the micro leaderboards that enhances the competition further because users are competing against their friends.

Running is an endless game when using the Nike+ Run Club app, which ties into behavioral momentum. Users are encouraged to continue running and tracking their runs based on the rewards they receive in the app and the results they see in the mirror.

Nike+ Run Club does not hide its gamification from users, in fact, it invites users to initiate games and compete with friends. This app helps users accomplish a goal that they have already set out to accomplish, and in that and many other respects, it is ethical. However, Nike does try to build brand loyalty through this app in hopes that by giving back to the running community, the users of their app will become or remain customers through the Nike Running Shop.

**Streaks**

Streaks is a to-do list that helps you form habits. Users can choose to form good habits or break bad habits by entering them into the app and tracking their progress each day. The app makers claim that working on something every day helps you form a new habit. Every time you complete a task, your streak is extended. If you miss a day, your streak will reset to zero days.

This form of endless gameplay is tied to behavioral momentum, which makes it easier for users to form habits with each day that they extend their streak. Users can check their progress and stats at any time for each habit, which acts as a form of personal achievement. The appointment dynamic comes into play as well since the user must return to the app each day to continue his or her streak.

Streaks uses gamification more subtly than other apps, which would normally put it in the running to be unethical. That would be the case if it were actively obscuring the game mechanics in order to deceive the user. However, because the user is in complete control over the behaviors they are gamifying, this app falls decidedly in the ethical realm.

**Shopkick**

Shopkick is a shopping app for smartphones and tablets that offers users rewards for shopping activities both online and in-store. Users earn reward points, or kicks, for these actions, and they can exchange them for rewards in the form of mobile gift cards. There are eight ways to earn rewards while you shop:

- walking into stores
- visiting online stores
- scanning items
- purchasing with a linked card
- making online purchases
- viewing online products
- watching videos
- submitting receipts

As of April 2017, Shopkick had driven over 200 million store visits, over 270 million product scans in aisle, and over $2.5 billion in total sales from brand and retail partners (Perez, 2017). American Eagle’s EVP Fred Grover said, “Our Shopkick customers buy twice as often as a non-Shopkick user and have helped increase in-store traffic” (Graham, 2012).

Shopkick is an endless game that encourages users to take part whenever they are near participating stores or online. Users earn achievements in many different ways that require the user to interact with brands and merchandise. The easiest way to earn achievements is to enter a store or scan your receipt. All of these actions are tracked by the app and shared with participating retailers.

It can be argued that Shopkick is an app that uses gamification unethically. The quote from an
American Eagle executive shows that users of the app buy more often than those who do not use the app. It could be that those who use the app just buy more often, but we could argue that the gamification techniques are motivating this behavior. Gamification is meant to encourage action, and this action can be financially harmful to the user.

Viggle (Legacy App)

Viggle was bought by Perk.com Inc. in 2016, and many of the game mechanics changed along with how the app functions. This is a case study on the original version of Viggle. The original version registered the television show you were watching by listening to your TV and engaged users with a loyalty program for viewing particular programs. Early rewards included gift cards to retail establishments. The app also displayed the social media activity for other shows at the same time, along with what rewards were available for changing the channel to competing programs.

Users could win achievements in the form of points for checking in to programs playing on television. The points could be exchanged for higher forms of achievement (gift cards and products). The app was built around an appointment dynamic that incentivized users to check in at an appointed time (when the show is on television).

The countdown mechanic further motivated users to check in at the beginning of the show rather than the end because as the program time ran down, the points dwindled. There was a status aspect to the game that made watching TV alone at home a social experience. Viggle displayed Twitter mentions of the shows people were watching, and users could interact with others in this virtual space. The app used a fixed interval reward schedule that rewarded points only after the program had ended. This motivated the user to stay checked into one program (and thus not virtually channel surf) because points could be deducted for switching in the middle of a program. Viggle was set up to be an endless game that used behavioral momentum to motivate users to continue playing. Just as the show was ending, Viggle would send a notification to the user alerting him to how many points he had just won—which excited the user and started the process all over again.

Viggle isn’t necessarily unethical based on my system of measurement, but it straddles the line. The app was created responsibly because the user is fully aware that he or she is playing a game. However, it is up to the user to stop the app from keeping them planted in front of the television for longer than they wish to be there. Earning points with the app requires a lot of screen time, so for those users who are motivated to turn their points into gift cards or other rewards, Viggle has the potential to turn them into couch potatoes.

What Can We Do to Ensure the Ethical Use of Gamification?

The first step to ensure the ethical use of gamification is learning to recognize the unethical use of gamification. Technical communicators can bridge the gap by acting as advocates for the user and working with those companies that implement gamification to ensure the incentivized behaviors benefit the user. The proposed system of measurement in this paper can act as a guide to help us all identify unethical uses of gamification.

Questions to Help Identify the Unethical Use of Gamification

- Does the user want to achieve the behavior that the gamification incentivizes?
- Is the app using gamification to get people to do something they want to do or something the company wants them to do?
- Is the company presenting game mechanics overtly or obscuring them intentionally?
- Is the incentivized behavior physically, mentally, or financially harmful to the user?

We may not be the decision makers in the mobile app design process, but we can be the voice of the people who will ultimately use the app. We are uniquely positioned to act as user advocates. Gamification is a powerful tool that should be used to help people achieve their goals instead of manipulating people into harmful behaviors. As user advocates, we should be looking out for the rights and well-being of the people who can be influenced by gamified apps.
References


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Author Biography

Kelsey Loftin is a UX Researcher and Designer who owns Don’t Panic Digital Media, a business that specializes in website design, user experience reviews, and communications strategy for small to medium-sized businesses. She brings a strong ethical stance to all of her designs and ensures each has a distinct impact. Her process includes ensuring that both the client and end user receives a delightful user experience. Originally from Alabama, Kelsey has been living and working in Austin, Texas, for the past 7 years.
Let’s Tackle Open Source Docs
Sarah Maddox

The term “open source” describes software where the source code is available for anyone to view, use, change, and then share. The documentation for open source products is often of bad quality or non-existent. Yet documentation is highly valued in the open source community. Why the apparent contradiction? Because documentation is hard to write. That’s where we as technical writers come in. However, getting started in contributing to open source can be hard too. This discussion presents some hints about getting started in open source, and introduces a new program called Season of Docs, which aims to foster collaboration between open source organizations and technical writers.

The takeaways from this discussion include the following:

- How our skills as technical writers are essential to the world of open source.
- How a technical writer can get started with contributing to open source projects.
- An introduction to Google’s new Season of Docs program which fosters collaboration between technical writers and open source projects. If you’re a technical writer interested in open source documentation, this program may be right up your street.

Documentation-related Results in GitHub’s Open Source Survey

The results of GitHub’s Open Source Survey show that documentation is:

- highly valued
- important for inclusivity and accessibility
- often overlooked

Open source project maintainers know they need documentation to tell people about their products and to help people use the products effectively. What the open source project maintainers often don’t know is how to create good documentation.

How a Technical Writer Can Help

Technical writers can help open source projects answer the above questions. More specifically, this section looks at some of the tasks a technical writer can tackle in an open source project.

For open source products that already have a set of documentation, a useful exercise is to refactor the existing documentation. The technical writer can ensure an improved user experience by providing more accessible information architecture, for example. This task also helps the technical writer get to know the documentation and the product, thus paving the way for future contributions.

Often a development team creates their technical documentation from the bottom up, with the result that there’s a lot of detail but it’s hard to understand the product as a whole. A technical writer can fix this by writing conceptual overviews of, or
introductions to, a product and the use cases that the product solves.

Technical writers can create a tutorial for a high-profile use case, or a set of focused how-to guides for specific tasks.

A contributor’s guide for an open source project is often a highly-valued document as it improves the wellbeing of the community and raises the number of contributions to the project as a whole. A technical writer new to the project is in an ideal position to create a contributor’s guide that includes basic information about getting started as a contributor to the open source project, as well as any rules around license agreements, processes for pull requests and reviews, building the project, and so on.

On a larger scale, a technical writer can collaborate with the engineers in the open source project to build the infrastructure for a new documentation site, hosted on a platform chosen under consultation with the open source project maintainers.

Getting Started in Open Source

It can be difficult to know where to start as a new contributor to an open source project. This section contains some guidelines.

First, choose your open source project with care. Look for a technology that interests you. Your work on the project will be a big investment on both sides: for you and for those in the open source project who help you get started. Make sure it’s going to be worth the effort.

Find a welcoming project. Look for the community’s contribution guidelines. (If they don’t have any, they should. This is something you can help with.) Are there guidelines on how community members are expected to treat each other? Does the community value diversity and does it make an effort to help everyone feel welcome?

Become familiar with the community’s etiquette. Look for a document describing the code of conduct. Note any guidelines on how you should get acquainted with the community and what you should do before you can start contributing to the documentation.

When you’re ready to get started, examine the project’s issue tracker to find something you can tackle. Look for issues labeled with “good first issue” or “help wanted.” Take a look at the documentation and if you find something that needs improvement, add an issue yourself, then offer to tackle it.

Often a new contributor needs to become familiar with layer upon layer of technologies heaped one on top of the other. Markdown or other markup; YAML; Hugo or other static site generator; Git or Mercurial; GitHub or BitBucket; concepts related to the product; and last but not least, the code that the developers are writing. Be methodical. Make a list of the essential technologies and get a basic understanding of each layer. Once you’ve gained the understanding, you can write docs to help other people starting on the project.

Most open source communities are geographically distributed, with no central location where you can meet the other contributors. Communication is key here. Find out how the other community members talk to each other. Some communities hold regular online meetings. Join them. Use whatever facilities the community provides, such as Slack, email groups, online chat tools, and the project’s GitHub issue tracker.

Above all, be confident in your own skills. Know what you bring to the table. You’ll find that the community appreciates your skills too, particularly when you point out what you can do, and then do it. Don’t hesitate to ask for help with the things you don’t understand.

Where relevant, tell the community what you plan to do. For example, create a design doc and share it with the community for discussion, or hold lengthy discussions on the related issue in the issue tracker.

Use every opportunity to train the engineers and others in the community. Teach them what good docs are and how to develop them. This sharing of information helps others appreciate your skills, as well as adding to the skills of the other contributors and improving the documentation itself.

Introducing a New Program: Google’s Season of Docs

Season of Docs (g.co/seasonofdocs) is an annual program that fosters collaboration between open source projects and technical writers. 2019 is the first year of the program. Season of Docs offers technical writers a way to get started in open source and provides a framework in which they can achieve something substantive.

In a nutshell, this is how Season of Docs works:
Open source organizations apply to be mentor organizations in the Season of Docs program.

Technical writers apply to the open source organization they want to work with, and write up a project proposal.

Successful applicants spend a few months working with a mentor to complete their technical writing projects.

Google announces the projects that finish successfully.

Technical writers working as open source contributors within the Season of Docs program can count on buy-in from open source organizations, dedicated open source mentors, and a well-defined contribution framework.

Google announced the program on March 11, 2019. The Season of Docs website (g.co/seasonofdocs) includes details of the participating open source organizations and the documentation tasks that they want help with. Technical writers can start applying to take part in Season of Docs from May 29.

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Sarah Maddox is a technical writer at Google, where her current focus is on open source documentation. Outside of work you’ll often find Sarah strolling around the Australian bush, keeping a lookout for birds and other wildlife.
Technology for Good: Helping Orgs Do (More) Good with Technology

Robert E. Perry, Jr., Associate Fellow, STC Director

Technology is one of the most powerful equalizers of our time, providing access to data, knowledge, and connections. As we embrace the Fourth Industrial Revolution, there is a constant struggle with using technology for the greater good. Now more than ever, people are striving to lead their lives with purpose, and the workforce is looking for institutions that promote the values and ideals that are important to them. Society is increasingly looking to companies to play a part in creating real and measurable impact. In this session, I will discuss Industry 4.0, the implications for our industry, and relate how my company, Salesforce.org, has created solutions to get technology in the hands of nonprofits, educators, and philanthropic organizations so they can connect with others and do more good. I will also discuss how Salesforce.org is incorporating Compassionate Technical Writing into our content and how writers should not only inform users how to use technology, but also reflect empathy and awareness of the challenges they might encounter. Technology is constantly changing and can be challenging at times. Technical writers can help bridge the gap and bring about a better understanding of not only the technology but how to use that technology to make a positive difference in the world.

Fourth Industrial Revolution

In today’s world, we might often feel anxious because of constant progress and change. We have become hyper informed and extremely connected. Occasionally it might seem like technology is being used to polarize and divide us instead of informing and guiding us.

The Fourth Industrial Revolution has produced one of the most disruptive and transformative shifts in history, at an extremely rapid pace. New technologies such as artificial intelligence, machine learning, robotics and biotechnology are having a life-changing impact on nearly every industry, including technical communication.

Technology is one of the most powerful equalizers of our time, providing access to data, knowledge, and connections. As we embrace the Fourth Industrial Revolution, there is a constant struggle with using technology for the greater good. Now more than ever, people are striving to lead their lives with purpose, and the workforce is looking for institutions that promote the values and ideals that are important to them. Society is increasingly looking to companies to play a part in creating real and measurable impact.

Technology for Good

This connected age can bring about great opportunity. There have been unprecedented rates of social engagement, and we can now connect and organize on a global scale. In this session, I will discuss Industry 4.0, the implications for our industry, and relate how my company, Salesforce.org, has created solutions to get technology in the hands of nonprofits, educators, and philanthropic organizations so they can connect with others and do more good.

Currently I am the lead (and lone) writer for Philanthropy Cloud—a platform that empowers corporate philanthropy. It provides a digital marketplace where employees can engage with causes they care about the most. It is designed for a new era of giving, providing every employee access to a global network of opportunities to donate, volunteer, and advocate for causes they are passionate about.
Compassionate Technical Writing

I will also discuss how Salesforce.org is incorporating Compassionate Technical Writing into our content and how writers should not only show users how to use technology, but explain why they should use the technology and reflect empathy and awareness of the challenges they might encounter.

Technical writing can often be dry and procedural to the point of being bland and unfeeling. It normally dictates one task after another without much warmth. At Salesforce.org, however, we feel that content cannot only be used to demonstrate how to properly use an application, but also reflect rapport and appreciation of the challenges users face. It is not enough to create content that simply describes how to use our products; we want customers to feel the greater importance of what they are doing.

Technology is constantly changing and can be challenging at times. Technical writers can help bridge the gap and bring about a better understanding of not only the technology but how to use that technology to make a positive difference in the world.

Author Biography

A technical communicator and trainer for over 25 years with experience in the software, financial, analytics, pharmaceutical, and environmental industries. Robert has a Bachelor's Degree in Chemistry from the University of North Carolina at Chapel Hill and a Master's Degree in Technical Communications from North Carolina State University. An active member of STC for over 20 years, Robert currently serves on the Board as a Director. A former instructor in the Duke University Continuing Studies program for Technical Communication, Robert is currently the Lead Member of Technical Staff, Documentation at Salesforce.org for Philanthropy Cloud, a platform that empowers corporate philanthropy. Philanthropy Cloud provides a digital marketplace where employees can engage with causes they care about the most and is designed for a new era of giving - providing every employee access to a global network of opportunities to donate, volunteer, and advocate for causes they are passionate about. Robert lives with his husband in NYC and is a Deacon at Middle Collegiate Church—check it out if you are in NYC or online.

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Website Search with Apache Solr

Scott Prentice, Associate Fellow

Search is crucial for helping customers access your online content. They may use Google to initially locate your product/documentation, but once they are on your website, keep them there by providing a search tool integrated with your content. There are many ways to provide an integrated search tool, some options will make more sense than others based on the way your content is authored or published. We'll discuss some of those options, but will focus on Apache Solr.

Is your content semantically tagged? Perhaps you should consider exposing some of that to your customers? Do you have separate search interfaces for each area on your website? Build one search tool that exposes all areas with one query.

Apache Solr is an open source enterprise search platform with features including full-text search, hit highlighting, faceted search, real-time indexing, and rich document (Word, PDF) support. It is used by many popular websites such as, eBay, Netflix, Instagram, Zappos, and others. This tutorial will introduce you to Solr's features and walk you through a basic installation and setup.

Search Terminology

Crawl—The process of programmatically reading the content on your website or file system. This process would typically create a “feed” that contains the raw content in some normalized format (no HTML or other markup), which is passed to the Indexing process.

Index—The process of programmatically reading the content feed and adding that data to the search engine's underlying database or data storage. Often this process will include various types of filtering and linguistic processing.

Collection—The result of the indexing process is a collection (or core). Depending on the search technology in use, this can be a database, binary file or text file. Basically it's just the “blob” of data that defines the target of the search tool. Sometimes this will also be called a “search index,” but that can be confused with the indexing process itself.

Common Search Options

The typical options for implementing a search tool on a website are the following:

- Remote search service
- Static JavaScript
- Custom search application

A remote search service is one where you rely on a third-party website or service to crawl and index your content. They will provide some type of API that allows you to add a search form to your website. This service may be free or paid, with features that correlate to the cost. This is a reasonable option for very basic search, but often you'll find that it really doesn't provide what you need or what your users' expect.

A number of publishing tools provide search with a static JavaScript collection/index. The publishing tool crawls the content and creates a specially-formatted text file that contains the content from all of the files. A search form uses JavaScript to read the text file and display search results. This can often be customized to some extent, and is useful for single books. It's not great for site-wide or multi-book searching.

A custom search application can be developed from various technologies, typically PHP, Perl, or Java. There are many free, open source options available, and are highly customizable, allowing you to make this work exactly the way you want. The downside here is that you'll need development resources to set things up. Apache Solr is one of these technologies.
Apache Solr

Apache Solr is written in Java and can be installed on Windows or Unix-based servers. Solr provides a wrapper around the Apache Lucene indexing and search technology. It's fully Unicode compliant and while it can appear quite complex, a minimal installation can be quite useful, and it's not as hard to set up as you might expect.

Solr is a server application that can be integrated into a website in various ways. Fundamentally, you define a schema based on the structure of your content and how you want to use that content, then you load that content into the Solr collection. You'd then create an interface between your website and the Solr collection. Typically this would be a search form where users enter a query which would display a list of results, but as you start using Solr you'll see that the integration options are essentially unlimited.

You can think of a Solr collection like a database. Your content is loaded into fields, and the query returns a subset of matching fields. The simplest schema might be just three fields, an id (often a path), a title, and the content. Your query would search the title and content fields, and return the path and title to display in the list of results. The results can include contextual bits from the content as well highlighted markup to make it easier to locate the right items in the list.

If your needs require more complex queries or fields of various types, Solr can accommodate that. Queries can be a simple word match, they can use wildcards, they can find words within a certain proximity to other words, they can match on date or numeric ranges, and many other options.

Simple Installation and Setup (Live Demo)

The basic Solr installation is essentially just a matter of extracting the distribution archive onto your server's file system. Once that's done, you can start the Solr server, set up the configuration files (and schema), create the empty collection, then crawl and index the content. The Solr Admin dashboard provides a convenient way to view the status of available collections and perform queries.

Once you've got Solr installed and running, you can create multiple collections that use the same or different schemas, making it easy to experiment with various options. In development, it's fine to have Solr running on your web server, or any spare server that's exposed to the internet, but in a production setup it's best to provide a dedicated server.

Making It Real

The basics of getting Solr up and running are deceptively simple. The real work comes in deciding exactly how you want to expose your content and what features of a search interface will be the most useful.

There are a number of ways to crawl and index your content. You can upload raw files directly to Solr (HTML, DOC, PDF), or you can parse these files and create a JSON feed from the important parts of the documents, then upload that JSON file to create the fields in the collection. Creation of this JSON feed can typically be integrated into the publishing process, so that each time your content is published or updated, the content in the Solr collection is also updated.

Is your documentation authored as DITA or other XML model? There's likely a lot of semantically-tagged content in those files and that information is probably lost when you publish. There's no reason that you couldn't include this semantic tagging as metadata when generating the Solr collection. Let your users benefit from all of the effort you've gone into with that tagging.

Depending on what types of fields you've included in the collection, you'll need to create a search interface to access that content. This may be a simple search form and results, but if your fields include metadata for tags or categories, you could augment your documents with auto-generated lists of “similar” content by automatically running a query on each page of your website.

Also, depending on the amount of content in your collection(s) or traffic to your website, you may need to set up Solr as a robust multi-server environment (SolrCloud). With SolrCloud, you create replicas of your collections on multiple servers, so that a server failure doesn't bring down your search. You can also split large collections into separate pieces (shards), to make queries faster and more efficient.

In addition to indexing your user documentation, you may want to consider including other types of content in your Solr collections. Marketing and support material could be useful in queries, as well as forums and other user-generated material. If you have areas of your website that change frequently, you can set up an automated crawler to run on a
regular basis, or even integrate the indexing process into the forum update process.

Takeaways
Apache Solr is a robust and solid search platform. While powerful enough to support the most demanding websites and services, it can be effectively implemented with minimal effort. A useful search interface will expose more information to your customers and encourage them to spend more time on your website rather than returning to a third-party search system.

Resources

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License to Write: Techniques for Tech Comm Success

Ann Marie Queeney

The exciting exploits of James Bond may seem far removed from the field of technical communication. However, after reading a book titled *The Man with the Golden Typewriter: Ian Fleming's James Bond Letters*, I recognized that Fleming was a disciplined writer whose commitment to clear, sharp writing and accuracy shares many similarities with the technical communication field. This paper explores how Ian Fleming’s approach to his work can strengthen your writing and editing skills, transform subject matter experts (SMEs) from information suppliers to valuable collaborators, and maximize your efficiency in meeting project goals.

Ian Fleming’s Life

Fleming, an English author and journalist, was born on May 28, 1908. During World War II, he served in Naval Intelligence and although he was not in active combat, according to Fergus Fleming (editor of the mentioned book and Ian Fleming’s nephew) “. . . he engineered numerous covert operations.” After the war, Fleming became Foreign Manager of the *Sunday Times*. He also had two goals: 1) Build a house in Jamaica (an island he had visited during the war); and 2) “To write the spy story to end all spy stories.” He achieved his first goal quickly when he built a bungalow, which he named Goldeneye.

He achieved his second goal in 1953 when Jonathan Cape published *Casino Royale* and introduced the world to James Bond, Agent 007. This novel launched the Bond series, culminating in 12 novels and a short story collection. In addition to writing the Bond series, Fleming researched and wrote articles, non-fiction books, and three volumes of the children’s series *Chitty-Chitty-Bang-Bang*.

Fleming mainly wrote letters to communicate with his editors, SMEs, and others because it was more efficient and reliable than the technology of the 1950s—the telephone. As a result, we have a valuable record of his writing process.

In 1961, Fleming suffered a heart attack and his health began failing. He died following a second heart attack on August 12, 1964, at the age of 56.

Fleming was witty, curious about the world, and generous (he stayed with his original publisher despite offers from other publishing houses). The Bond legacy continues with authors and filmmakers chronicling new adventures of the iconic secret agent.

The Golden Typewriter

In Fleming’s era, professional writers’ equipment needs were simple. They only required a typewriter and paper to perform their jobs. However, while Fleming’s contemporaries viewed their grey or beige typewriters as strictly utilitarian, he took a different approach. In 1952, he purchased a gold-plated Royal Quiet de Luxe brand typewriter (at a cost of $174) to reward himself for completing *Casino Royale* and inspire his future writing.

Fleming typed the following letter to his wife, Ann, dated August 16, 1952:

> My love

> This is only a tiny letter to try out my new typewriter and to see if it will write golden words since it is made of gold.

Project Management

Beginning with his second novel, *Live and Let Die*, Fleming established a regimen that he used for writing the Bond series. In January and February, he wrote a Bond novel at his home in Jamaica. Upon his return to England, he responded to his editors’ comments and completed more research, as needed. Fleming also researched his next novel during this timeframe. Lastly, towards the end of the year he reviewed the proofs of his novel, which would be published the following April. At the beginning of the new year, Fleming would repeat
the cycle, writing a new novel from the outline based on his previous year’s research.

While most of us do not have the flexibility (or the bungalow) to write and winter in Jamaica, Fleming’s professional responsibilities were similar to those of technical communicators. He worked on multiple, deadline-driven projects. In addition to writing the Bond series, he also was Foreign Manager of the Sunday Times, motoring correspondent for the Spectator, director of Queen Anne Press (a small publishing house), and manager of The Book Collector magazine.

Fleming managed demanding professional projects, a wide range of recreational interests (including golf, snorkeling, and cars), and an active social life by drawing upon his journalist, time management, and organizational skills. Rather than multi-task, he compartmentalized his assignments, focusing and dedicating his time to each project while balancing it with his other responsibilities.

For successful project management:

- **Establish your overall project plan (the big picture).**
  Fleming assigned specific timeframes for researching, writing, and editing the Bond novels. He knew before he began writing how long it would take to complete each phase and used these milestone dates to meet deadlines (his and collaborators). At your project’s start, identify and assign milestone dates for each phase. While project deadlines often change, establishing initial due dates helps you monitor your project’s progress and make adjustments to facilitate its successful completion.

- **Communicate clearly.**
  Fleming’s strong communication skills also contributed to his success in achieving his goals. He clearly and concisely identified what he needed, reason for his request, due date, other information needed for successful completion, and if applicable what the person could expect from him. Interestingly, in our era of electronic communication, Fleming shows us that it is possible to manage projects virtually via the virtual format of his era—letters.

  *Be specific, clear, and concise in your oral and written communications. In addition, select the appropriate communication method.*

  While Fleming mainly wrote letters, there were times when he suggested a face-to-face meeting.

- **Remember the soft skills.**
  In addition to clearly communicating the purpose of his correspondence, Fleming also engaged the recipients and made them feel that they were valuable contributors. His approach was successful as he maintained positive, long-term working relationships with editors, SMEs, and other collaborators across many projects.

  While the focus of tech comm projects is understandably on deadlines and content, also remember to use your soft skills. Thank SMEs or team members for their time and acknowledge the value of their contributions.

  Fleming rewarded some readers who wrote to him with an autographed book and SMEs (depending on their contributions) more lavishly (Herman W. Lieber received a Cartier pen). Your less costly offer of lunch or coffee will be appreciated. If your company has a recognition program, submit the names of team members or SMEs who helped you achieve your goals.

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### Research

Fleming’s first novel did not require much research since he wrote it “from imagination and experience.” However, he thoroughly researched his remaining novels. No matter how fantastic Bond’s adventures may have been, the details were accurate.

Fleming conducted extensive research, in-person and by letters. He also identified and relied on SMEs to provide accurate information.

For effective research:

- **Gain personal experience.**

  When Fleming was researching *Diamonds are Forever* he watched diamonds being sorted and cut at DeBeers. While you may not visit exotic sites, hands-on experience is valuable.

  Here are some ways you can increase your personal knowledge of a topic:

  - **Observe associates as they perform their jobs (job shadowing).**
• Ask for an invitation to focus groups or access to the transcripts.
• Participate in formal software testing. In addition, ask for access to test environments (sandboxes) so you can explore on your own.
• Produce clear, accurate notes.

According to Ernest Cuneo, a friend (and "lawyer, newspaperman, and intelligence operative"), Fleming would review and type the notes taken during his interviews, "no matter what the hour."

Fleming recognized the importance of reviewing and clarifying information while the memory of an interview was still fresh. In addition, clearly transcribed notes facilitates efficient writing, as you do not interrupt your work to clarify your research.

For productive relationships with SMEs:
• Build a SME network

While Fleming identified SMEs for specific novels, he had several experts whom he relied on throughout his career. It is more productive and less stressful if you already have an established network of SMEs, rather than try to locate an expert in the middle of a project. Identify people to help you in key functional areas within your company or with specific topics.
• Cultivate an ongoing relationship

Ideally, the working relationship should be mutually beneficial. You can reciprocate your SMEs’ contributions by providing writing advice on their projects and connecting them with other SMEs in your network.
• Invite critics to contribute as SMEs

Fleming was genuinely interested in his readers’ comments—positive and negative. In a notable example, he invited Geoffrey Boothroyd to become his weaponry advisor after Boothroyd wrote him a letter correcting his use of weapons in a novel. Boothroyd was eager to provide advice, resulting in a long-term, productive author/SME relationship.

I recognize that some people are only interested in criticizing. However, many SMEs sincerely want to improve content accuracy and might welcome an invitation to contribute. I have found that most people enjoy discussing their work or sharing their expertise. Lastly, as collaborators they now have a vested interest in the project’s accuracy.

Writing Regimen

Fleming did two important things that enabled him to complete drafts of the Bond novels in two months. First, he established a writing regimen. Second, he followed the regimen.

Fleming wrote every morning for three hours while he was in Jamaica. He did not deviate from his schedule or allow guests to interfere with his work. Fleming was concerned about the quality of the time he spent writing, rather than the quantity.

While you likely do not have Fleming’s autonomy, you can strengthen your writing regimen.
• Focus on writing

Fleming mastered the skill of researching. When he arrived in Jamaica in January, he had completed his research and could dedicate his entire time to writing.

While it is common to have some unknowns, you should have most of your research completed before you begin your writing phase. As you write your first draft, identify where you need additional information or clarification and continue writing. You may discover issues or patterns that are only evident when you complete a first draft.

I advise against multi-tasking—researching and writing. Rather than being productive, it usually results in incomplete information and additional work for you and SMEs as you re-interview them to fill the information gaps.

Fleming also spent his time solely on writing and did not edit until he completed the first draft of his book. This is good advice as writing and editing are two different processes. When you combine the two, you can create a loop of continuous editing, which interferes with productivity.
• Schedule dedicated writing time

When Fleming wrote he was completely focused. While you may not be able to avoid interruptions, try to schedule time dedicated to writing.
Here are some suggestions:

- Begin your workday before co-workers arrive. If you try this approach, use the time exclusively to write. While tempting, do not open your email or other electronic messages.
- Turn off automatic announcements telling you when you receive an electronic message while you are writing. In addition to disrupting your concentration, you may respond to messages that can wait, interrupting your writing time. This suggestion depends on your company culture and the type of work you perform.
- If you have a deadline and the interruptions will not stop, schedule a meeting with yourself on your online calendar, which will show you as unavailable.
- Take care of yourself
  
  Ian Fleming was in the enviable position that he could quit writing when he no longer felt productive. He would spend the afternoons snorkeling and exploring nature. However, there are still ways you can maximize your productivity and reduce your stress level.
  
  - Take short breaks throughout the day, such as a brisk walk.
  - If your company has an onsite exercise facility, schedule a regular exercise break.
  - Have healthy snacks available for sustained energy. Vending machine items and caffeine provide a temporary energy boost.

**Editing**

William Plomer, a member of Fleming’s editing team at Jonathan Cape, wrote in response to his reading *On Her Majesty’s Secret Service* (May 25, 1962): “What is so good about your books is their sharp focus. Everything is so clear, so makes a good impression.”

While the Bond novels reflect Fleming’s natural talent, they are also the product of effective editing. Fleming valued the editing process and feedback of his work. He recognized that his editing team made his work better and he often accepted their advice and provided an explanation when he did not. Not only did Fleming value his professional editors’ input, he also welcomed feedback from his readers, SMEs, critics, and friends.

Although Fleming was a successful author, he still experienced many of the same writing challenges as technical communicators.

As you edit your own or others’ writing, review for:

- **Technical accuracy**
  
  Noel Coward, English playwright and Fleming’s friend wrote a tongue-in-cheek letter regarding an error in *Dr. No* (6 May 1958): “. . . but what I will neither accept nor forgive is the highly inaccurate statement that when it is eleven A.M. in Jamaica, it is six A.M. in dear old England.”

  These types of errors are common and usually occur when authors write from their memory. Ensure accuracy by confirming the content with an official source. Examples: conversion from English to metric measurements, decimal placement, external standard nomenclature, and identification of acronyms.

- **Need-to-know vs. nice-to-know information**
  
  William Plomer, wrote to Fleming regarding *From Russia with Love* (28 June 1958): “Also, p. 111 Colonel is a fearful bore. Do we need him at all? And, if so, could we have his lectures shortened or omitted?”

  Plomer asked two questions that you could adapt to editing technical documents.

  1. Is the information required for the audience’s understanding? Remove the information and reread it. Is the document still clear and accurate? In addition to your SME’s review, ask an audience member to read the information. Sometimes writers include information that they think their audience needs, rather than what they actually require.

  2. If the information is required, can it be altered to improve clarity and the audience’s use? Determine if the content is better suited for another format (such as a table, flow chart, or graphic image) or another location (such as an appendix).
• Writing for a global audience

Fleming, who was English, wrote dialogue for American gangsters in *Thunderball*, with uneven results. A reader, Herman W. Liebert, a librarian at Yale University and scholar on the works of Samuel Johnson, became Fleming’s American vernacular SME after writing Fleming and supplying a list of corrections.

If you write for a global audience, you understand the challenges. However, regardless of the audience, your goal is clarity.

When writing for a global audience apply the following general good writing practices:

- Replace clichés and colloquialisms with clear language.
- Replace business and technical jargon with clear language.
- Be aware of jargon, clichés, and colloquialisms you frequently use in your conversations. The language we use in our oral communication often carries over to our written documents.
- Write in short sentences.

Conclusion

By following Ian Fleming’s approach to working collaboratively, establishing and meeting deadlines, and focusing on clear, accurate writing, you too can be granted a license to write.

Resources


https://www.stc.org/intercom/2017/05/reviewing-and-editing/.

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Ann Marie Queeney specializes in procedures for the healthcare industry. She has over 18 years of document specialist experience in the medical device industry. Her services include technical writing, editing, compliance assessment, and skills training. Ann Marie, a senior STC member, is manager of the Policies & Procedure SIG and a member of the STC Philadelphia Chapter and Technical Editing SIG.
More Lessons Learned: What Harry Potter Professors Teach Us About Instructional Design

Jamye Sagan

Education plays a crucial role in the Harry Potter series by J.K. Rowling. At Hogwarts, the school where Harry Potter and his friends study magic, we witness several examples of instruction in action. Each of these instructors has important lessons to share with us regarding effective instructional design and training delivery.

In this sequel presentation to “Lessons Learned,” we will profile more Hogwarts instructors, and analyze the effectiveness of their lesson delivery. Within the lens of each professor profile, we will share more practical tips on tackling common training issues, as well as provide some real-life (aka Muggle) training examples. By the end of the presentation, you will have even more tools to confidently tackle many basic training requests. Even if you have neither read the Harry Potter books nor watched the movies, you can still learn something from the Hogwarts instructors.

Technical communication and instructional design share much in common. The Society for Technical Communication defines technical communication as “any form of communication that exhibits one or more of the following characteristics: communicating about technical or specialized topics, communicating by using technology, and providing instructions about how to do something.” Instructional design—“the entire process of analysis of learning needs and goals and the development of a delivery system to meet those needs”—incorporates all aspects of technical communication, especially the last point about providing instructions. Let’s peek into the classrooms of a few more of the Hogwarts professors and instructors from Harry Potter to see what we can learn about how to best provide instruction to our learners.

Severus Snape: Relevance and Multisensory Appeal

When Professor Lupin, the regular Defense Against the Dark Arts teacher, is out ill, Snape serves as a substitute teacher and teaches the class about werewolves. Unbeknownst to the class at the time, Professor Lupin is a werewolf; Lupin and Snape were enemies while in school together. Snape’s lesson was his way of revealing Lupin’s true identity without blatantly saying so (Prisoner of Azkaban, pp.132–139).

In the movie Harry Potter and the Prisoner of Azkaban, Snape uses a slideshow projector to show the students some terrifying images of werewolves. Not only do the students read about werewolves, they also get to see what one looks like.

Lesson Analysis

Snape’s lesson clearly demonstrates the necessity to make sure lessons and their content are relevant and current—even for reasons of revenge. In delivering his lesson, Snape shows his advanced knowledge of werewolves and gauges classroom knowledge by asking them questions about werewolves. Even though most of the class cannot answer his questions, he still ignores the one student who DOES know, and unfairly admonishes her by calling her an “insufferable know it all.” On a positive note, Snape does an effective job in showing the class images of werewolves, so they could better visualize their characteristics.
Lesson Takeaways

• **Make sure your instructional materials contain relevant info.** Training content should reflect current procedures or information. For instance, when developing training for a software application, try to use the same software version that most of your end users will be using. However, if tools/version will look different, but function is the same, add a statement stating as such, to minimize any confusion with the change in cosmetic appearance.

• **Incorporate variety into your lesson.** While lectures can be effective for conveying vast bits of information, they quickly lose impact if they don’t engage as many senses as possible. Include such elements as images, video clips, graphs, charts, and other audio/visual elements. Better yet, don’t depend solely on lectures to convey information. Include group discussions, exercises, and other activities that invite participation.

• **Use multimedia elements to make your lessons come to life.** Examples include photographs, diagrams, videos, music, and even live demonstrations when appropriate. When should you use certain multimedia elements? Consider the following:
  - **Which trait do you want to showcase?** Think about which multimedia element would best convey your message. For example, if you want to demonstrate how to apply a blood pressure cuff, a video showing the process would be ideal. However, if you do not have video capabilities, use a series of photos to show key elements such as where on the arm to place the cuff. If you want to show students how were-wolves move, then a video would be appropriate.
  - **In what format will your learners view your materials?** Will they view your training via webinar or video? If so, you can certainly incorporate video. Otherwise, if you are using printed materials, then use photos. In any case, make sure your learners can view the desired output with the tools they have.

Minerva McGonagall: Handling Distractions with Style

In the movie *Harry Potter and the Sorcerer’s Stone*, first-year students Harry and Ron race into their Transfiguration class and think they are on time because Professor McGonagall is nowhere in sight—just a tabby cat perched atop a desk. When the cat materializes into the Professor, the latecomers express both shock and admiration.

Lesson Analysis

McGonagall handles classroom interruptions quite effectively. First, she quietly admonishes Harry and Ron for being late, all without disturbing the rest of the students who were quietly studying their lessons. She also uses humor when speaking with her latecomers, suggesting they transform themselves into a map and compass to get to class on time.

Lesson Takeaways

Although this lesson with McGonagall focuses on physical interruptions in a classroom, we deal with several different types of distractions in training, from participants entering a webinar a few minutes late, to being interrupted in the middle of performing another job. The following takeaways will address how design materials and lessons that address constant interruptions in the workplace.

• **Divide content into small chunks.** Doing so helps ensure you cover as much material as you can in that limited amount of time. Plus, if you present too much information to your learners at once, they may get overwhelmed and start tuning information out. A good rule of thumb is 15–20 minutes per module or activity. If you can, break that down even further.
  - **When developing training, break it up into smaller chunks**—also known as chunking—to make it easier to digest. If developing e-learning courses, break up the content into several modules. For instructor-led courses, mix up activities within the given classroom time.
  - **Chunking training content also makes course updates much easier**; you only have to update the small chunk vs. the entire course.
When chunking your training, consider:
Think of how steps are broken down.
Think of the topics you are covering. If you are covering multiple topics, group related ones together.

Produce easy-to-follow reference materials. Doing so can help users better deal with distractions by being able to easily see where they left off, after the interruption. For example, I create one-page job aids that neatly summarize the task at hand. These job aids focus solely on what needs to be covered. When possible, I use screenshots and pictures to show the process. If focusing on a certain process, I show only the pertinent portion of the screen at hand, instead of the entire screen. I show then entire screen only when users need to see everything in scope or if the entire screen is covered. I also use tables and other methods of formatting information to make it more visually attractive.

Wilkie Twycross and the Three Ds of Disappearing—and Reappearing

In *Harry Potter and the Half-Blood Prince*, sixth-year students can learn how to Apparate—or transport themselves by disappearing from point A and re-appearing at point B. Instructor Wilkie Twycross conducts Apparition lessons over the course of several weeks. In helping his students remember what they need to do to apparate successfully, Twycross reviews the three Ds: Destination, Determination, and Deliberation. (*Half-Blood Prince*, pp.382–386)

Lesson Analysis

Twycross uses a mnemonic device to help his students remember what skills they need to master for successful apparition: the Three Ds of Destination, Determination, and Deliberation. Mnemonics are learning devices that help people retain or remember information. They include songs, acronyms, words, and images. Twycross’s “Three Ds” is an acronym type of mnemonic. Although each word begins with the letter D, Twycross keeps these three words in order since each action builds upon itself. First, students focus on their destination—the wooden hoop in front of them. Then they focus their determination on that destination by wanting to occupy that space inside the hoop. Finally, they move to the destination with careful deliberation.

Overall, Twycross is a fairly competent instructor. He has the students practice apparating as he explains the three Ds. However, he waits until the students have practiced a few times before demonstrating a successful apparition. To make his lesson more effective, he should have demonstrated his own apparition while explaining the three Ds, so the students could better visualize success. Then once the students have seen a successful apparition, Twycross can still conduct the guided exercise where he talks about each D as the students follow along.

**Lesson Takeaways**

- Identify, develop, and use mnemonics to help learners remember key concepts.
  Consider your learning objectives—what your learners need to know. From there, identify any concepts or actions they need to remember. For example, we employ the hot dog technique when teaching screeners how to properly hold a patient’s finger for a fingerstick. In this image mnemonic, the screener’s hand resembles a hot dog bun cradling a hot dog, which represents the patient’s finger. Holding the finger like this ensures the screener not only has a firm grip on the finger, but also can easily identify where to perform the fingerstick.

- Consider localization and translation issues when using mnemonics. For example, if producing materials in multiple languages, consider how terms will be translated. You may need to change the mnemonic to suit the language. For example, if Apparition was taught in Spanish, the three Ds would still apply since they translate to Destino, Determinación, and Deliberación. However, if Apparition was taught in Polish, the three Ds would not apply since they would translate to Przeznaczenie, Determinacja, and Rozwaga.

**Horace Slughorn: Lucky Reward**

In *Harry Potter and the Half Blood Prince*, Potions Professor Slughorn offers a special reward—a tiny vial of liquid luck—to the student who can produce the best Draught of Living Death potion (*Half-Blood Prince*, p.188).
Lesson Analysis

Slughorn demonstrates effective use of reward to drive positive results from his students. How? First, Slughorn admits creating the Draught of Living Death is a rather complex task, and students could struggle and possibly give up on creating the potion. He dangles the extrinsic carrot in front of the students to encourage them to try for this reward. Of course, the reward itself is fairly valuable and worth trying for.

Lesson Takeaways

Not all rewards have to be tangible or extrinsically valuable. The main thing to remember when using reward is that it should be a tool toward achieving a goal, not the only goal.

- **Offer rewards to encourage participation in challenging tasks.** Although we ideally should work toward a goal for the intrinsic value, sometimes a “little bribe never hurts.” Sometimes, if a student finds fun in performing a challenging task, they develop that intrinsic value on their own.
- **Offer rewards to encourage participation.** Rewards need not be big or fancy. In the Instructional Design and Learning Special Interest Group, we have a gift card drawing for those who complete the bi-ennial membership demographic survey.

Rubeus Hagrid: Letting Passion Shine Through

In *Harry Potter and the Prisoner of Azkaban*, Hogwart’s gameskeeper Rubeus Hagrid makes his debut as the new Care of Magical Creatures Professor. In his first lesson, Hagrid teaches Harry and his fellow third-years about hippogriffs—half-horse, half-eagle creatures—from how to approach them to flying upon one (*Prisoner of Azkaban*, pp. 112–117).

Lesson Analysis

For someone who has never taught before, Hagrid does a decent job of conveying to his students his passion for magical creatures. For instance, when he teaches the students how to approach the hippogriff, he clearly explains what to do, and what not to do. Once he reviews this basic information, he then invites Harry to actually approach the creature. Hagrid walks Harry through the process, reminding him to back away as needed. After Harry successfully pets the creature, Hagrid then challenges Harry’s comfort zone by having him fly upon the hippogriff. Once Harry returns from his fearful yet exciting flight, most of the class is eager enough to try themselves. The only majorly negative aspect of Hagrid’s lesson is his assumption that the students know how to open their textbooks. When he shows the students how to open their books, he shows them and says it “as though this was the most obvious thing in the world.” Maybe to him, but not to everyone else, though.

Lesson Takeaways

- **Review procedures, then demonstrate them.**
- **A good way of doing is to briefly explain the steps, demonstrate to the learner, then have them try.**
- **For more information about this topic, refer to the Lupin section in Lessons Learned: What Harry Potter Professors Teach Us About Instructional Design presentation.**
- **Challenge your learners and expand their horizons.** Don’t just challenge them for the sake of challenging. Make sure you have a purpose for doing so. In Hagrid’s case, hippogriffs can be flown upon and once people know how to approach the creature, they can utilize that advanced skill of flying. When presenting brand-new material, consider what learners already know and build up their knowledge base from there. Make comparisons to things that they may already know. At the same time, though…
- **Do not assume anything.** Knowing your audience is crucial for anything you produce. Never assume they already know what to do. When in doubt, explain or cover the concept no matter how trivial it seems to you. If a learner already knows, they can simply skip over the material. This especially applies to teaching students about dangerous or hazardous items. This is probably why flight attendants review the safety procedures before the flight takes off. Those who already know can tune them out or pay attention anyway to get a refresher, and those who don’t know will benefit from the information.
Harry Potter: Learning from Past Instructors

In *Harry Potter and the Order of the Phoenix*, Harry and his friends form an underground group in which he teaches his fellow students how to defend themselves magically. He even teaches them how to produce a Patronus (*Order of the Phoenix*, pp. 606–607), which he had learned from Professor Lupin just two years ago. (*Prisoner of Azkaban*, pp. 236–243).

Lesson Analysis

Like Hagrid, despite lacking formal teaching experience, Harry does an excellent job in teaching his fellow students how to perform various spells. He provides constant guidance, from verbal encouragement when a student finally performs a certain spell, to actually walking about the classroom and adjusting people’s arms, hands, wands, etc. to guide them in the proper body position. Most importantly, Harry takes what he learned from others and shares it. For instance, just two years ago, Professor Lupin had taught Harry how to produce a Patronus, which is extremely advanced magic. Harry remembered how Lupin broke down that lesson—from recalling a happy memory, to the incantation, to putting it all together to try to produce a Patronus.

Lesson Takeaways

- **Observe instructors you admire and emulate them.** This includes not just teachers, trainers, and professors, but ANYONE who has taught or trained you on something. Ask yourself these questions: What did you like most about their lesson or teaching style? What helped you remember the subject matter?
  - Harry learned from Lupin how to break down a lesson into smaller components. For more information about this topic, refer to the Lupin section in *Lessons Learned: What Harry Potter Professors Teach Us About Instructional Design* presentation.
  - **Walk around the classroom.** Observe and offer help as needed. How would you do this? use guiding questions to help students arrive at the right answer—don’t just give away the answer. For example, if you’re teaching someone how to give a blood pressure reading and they applied the cuff upside down, note mentally what is incorrect and ask the student about that incorrect item.
    - Of course, if you are not in a physical classroom, you can still observe and provide guidance. During a webinar, for example, listen for any questions and look at the chat windows.
    - **Provide encouragement and offer feedback.** Just as Lupin commented on Neville’s performance and his confidence in his abilities, so should you do the same with your students.
      - Feedback needs to be specific. Instead of just saying “Good job!” or “Wrong, please try again,” give a reason. Explain why. For instance, when developing e-learning courses, I incorporate several “Test Your Knowledge” questions throughout the course. I base these questions on the defined objectives and provide specific feedback. When the learner answered the question, they would immediately know if they answered correctly or not, and more importantly, why. Meaningful feedback helps the learner know not only what they did correctly, but also what they need to work on.

As we’ve seen with these instructors, although many of them are not professors per se, they know how to convey their knowledge to others.

Resources


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As the Pharmacy Communication Advisor for H-E-B, Jamye helps design training programs and materials for various projects and initiatives in the pharmacy department, including use of their proprietary prescription dispensing software and health screening programs. She also manages communications between the corporate office and the store pharmacies.

A Senior Member of STC, Jamye volunteers with the Instructional Design and Learning SIG as its Treasurer, as well as handles Social Media and Surveys. Jamye also belongs to the Policies & Procedures SIG, the Technical Editing SIG, and the Women in Tech Comm SIG. She also volunteers at the Society level, as the SIG Outreach Director for the Community Affairs Committee and served as the 2017-18 chair of the Community Achievement Award and Pacesetter Award committees.

When not making “sense out of the senseless” in the tech comm world, Jamye enjoys transforming yarn into pretty and useful objects. She even belongs to a virtual group devoted to fiber crafts and Harry Potter.
Expanding Your Toolbox to Make You a More Productive Editor

Kelly Schrank, Associate Fellow

If you use Microsoft Word to edit other people’s work, you probably have your own bag of tricks to get the job done. In this proceeding, I will share some of my tips and tricks, gathered from many years of experience editing different types of documents in the hopes that you will learn something new to make you a more productive editor. My goal is to cover a broad array of technical solutions: reminding you of some shortcuts you may have learned and forgotten; covering some time savers like making an Editing Tools tab in Word and customizing the Spell Check to work harder for you; and automating some of your editing tasks using advanced find and replace with wild cards and simple macros.

Word Add-ons

PerfectIt
For those editing long documents with lots of abbreviations, specifically medical writing, this software is worth the money. It can generate a list of abbreviations used, tell when they have not been expanded on first use, and point out if they have been expanded more than once.

Have words that someone ALWAYS misspells? Or changing from US to UK spelling or vice versa? It can flag particular words, so even though you have to define it once, it will do the work for you once defined. Out of the box, it can help you fix inconsistencies. Create separate styles for separate clients, and it can do a lot of the work for you.

Website: https://intelligentediting.com/
Cost: $70 per year

Grammarly
This addition is controversial in some circles. I use the free version, but I have heard that the paid version is not worth the money, and even worse, that it makes life more complicated by flagging too much. It’s an add-on to Chrome, so it can conduct a spell check and grammar check on your emails and anything you type in any software or apps you use (desktop or online).

Website: https://www.grammarly.com/
Cost: free

Keyboard Shortcuts

There are over 250 keyboard shortcuts in Word. We all have our favorites, and certain ones that everyone knows. Here are a few of my lesser-known favorites:

<table>
<thead>
<tr>
<th>Operation</th>
<th>Shortcut</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Word Count Dialog box</td>
<td>Ctrl + Shift + G</td>
</tr>
<tr>
<td>Left align text</td>
<td>Ctrl + L</td>
</tr>
<tr>
<td>Format a letter to subscript</td>
<td>Ctrl + +</td>
</tr>
<tr>
<td>Format a letter to superscript</td>
<td>Ctrl + Shift + +</td>
</tr>
<tr>
<td>Insert an endnote</td>
<td>Ctrl + Alt + D</td>
</tr>
</tbody>
</table>

Table 1. Keyboard Shortcuts.

Quick Access Toolbar

Some frequently used commands are not conveniently located or may require too many clicks to access in Word’s default location. You can add many of these commands to your Quick Access
Toolbar (QAT) to save yourself precious steps in longer sequences.

With many of these types of customizations, you have to know what you want to do ahead of time, it may take some time to figure out what Word calls a command and where it is located, and you may not be able to make your shortcut quite as fast as you might like.

But once you have all that, here’s how you do it:

1. Right-click on ribbon.
2. Choose Customize the Quick Access Toolbar.
3. You can Add or Remove items from your QAT.
4. Click OK when done.

**Editing Tools Tab**

Creating your own Editing Tools tab is straightforward but can save you time with actions you take repeatedly.

This is very similar to customizing your QAT; here’s how you do it:

1. Right-click on ribbon.
2. Choose Customize the Ribbon.
3. Click the box next to items you want or don’t want in your ribbon.
4. Click New Tab button to create a new tab.
5. Choose commands from left, then press Add to move them to right.
6. Click OK when done.

**Auto Correct List**

Customizing your Autocorrect list (Options > Proofing > Autocorrect) is one way to make Word’s Spell Check work harder for you. There are many misspelled words already there, but you can add your own commonly misspelled or mistyped words to Autocorrect list.

**Custom Dictionary**

Your Custom Dictionary is where you add new words while you are running Spell Check and you ask it to Add to Dictionary.

You can also manually add new words by performing the following steps:

1. Click the File tab, and then Options.
2. From the Word Options dialog, click the Proofing tab.
3. Click the Custom Dictionaries… button.
4. Click Edit Word List button.
5. Type in new words to add and/or delete words that you mistakenly added.

**Exclusion Dictionary**

Your Exclusion Dictionary allows you to type in words that you want flagged as misspelled, even if they may not be wrong according to a traditional dictionary.

To modify the exclusion dictionary for a language, perform the following steps:

1. Copy this address (with your username as indicated) and paste in your Windows browser to find the following folder: C:\Users\username\AppData\Roaming\Microsoft\UProof.
2. Locate the exclusion dictionary for US English: ExcludeDictionaryEN0409.lex.
3. Right-click the file, click Open with, and then select a text editor such as NotePad.
4. Add each word that you want the dictionary to flag.
5. When you are finished, click Save on the File menu, then click Exit.

**Navigation Pane**

The document map function allows you to use the power of the Navigation pane to reorganize sections of your document quickly and without a lot of cutting and pasting. It does require that you use the Headings styles in your document. When you are looking at the Headings in your document in the Navigation pane, you can move the headings around, and the text that falls within each section will move with the headings. Word will also renumber your headings if you have numbered headings.

**Find and Replace—Advanced**

Under More>> in the Advanced Find section, there are other ways to search for items, like Match case, Ignore punctuation characters, and
Ignore white-space characters that can be helpful in specialized situations. Under Format, you can search for highlighted items (Highlight), and under Special, you can search for special characters like an em dash.

Find and Replace—Wildcards

Using wild cards lets you get even more specific in Advanced Find.

<table>
<thead>
<tr>
<th>Wildcard</th>
<th>What it Finds</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>Any single character</td>
</tr>
<tr>
<td>#</td>
<td>Any single number</td>
</tr>
<tr>
<td>*</td>
<td>Any string of characters</td>
</tr>
<tr>
<td>&lt;</td>
<td>The beginning of a word</td>
</tr>
<tr>
<td>&gt;</td>
<td>The end of a word</td>
</tr>
</tbody>
</table>

This list is just the tip of the iceberg. Wildcards can get a little or a lot more complicated, depending on what you do with them.

Find and Replace—Simple Macros

If you’re organized and have a set of find and replace actions that you perform with each document you edit, you can record a macro that accomplishes all of your find and replace actions much more quickly. You just need to test it for any unintended consequences. You can also use some of what you know about wildcards to make the macro more efficient and accurate.

To record a simple macro, perform the following steps:

1. Click the Developer tab.
2. Click the Record Macro button.
3. Give your macro a name (no spaces).
4. Click Button.
5. When the Customize the Quick Access Toolbar window displays, click the Add button.
6. Click the Modify button.
7. Choose a button image and click OK.
8. Go through the steps you want in your macro.
9. When you’re done, go back to the Developer tab and click the Stop Recording button.
10. Test it!

Note: If you don’t have the Developer tab showing, use what you’ve learned about customizing the ribbon to display it!

Editing Checklists

Creating and using an editing checklist for a particular type of document can really help you (and your team) be more efficient and consistent. But a checklist is no good unless you use it! Being able to check off items you have completed lets you know where you left off when you’ve been interrupted, or you go off on an error-finding tangent.

Here are 9 steps to a great editing checklist:

1. Start with a type of document you edit often
2. Document your actions
3. Add specifics—show and tell
4. Put in order
5. Start BIG
6. Go smaller
7. Add mechanics
8. Add tracking items
9. Test, revise, test, revise, use

For more details, go to SlideShare for my handout: https://www.slideshare.net/kellyschrank/how-to-create-an-editing-checklist

Resources


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Kelly Schrank has been in technical and medical communication for over 20 years. After stints as a medical editor, communications manager, and technical writer in pharmaceutical, cybersecurity, and many other industries, she has just started her own business Bookworm Editing Services, with a focus on formatting and editing formulary dossiers. She also enjoys editing proposals, slide decks, training materials, and many other types of documents.
Disrupting PR: How Technical Writers Can Augment Public Relations

Melissa Schuck

The communications landscape is rapidly changing and the lines between communications specialties are blurring. The field of public relations, in particular, is experiencing a huge shift both in form and function. As this occurs, it’s becoming increasingly apparent that technical communicators have the skills and abilities to cross over into this specialty in a way that adds a significant amount of value to organizations. As public relations changes, organizations can improve communications activities by including technical writers on communications teams.

While public relations practitioners have audience analysis experience, technical writers bring a unique outlook on how audiences interact with language. Technical writers can provide public relations projects with a more holistic perspective on how to shape composition and organization for greater impact on public relations audiences.

Introduction

The field of communications is comprised of many subspecialties, with mass communication, business communication, technical communication, and public relations being just a few. Each specialty arose due to a distinct need for communicators with a specific set of skills, whether it be a writer adept in project management or skilled in public outreach. Communicators often make the decision to specialize very early in their education and/or careers, narrowing the scope of their job opportunities and projects, with many communicators largely passing on anything outside of this purview.

Within organizations, different communications specialists tend to coexist in silos—different departments are structured to manage different communications needs. Communicators may even be matrixed within other technical departments, as is common in technical communications, yet still isolated from other communicators. This separation of work divides the overall communications workload that many organizations experience. This separation also provides continuity, as the same teams continue to tackle the same communications tasks. What this traditional structure typically does not provide is maximum use of total talents present throughout the organization.

Public Relations: A Background

At the same time technical communications was breaking out as its own unique discipline separate from English composition and business communication (Longo 123), public relations as we know it was beginning to take shape. At less than a century old, public relations is a young field compared to those that have been practiced and studied for numerous centuries. Even today, many find it hard to concisely define the field of public relations, although the Public Relations Society of America currently settled on the following definition: “Public relations is a strategic communication process that builds mutually beneficial relationships between organizations and their publics” (“About Public Relations”). When discussing the field, many common responsibilities include interfacing with journalists, producing press releases and other public statements, and prepping leadership to speak with the public. Traditionally, public relations practitioners have spent most of their time working with the media, as newspapers, radio, and television were historically the main methods through which audiences learned about organizations. The widespread use of the internet dramatically impacted this major role of the public relations practitioner.

With computers and access to the web being inserted into an ever-increasing amount of households, it quickly became obvious that journalists...
were no longer the only way that public relations practitioners could reach their audiences. Organizations began developing websites, and audiences began to get their information straight from the source. Present day public relations is now split between working through media and speaking directly to an organization’s public. The role of the media, while still fundamentally important, is continuously overshadowed by how organizations manage their audience relationships via the internet.

The Internet: A Problem and Solution

While the internet was causing public relations practitioners to question their knowledge and change well-established best practices, it was also changing the life of the technical communicator. While technical communicators also had to adjust to this new technology, the benefits of enhanced connectivity quickly became apparent. The rise of the internet also brought with it increased projects and responsibilities that fell reasonably well within the current realm of the technical communicator. Now that technical communicators were largely technically minded communications (versus technical) experts, the transition to learning how to operate these new technologies in order to provide associated documentation was a comparatively small step. For public relations practitioners, mastering the new technologies brought about by the internet has proven to be a massive task. In the world of the public relations practitioner, the internet and associated technologies has continued to complicate how practitioners manage relationships with their audiences in a world that is connected and communicating every second of the day.

Public Relations and Content Management

Managing content has always been a role of the public relations practitioner. As content producers, there has always been an element to the role that required storing, organizing, and publishing content. In general, this content management was a correlated task, not a major focus for the discipline. Traditional organization and publishing techniques and practices only partially transition to a world now ruled by the internet. This means that content management has become a serious issue for the public relations practitioner in a world that now revolves around the pulse of social networking sites (“Crucial Issues Facing Public Relations”). Public relations needs efficient and effective content management that keeps pace with the demands of increased content development and publication, especially for content published through social networking sites. This is an issue that the field of public relations cannot ignore. Yet, this is not an issue that is unique to public relations—technical communicators have been developing and honing content management practices continuously throughout these major changes in technology.

Conclusion

In both academia and industry, the field of communications has continued to split as disciplines within it have grown more specialized. These splits have caused an increasing dissociation between the disciplines, which has benefits in the separation of work required by researchers and practitioners alike. Where this dissociation hinders progress is in the duplication of skills, as communicators tackle similar problems yet seek out independent solutions. Public relations as a whole is facing a skills deficit when it comes to content management—a deficit the discipline will need to fix quickly in order to thrive. One of the fastest and most cost effective courses of action is likely to look beyond the silo and pull in this expertise by incorporating technical communicators into public relations teams and projects.

Technical communicators already possess the knowledge of content management technologies and best practices while being adept at functioning within communications environments. In addition, technical communicators also bring other complementary skills to public relations teams, such as editing, audience analysis, and user-centered design. As technology continues to morph at a rapid rate, these skills will continue to increase in value, making the decision to fold technical communicators into public relations environments a valuable short and long-term investment.

Resources


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**Author Biography**

Melissa completed her BA in Professional and Technical Writing at the University of South Florida and MA in Technical Communication at Minnesota State University, Mankato. She’s spent over a decade in various communications positions including six years supporting the military on technical writing, innovation, and public affairs projects. Melissa has also lent her communications talents to engineering, manufacturing, and research organizations. She has spent the past two years focused on shaping the future of these fields by teaching courses in general writing and editing, communications theory, technical and business communication, public relations, and social and new media.
Managing a large amount of content is equal parts art and science. Left to its own devices, it can quickly devolve into chaos. One key element of managing a large documentation project is to keep it well-organized. I have found that implementing a strict taxonomy for all of your project files is invaluable to a well-organized project. A strict taxonomy allows you to easily identify how all of your content fits into the overall project. During this session, you will learn what a taxonomy is, how it can help you, and how to create one of your own.

Introduction

Four years ago, I inherited a nightmare Flare project. It was full of poorly written content, unused content, and duplicate content. The project itself lacked any sort of logical structure. Project files were organized in a haphazard manner. In short, it was a disorganized mess.

Before I could address the poorly written content, I needed to assess the content that I had—to figure out what was being used and what wasn’t. The first step of that process was to apply a taxonomy to all of the Flare project files.

A taxonomy is a system of naming or classifying content in a way that reflects the inherent relationships between different pieces of content. Taxonomies can be applied to technical content in a variety of ways. They can be applied to index keywords to provide indexing support (Hedden 15). They can be applied to related terms and concepts to provide retrieval support (Hedden 17–18). They can also be applied to file names, navigational menus, and site maps to provide organizational and navigation support (Hedden 21–22).

For the purposes of this paper, we will be discussing taxonomies that provide organizational and navigational support. In this case, your taxonomy basically refers to the folder structure for your documentation project, as well as the naming conventions used for the project files (White, 2012). The biggest advantage of applying a taxonomy to your documentation project is that it makes your content more findable. Rather than riffling through unrelated content to find what you need, you can immediately locate the content you are looking for. A taxonomy makes it easier to identify the purpose of any given piece of content, which in turn makes it easier to identify how all of your content fits into the overall project.

Your taxonomy should be reflected in all files in the project, including topics, images, snippets, metadata, and DITA elements. Common elements within topics, such as introductions and field definitions, should use the same bookmarks and similar language. Figures 1 and 2 illustrate how a Flare project might look without and with a taxonomy, respectively.
Creating a Taxonomy

The first step for creating a taxonomy is to perform a content audit of the content that will use the taxonomy. The purpose of the content audit is to discover:

- What is the most logical way to group this content together?
- Are there inherent parent/child relationships?
- How should the taxonomy reflect those relationships?

As you are performing your content audit, there are a few considerations that you should keep in mind.

- What are the common components across all subject areas? This might include introductions, tasks, field definitions, button definitions, etc.
- Is there a hierarchy to my content, such as the navigation in the user interface? Does this hierarchy need to be reflected in my taxonomy?
- Do you support multiple outputs with unique content? This might include user guides for different applications, online vs. print outputs, etc.
- Are there common types of screenshots, snippets, etc.?
Where do I want to apply the taxonomy within my content? This might include file names, index keywords, bookmark names, etc.

One approach to performing a content audit is to create a mind map of your content. A mind map is useful because you can easily rearrange your content in different ways. Most likely, you will not need to audit all of your content because a pattern will start to emerge.

To get started, list all of the headers for your audited content in your mind map. For example, Figure 3 shows a mind map of the topic headings for one section of my Flare project. At this stage of the process, nothing has been categorized or tagged in any way.

Figure 3. Uncategorized mind map of project content
Start by playing with logical ways to organize your content. You might want to try organizing your content by subject area, by content type, or by using a combination of the two. You may want the organization of your content to follow the organization of the user interface, or you may want it to be workflow-based. For example, Figure 4 shows a mind map of the same topic headings. This time, however, they have been organized by subject and by content type.

This exercise makes it easier to see the hierarchical relationships in your content. It also makes it easier to notice patterns for common elements, such as introductions, types of tasks, field definitions, etc. At this point, you can start adding the tags that you’ll use for your taxonomy. In Figure 5, you’ll see that tags have replaced the categories and content types shown in Figure 4. At this point, you have the first draft of your taxonomy.

**Sample Taxonomy Guidelines**

You can use any taxonomy that you like, as long as you use it consistently. Some of the guidelines for my taxonomy include:

- Three to four letter prefix for each subject area. The file names for all content related to this subject—topics, images, and snippets—begin with this prefix.
- Three to four letter abbreviation for each application in the software suite. All output items for each application—targets, condition tags, destinations—use this abbreviation.
- Whenever possible, snippet and image file names match the file name for the topic they are related to.
- If multiple application-specific screenshots are required for a particular section, the application abbreviation is added to the end of the image name.
Figure 5. Project content, tagged with codes for subject and content type

- An identifying word for common sections, such as introductions, field definitions, and button definitions. All bookmark names and snippet names use this identifying word, regardless of the subject area.

Example: A topic about methods used for managed pressure drilling (MPD), in the Controls section of the user guide. The topic is broken up into individual sections for each MPD method.

- Subject area prefix = CTRL (short for Controls)
- Topic = CTRL_MPD.htm
- Section = Introduction
  - Bookmark = About
  - Image (Operation application) = CTRL_MPD_Ops.png
  - Image (Operation Lite application) = CTRL_MPD_OpLt.png
- Section = Flow mode
  - Bookmark = Flow
  - Image = CTRL_MPD_Flow.png
- Section = Connection mode
  - Bookmark = Connection
  - Image = CTRL_MPD_Connection.png
  - Snippet = CTRL_MPD_Connection.flsnp

Example: An introductory topic about static BHA analysis, in the Mechanics Analysis section of the user guide. The topic includes the introduction and button definitions.

- Subject area prefix = AMBS (short for Analysis\Mechanics\BHA\Static)
- Topic = AMBS_About.htm
- Section = Introduction
  - Bookmark = About
  - Image (Planning application) = AMBS_Plan.png
  - Image (Monitoring application) = AMBS_Mon.png
  - Snippet name = AMBS_About.flsnp
- Section = Button definitions
  - Bookmark name = UseTab
  - Snippet name = AM_UseTab.flsnp
Resources

References

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Author Biography
Jennifer Shumate is the lone technical writer for Weatherford’s OneSync® software suite, a drilling engineering software package for planning and monitoring wells. Jennifer is deeply passionate about using technical communication to improve the user experience. She earned a B.A. in English from Texas State University, and she has eleven years of experience in the technical communication field. Before joining Weatherford, she worked at Shell Trading and Borland Software. She is the treasurer for the STC Houston chapter, as well as a senior member of STC.
Making Video Part of Your Localization Strategy
Sarah Stegall

Technical illustration has evolved into instructional videos, and technical writing has expanded to encompass localization for international audiences. Just as we would alter a documentation strategy in preparation for translation, we need to prepare videos for subtitling, voice-over narration, and even animation in foreign languages. Questions of narrative voice, pronunciation, expansion/contraction of material, and technical questions arising from subtitling or animation are only some of the issues facing the localization manager/editor. This paper assumes readers are familiar with the basics of both content localization and video production, and explores some solutions to commonly encountered challenges to the production of videos in foreign languages.

The Challenges of Video Localization

The convergence of video and localization for delivering technical content presents unique challenges to technical content creators. It’s clear from assessments of millennials (An, Swant) that video will play a larger and larger role in content delivery going forward. At the same time, audiences show a clear preference for materials prepared in their own language (DePalma et. al., Beery and Barton). This means that it’s no longer enough just to produce a translated document or create a video; technical communicators must now take the next step and create videos localized for their target languages.

While it’s true that English has dominated the Web since its inception, and that the vast majority of online resources are in English, the rising influence of Asia and other non-English speaking areas means this state of affairs will not long remain static. Companies that ten years ago would have dismissed the idea of translating English technical documents into Chinese, Korean or Arabic as too expensive or complicated now face a rising demand for localized content, often from buyers, sales engineers, and their own support personnel. Translation rates are rising across all sectors of the information economy; content localization is predicted to increase from USD 2bn in 2017 to USD 2.5bn before 2020 (Estopace). Figure 1 shows the increase in Internet users from non-English speaking countries for the last 18 years.

Localization is complex. Videos are expensive, time-consuming and technically difficult. When we add one to the other, we not only inherit all the problems found in those approaches to technical communication, we find new ones arising. This paper will examine several issues unique to the production of videos in multiple languages, and suggest some solutions and resources.

It is assumed that readers are familiar with the basics of video production: scripting, shooting, assembly, and editing. It is further assumed that readers have some familiarity with the process of localizing content for translation: standardization of text, editing for slang and jargon, and re-use of as much content as possible. Support for finding out more about video production and localization can be found in the Resources section.

Audio Mismatch

Writers with experience in localization know that preparing for translation includes accounting for language expansion. We know that we need to make sure there is room in our page layouts and page counts for German, which can expand the number of words in a document by up to 35%, or for Japanese, which can reduce the number of words by 55% (Andiamo.com). Figure 2 shows relative rates of text expansion and contraction for translated text.
Making Video Part of Your Localization

Figure 1. Growth of Internet Users by Language, 2000-2018

<table>
<thead>
<tr>
<th>Language</th>
<th>From English</th>
<th>Into English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>20% to 25% expansion</td>
<td>20% to 25% contraction</td>
</tr>
<tr>
<td>Chinese (Mandarin)</td>
<td>10% to 15% contraction</td>
<td>10-15% expansion</td>
</tr>
<tr>
<td>French</td>
<td>15% to 20% expansion</td>
<td>10% to 15% contraction</td>
</tr>
<tr>
<td>German</td>
<td>10% to 35% expansion</td>
<td>20% to 30% contraction</td>
</tr>
<tr>
<td>Italian</td>
<td>10% to 25% expansion</td>
<td>15% contraction</td>
</tr>
<tr>
<td>Japanese</td>
<td>10% to 55% contraction</td>
<td>20% to 60% expansion</td>
</tr>
<tr>
<td>Korean</td>
<td>10% to 15% contraction</td>
<td>15% to 20% expansion</td>
</tr>
<tr>
<td>Portuguese</td>
<td>15% to 30% expansion</td>
<td>5% to 15% contraction</td>
</tr>
<tr>
<td>Russian</td>
<td>15% expansion</td>
<td>5% to 15% contraction</td>
</tr>
<tr>
<td>Spanish</td>
<td>15% to 30% expansion</td>
<td>5% to 15% contraction</td>
</tr>
</tbody>
</table>

Figure 2. Expansion and Contraction Rates for Translated Text
When it comes to audio tracks, however, another factor comes into play: speech. For most of us, it takes longer to say something than to read it silently (Words To Minutes). The narrative track of a video sets the timing for the entire project. If you create a video timed only to the English version of the narration, you may wind up re-editing the entire video for each target language. For example, you may have an introduction that runs fifteen seconds in English, eight seconds in Japanese, and twenty seconds in German. If you plan for a fifteen second introduction, you will have to cut five seconds out of your German narration. You will have an extra seven seconds of silence in the Japanese track.

Solution: Prioritize translation and recording of narrative. If you get the translated script recorded first, you can then plan your video based on the amount of time your narrator needs to get through the material. If you don’t mind a little re-editing, you can also plan to have “stretchable” B-roll in your video. For example, if you have an explainer with a long narrative, you can intersperse shots of the product, images of people working, or some other relevant image. If you are using animation, of course, you can alter the timing to fit the video. If you have prepared your script as a PowerPoint deck, you can use the PowerPoint slide timing feature (Microsoft) to do a test run and see how long your script will take to read aloud. The online tool Readtime (http://readtime.eu/) can also help your narrators to time themselves.

Talking Heads

Instructional videos often include shots of people explaining a product or process. If your video includes on-screen interviews with subject matter experts, you will need to use either audio replacement or subtitling to reach your target audience.

Solution: The advantages and disadvantages of different approaches are summarized below. You may need to vary the solution you choose based on your material. For example, if you have no human beings speaking, dubbing is probably not necessary. (See Figure 3.)

<table>
<thead>
<tr>
<th>DUBBING</th>
<th>Con</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closer to actual spoken language</td>
<td>Lip movements don’t match up</td>
</tr>
<tr>
<td>Screen images not blocked by text</td>
<td>Words have to match narrative length</td>
</tr>
<tr>
<td>Requires less attention</td>
<td>Not original</td>
</tr>
<tr>
<td>No need to read</td>
<td>Very expensive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBTITLES</th>
<th>Con</th>
</tr>
</thead>
<tbody>
<tr>
<td>No need to match lip movement</td>
<td>Not much room onscreen</td>
</tr>
<tr>
<td>Cheaper</td>
<td>Requires more attention</td>
</tr>
<tr>
<td>Viewer can hear original track</td>
<td>Distracts from image</td>
</tr>
</tbody>
</table>

Figure 3. Pros and Cons of Audio Replacement Options
Dubbing

- Audio replacement—The original audio portion of the interview is replaced with a recording of another person reading the translated material. The lip movements of your interviewee will not match the translated narration. This can be disconcerting, and also undermines the psychological perception of the speaker’s trustworthiness. It can also lead to unintentional humor, as any fan of spaghetti Westerns will know.
- Lip syncing—The script is rewritten in the targeted language so as to match the lip movements of the video. This is the method most often used in Hollywood movies, and gives the impression that the speaker is speaking in the user’s own language. However, this is a very time consuming and expensive solution.
- UN style voiceover—The English track is still present, but at a very low volume. Another narrator reads the translated transcript over the English track. This is used by the United Nations and by news organizations, because it gives viewers the speaker’s own words but also allows viewers who do not speak the interviewer’s language to understand what he or she is saying. This is a less expensive option than full lip syncing.

Subtitling

- Onscreen subtitles—These are embedded in the video and cannot be turned off by the user. A major downside for interviews is that the viewer must switch between watching the speaker and reading the subtitles. You also will have the same expansion/contracting problems with written subtitles that you have with translated text.
- Closed captioning—Subtitles in target language are hidden until selected by user. Captions can identify speakers or clarify questions, for example during a question-and-answer session. However, the availability of these captions may be constrained by your deployment platform; while YouTube makes it easy to turn on captions, a video hosted on your own company’s website may need special coding to make this available. There is also the possibility that some of your target users may not even be using a computer; they may be unable to turn captions on and off on a television, tablet or smartphone.

Deployment Mechanics

By translating your material into more than one language, you have doubled the deployment needs of your enterprise. Every time you add a language, you introduce a level of complexity into your video management strategy. Users may be confused to find several identical-looking videos in different languages, and may have trouble finding what they want. It would be wise to start planning the deployment of your video during the production stages, rather than wait until after your video is created to decide how and where to host it.

Solution: You have several options for addressing these issues. For example, on YouTube, you can:

- Create one video channel with multiple language content. All videos are hosted on one channel, where multiple videos are hosted in multiple languages. This is the easiest way to manage several videos while maintaining a consistent tone. However, this very simplicity may be a challenge for users; once they have found your website, they must then navigate among several nearly identical versions of the same video to find their native language. It may also confuse search engines, which will find multiple videos with nearly identical titles.
- Create channels for each language. You would create a multiple channels, one for each target language. This is especially helpful if you have videos using different alphabets, because search results will be in only one language. However, this will require regular updating and curating.
- Create one global channel with supporting local channels. In this scenario you would have a main channel, probably in English, and local channels that support a few localized videos. Usually this would leave most of the content on your English language channel.

Images

Images of people can present some of the greatest challenges for producers. Different cultures interpret them in different ways. An image Western viewers may consider innocuous, such as the finger
touching the thumb in an “OK” gesture, is very offensive in Brazil. Even non-humans can be a problem; in Western cultures, dogs are considered friendly symbols of loyalty, but they are shunned in Muslim countries. While this issue arises in print material with photo illustrations, the issue is magnified when extended to moving and speaking images in a video.

Solution: Where possible, replace potentially offensive photos with animations, with the translated narration playing underneath. Use simple shapes, paying attention to color (see next section). The ISO has a whole set of icons which have been carefully researched for their impact on audiences, which are universally recognized and accepted. (Gasiorowski)

Colors

Colors have strong symbolic meanings, whose impact is magnified by the fact that it is usually subconscious. White, not black, is the color of death and mourning in Asia and the Middle East, whereas in Europe and North America it often symbolizes peace and purity. In Japan, red means “danger”; in China, it signifies joy and good luck (Kroulek). While a Japanese viewer may not consciously register that your red shape is alarming, he or she may still feel some unconscious discomfort. This is not the kind of thing you want to discover after you have shot a five minute video against a scarlet background.

Solution: Carefully research your use of color, and avoid strong “trigger” colors if you can. Design a cohesive and well thought out palette and stick to it. Consult translation experts from your target countries, and enlist the help of your localization partner to learn which colors can safely be used from culture to culture. (See Figure 4.) Make sure your backgrounds for interview subjects are acceptable or neutral colors.

<table>
<thead>
<tr>
<th>COLOR</th>
<th>Great Britain</th>
<th>United States</th>
<th>China</th>
<th>India</th>
<th>France</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>Love</td>
<td>Love</td>
<td>Luck</td>
<td>Luck</td>
<td>Aristocracy</td>
<td>Anger</td>
</tr>
<tr>
<td></td>
<td>Stop</td>
<td>Stop</td>
<td>Joy</td>
<td>Anger</td>
<td>Danger</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Danger</td>
<td>Danger</td>
<td>Fortune</td>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORANGE</td>
<td>Calm</td>
<td>Confident</td>
<td>Luck</td>
<td>Mourning</td>
<td>Freedom</td>
<td>Future</td>
</tr>
<tr>
<td></td>
<td>Dependable</td>
<td>Joy</td>
<td>Disgust</td>
<td>Peace</td>
<td>Youth</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fortune</td>
<td>Cold</td>
<td></td>
<td>Energy</td>
<td></td>
</tr>
<tr>
<td>YELLOW</td>
<td>Coward</td>
<td>Coward</td>
<td>Wealth</td>
<td>Celebration</td>
<td>Temporary</td>
<td>Grace</td>
</tr>
<tr>
<td></td>
<td>Joy</td>
<td>Joy</td>
<td>Earth</td>
<td></td>
<td>Nobility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hope</td>
<td>Hope</td>
<td>Royalty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GREEN</td>
<td>Spring</td>
<td>Spring</td>
<td>Health</td>
<td>Romance</td>
<td>Fertility</td>
<td>Eternal</td>
</tr>
<tr>
<td></td>
<td>Environment</td>
<td>Money</td>
<td>Prosperity</td>
<td>New</td>
<td>Strength</td>
<td>Life</td>
</tr>
<tr>
<td></td>
<td>Go</td>
<td>New</td>
<td>Harmony</td>
<td>Harvest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLUE</td>
<td>Calm</td>
<td>Confidence</td>
<td>Heaven</td>
<td>Mourning</td>
<td>Freedom</td>
<td>Evil</td>
</tr>
<tr>
<td></td>
<td>Royalty</td>
<td>Dependability</td>
<td>Disgust</td>
<td>Peace</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corporate</td>
<td>Cold</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLACK</td>
<td>Funeral</td>
<td>Funeral</td>
<td>Heaven</td>
<td>Evil</td>
<td></td>
<td>Death</td>
</tr>
<tr>
<td></td>
<td>Death</td>
<td>Death</td>
<td>Neutral</td>
<td></td>
<td>Evil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mourning</td>
<td>Evil</td>
<td>High Quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WHITE</td>
<td>Purity</td>
<td>Purity</td>
<td>Mourning</td>
<td>Fun</td>
<td>Neutrality</td>
<td>Purity</td>
</tr>
<tr>
<td></td>
<td>Chastity</td>
<td>Peace</td>
<td>Serenity</td>
<td>Holiness</td>
<td></td>
<td>Harmony</td>
</tr>
<tr>
<td></td>
<td>Holiness</td>
<td>Holiness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4. What Colors Mean in Different Cultures
Pronunciation

There are significant differences in the way Portuguese is pronounced in Lisbon and Brasília, let alone Cape Verde, Mozambique and Guinea-Bissau (Dulce). China, one of the fastest growing areas for localization, boasts at least five separate dialects, from Mandarin to Cantonese to Shanghainese; all of them use the same characters for text but pronounce them very differently (Bolotnikov). Arabic boasts nearly as many varieties of the language as there are nations speaking it (Grigore and Bituna, Said). These differences are made more prominent when users hear the words read aloud than when they read text. Furthermore, a narrator who is not familiar with English may mispronounce words that have not been translated. Often, there is no direct translation of an English word into the target language, especially in software development. There is no choice but to retain the English word, but there is no guarantee that your native speaker who is reading your script will know how to pronounce it.

Solution: Choose your localization vendor and narrator wisely. It is not enough to just translate the words, a localization vendor should also know that all speakers of Portuguese understand “você”, for example, and that viewers in Hong Kong will not necessarily understand a narrative in Mandarin. It is worthwhile to research and determine which version of a language will be most familiar to all. If your target country is a member of the UN, it is very likely that you can find a “standard” version of its language. There is a version of Arabic, Modern Standard Arabic, used by 27 Arabic-speaking states and the UN; it will probably serve your purpose to adopt it as your standard. You must not only choose your translators wisely, but must choose voice actors whose pronunciation or accent will be perceived as “standard”. On the other hand, Cantonese and Mandarin sound so different that you might be better off using subtitles, as the Chinese themselves do. If you have untranslated English words in your narration, make sure that your pronunciation guide includes instructions on how to pronounce them.

Acronyms

We are accustomed to calling any collection of initial letters an acronym, but in fact only those abbreviations which can be pronounced as words are actual acronyms (Merriam Webster). Examples include NASA, NATO or ASCII; all of them are abbreviations, but they are universally treated as words and pronounced as such. On the other hand, an abbreviation such as FBI, IRS or YMCA is never pronounced as a word; these are called initialisms. The challenge for someone reading aloud a translation that contains acronyms is knowing when it is to be pronounced as a word and when it is not. You do not want your Mandarin speaker unfamiliar with English to spell out “N-A-S-A” or to pronounce “YMCA” as “yimka”.

Solution: Provide your narrator with a pronunciation guide, as you would with non-translated English words. A good rule of thumb is to expand the acronym the first time it is used, then use the abbreviation thereafter. For example, you would not necessarily have to expand a very well-known acronym like “ASCII”, but it would be a good choice to have your narrator say something like “Amazon Web Services, or A-W-S” the first time the subject comes up.

Deployment Issues

A recent Cisco white paper predicts that by 2023, 82% of Web traffic will be video, up from 75% in 2017 (Cisco). Last June, there were over 800 million Internet users in China alone. Looks like a great market for your product videos, right? But there’s one problem: almost all video channels are blocked in China. The People’s Republic bans YouTube, Vimeo, Twitter, Facebook, Google and just about every other social media platform. And although China represents the most extreme example of government control, it is not alone. Germany blocked YouTube from 2009 until 2016. At times, YouTube has been blocked in Russia, Thailand, Turkey and Venezuela. Twitter is not only blocked in China but in Iran and North Korea. Facebook is also blocked in Germany and (at times) the United Kingdom. Vimeo is blocked in Cambodia, Indonesia, Malaysia, Thailand and Vietnam, in addition to China. If that weren’t enough, with any target country located far from your office, you also might face bandwidth problems. Even in this day and age, long transmission routes can delay video streaming just enough to make it appear blocky, slow and unprofessional (Vzaar).

Solution: One way around the blocking issue might be to host your video on your own website. If you can embed your video in your own company’s URL, it might bypass the government filters. This solution runs the risk that, if the controlling government
objects to this or finds something objectionable elsewhere on your site, your entire company’s website might get blocked. So another solution is to find a host in the target country. One popular service in China is Youku, but it is focused mainly on entertainment. It is also necessary to have a Chinese email address, so if your company has a branch office in the country you can try setting up an account with Youku. Your best solution might be to partner with a local hosting service which can obtain a license; an additional advantage to this plan is that your video can be physically hosted in the target country, which eliminates issues with latency and delivery. In Russia, the Ivi.ru video streaming platform is mostly aimed at movie audiences, but occasionally hosts product videos; be aware, however, that as of the end of 2018, IP addresses associated with Amazon Web Services and Google Cloud Platform, two popular cloud hosts, are blocked there (Savov). Germany’s long-running ban of YouTube over price and copyright issues was only lifted in late 2016 (The CMU).

**Conclusion**

Although preparing multimedia in another language poses many challenges, these can be met with planning and research. With a solid knowledge of cultural differences, some technical know-how, and the cooperation of localization partners, even a one-person department can create useful training and product videos that will spread your message around the world.

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**Resources**


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**References**

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xAPI: Geek-Free Introduction for Instructional Designers

Megan Torrance

As adoption of xAPI begins to take hold, it allows for more robust and interesting tracking of the learning process. As actual performance and results data are integrated with learning metrics, we will have the data we need to tailor the learning process to individual needs while we can draw more useful conclusions about the learning as a whole across a wider population. A key skill will be identifying learning data needs, data sources and meaningful visualizations that answer organizational and learning and development questions about engagement and impact. xAPI also requires choices to be made about infrastructure and how to work with your existing and evolving learning ecosystem.

What Is xAPI and What Can You Do with It?

First things first, what is xAPI and what does it do for us? Literally, xAPI stands for eXperience Application Programming Interface. An API in general is an agreement between two systems in sharing data. For instance, when creating a post on LinkedIn, there may be an option to simply send the post over to Twitter. In this case, LinkedIn and Twitter have agreed to transfer data in the same format in order to create a more seamless user experience. The “x” in xAPI is for experience (and not an “L” for learning), because xAPI can track things that happen in the learner’s experience outside of the learning environment, on the job. xAPI will be the common language of learning tools across the ecosystem for interoperability and data transfer to support analytics and other actions.

xAPI has been called “the next generation of SCORM.” That is not so much the case as it truly is “what will replace SCORM.” Think of it like a phone. Modern smart phones can make phone calls, yes, but they can also connect to the internet, check email, play videos, take photos, count steps, and so much more. Through downloaded apps, the phone is future proof. Applications download today may not have even existed when the phone was purchased. xAPI can collect data much richer than the data that SCORM can collect, making it easier to use and improve upon in the future.

So, how does it help you?

• Learn more about the performance.
• Correlate learning with performance.
• Offer more targeted training.
• Support performance in better ways.
• Use data to learn with others.
• Compare performance and learning across learners.
• Deliver and track training outside of the LMS.
• Deliver and track training in an offline environment.

All of these things have been possible technically for a decade or so: the technology of xAPI is not the revolution. The revolution comes in the agreement of an entire industry to use a common communication specification.

What Makes xAPI Data Different?

SCORM collects limited data: time, score, location, status and answers, and only within an elearning context one learner at a time. This is a limited vocabulary with which to convey any kind of results or impact of learning.

xAPI is more akin to a grammar than a vocabulary. With a grammar you can communicate about anything. Much like a sentence, structure of an xAPI statement contains:

• Actor
• Verb
• Object
What Kinds of Data Can Be Collected?

An incredible amount of data can be collected, so it is important to focus on what and how much you need to record about your learner’s experiences.

What do we want to know? How much can we store? What will we want to know in the future? Some of the tried-and-true instructional models offer insight on what to track with the added richness that xAPI can provide.

Cathy Moore’s Action Mapping is focused on making measurable improvements to a business’s performance. As seen in Figure 2, there are several pieces measured (from inside to outside) including business goals, behaviors, practice activities, and knowledge. With SCORM, only the outer ring, or knowledge, can be measured because that is the only thing in traditional learning with a formal assessment.
When combined with the Katzell-Kirkpatrick Model shown in Figure 3, it becomes more clear what kinds of xAPI statements can be generated in accordance with the layout in Figure 1 above. For instance:

- Level 1: Peter rated event xAPI for Developers 5 stars “I learned so much!”
- Level 2: Jason answered question 20 “B”: “xAPI statements use JavaScript,” which is correct.
- Level 3: Stephanie completed the first step of the process in 0:23.
- Level 4: The team sold 87 units this week.

With the 70/20/10 approach in Figure 4, a learner’s progress can be tracked not just in the 10% (or formal learning), but throughout the entire learning approach (20% social and 70% experiential).
Finally, in Gottfredson and Mosher’s approach, as well as Torrance’s modifications, can be measured in all 9 opportunities for learning:

1. **Before**: Learns become aware they need to know something.
2. **Prepare**: Learners are getting ready to enter the training environment.
3. **New**: Learners are learning something for the first time.
4. **More**: Learners want to expand their knowledge.
5. **Remember**: Learners are remembering to apply what they learned on the job.
6. **Apply**: Learners need to act on what they have learned.
7. **Solve**: Problems arise or things break or don’t work the way they were intended.
8. **Change**: Learners need to learn a different way of doing something.
9. **Teach**: Learners need to share what they know and help others apply it.

**Where Does the Data Go?**

That’s a lot of data! So, what are we going to do with it? xAPI data is sent to and stored in an LRS, or a Learning Record Store. There several options here.

### Integrated Approach

The LRS could live inside your LMS, or Learning Management System, seen in Figure 5. Your LMS has employee demographic data—information about your learners, which location they’re at, organizational and reporting relationships.

### Managed Ecosystem Approach

There’s also a managed ecosystem approach (Figure 6) where your LRS is the data unifier when managing the connection between multiple other tools in the environment. If you have a lot of strong tools, this may be the route for you. This is great for large organizations who have multiple LRSs and multiple LMSs.
“Sidecar” Approach

The LRS and the LMS live separately, which allows you to avoid changing your LMS at all. You get all the advantages of using xAPI for the programs that need it, while also making sure your LMS data stays intact with minimal effort. See Figure 7.

Figure 7. A “Sidecar” Approach

Conclusion

As an industry, we have made leaps and bounds in bringing innovative change and technologies to the market. The expansion of xAPI without custom code, custom reporting, and very involved communication with your LRS provider make this technology more accessible than ever. Now, xAPI is gaining traction and adoption as an out-of-the-box, “geek-free” solution for the learning industry.

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References


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Megan Torrance is CEO and founder of TorranceLearning, which helps organizations connect learning strategy to design, development, data, and ultimately performance. Megan has over 25 years of experience in learning design, deployment, and consulting. Megan and the TorranceLearning team are passionate about sharing what works in learning, so they devote considerable time to teaching and sharing about agile project management for learning experience design and, of course, the Experience API (xAPI). TorranceLearning hosts the xAPI Learning Cohort, a free, virtual 12-week learning-by-doing opportunity where teams form on the fly and create proof-of-concept xAPI projects.
Content creates opportunities to engage customers and enhance their experiences, which can lead to customer loyalty and increased renewal rates. As content creators, what role do technical communicators have in the customer experience? Help documentation, whether it be instructions, videos, or on-screen tutorials, offers many opportunities to engage customers and provide microlearning experiences that build partnerships with the customer. How can you build documentation into the customer experience? What tools can you use, and how do you convince your stakeholders that your documentation and resources play an integral role in the customer experience? (Spoiler alert: through data gathering and analysis). Join us as we discuss how we took our documentation from being an afterthought to an integral part of developing our customer experience.

Overview

The Integrated Experience Design team at Edmentum, an education technology company, faced unique challenges implementing an effective support knowledge base strategy. As a result of mergers, Edmentum lacked consistent help documentation and a strategy to deliver these resources to customers. In addition, our customer support and services groups were bogged down by questions about basic functions like resetting passwords or completing simple tasks in our online learning products. The Integrate Experience Design team was created to address these issues. Comprising an instructional designer and a technical writer, our team is a part of the broader Experience Design (UI/UX) team to ensure our strategy focuses on creating a positive customer experience that adds value, instead of distracting background noise.

At the core, our strategy includes the following key points:

1. Providing targeted, concise resources with just the right information at the right time
2. Implementing tools and technology to improve customer engagement with Edmentum’s products
3. Using data and user experience feedback to inform our content design strategy
4. Driving the customer experience with our targeted, data-guided strategy

The Edmentum Experience

Overview of Edmentum and Our Audiences

As writers, we need to know our audience, especially when we want to influence our audience—who also happen to be our customers—to take action and engage with a product. And at Edmentum, we have a unique customer base: educators. Our customers may be:

- a second grade teacher in an urban school trying to bring individualized learning to her classroom,
- a high school math teacher preparing his students for state testing,
- the superintendent of a large district investing in devices for each student, or
- a rural middle school principal trying to offer more course options to her students.

The Edmentum portfolio consists of eight products that offer educational programs for K-12 and adult learners, making it easier for educators to individualize learning for every student through simple technology, actionable data, quality content, and a passion for customer success. (See Figure 1.)
When implementing our content design strategy for in-product support, we needed to keep in mind how unique and diverse our audience is. Teachers want to teach; they don’t want to spend hours learning a new tool for their classrooms. Unfortunately, before the Integrate Experience Design our team was created, support documentation was not a priority, and our customers didn’t know where to turn to find the information they needed. Edmentum was missing an opportunity to connect with customers and build a stronger partnership. With in-product support, we became a voice for our customers.

A Bleak Documentation Landscape

An Inconsistent Experience
After the mergers that created Edmentum, support documentation was in a troubled state. We had to contend with inconsistent writing styles, layouts, and terminology; unclear ownership; and complete lack of direction concerning the ideal support documentation experience. Other obstacles included lack of version control, inconsistent distribution, and conflicting instructional best practices. This disorderly approach led customers to seek knowledge outside of Edmentum’s products or to simply give up and leave our products completely. We needed to offer a better customer experience. We needed to provide our customers the answers they needed, when and where they needed them, from within our products. Our customers needed in-product support. And the research supports this insight.

Technical Documentation as a Part of the User Experience
Technical support documentation focuses on helping customers use a product more effectively. A study from The CMO Council found that providing better technical advice and assistance to customers is the number one way companies can improve the product ownership experience for users. Providing in-product support isn’t just a “nice to have,” it is integral to the customer experience and retention. (See Figure 2.)
Technical documentation can positively impact product success, promote collaboration, and improve the customer experience. With so much potential to positively impact the customer, we had to change the bleak view of documentation Edmentum had as an organization. We had to demonstrate that we don't just create instructional manuals; we are supporting customer success.

Introducing a New, Data-Driven Strategy

In-Product Support Strategy

Our in-product support strategy follows a three-tiered approach, which includes documents, videos, and on-screen guidance. Progressing through each tier increases both the time and involvement for customers and internal partners alike. Within the each product, a Help Center menu is the portal to access Tier 1 and Tier 2 resources. We use a third party vendor, WalkMe, a digital adoption platform, to house our resources within each Edmentum product. WalkMe also allows us to collect data on customer interaction with the Help Center and the available resources. It also provides us a platform to make announcements and push information directly to customers within the product. (See Figure 3.)

Tier 1: On-screen/on-demand support created with WalkMe. With guided, on-screen tours, tips, and even an opportunity for customers to share their feedback, all accessed via the Help Center button.

In addition, we push timely information directly to customers with windows that automatically appear upon login.

Tier 2: Via the Help Center menu, users can access our online resources library for more detailed or technical topics that may not be covered in Tier 1. The resources are organized in categories that reflect the key actions our users need to complete.

Tier 3: Should the customer need more detail or personalization, they have the option to contact Customer Support. Reaching out to Customer Support allows our team to provide the personal and consultative engagement that is sometimes needed for inquiries that require deeper technical or instructional solutions.

This approach also offers important benefits to our internal partners, including allowing them to focus on implementation topics, rather than basic, simple tasks, such as password recent.

Production Workflow

Our production workflow to create our in-product support resources follow a process that is similar to many instructional design models and ensures key stakeholders are involved in our content creation process. We found this to be key to buy-in. When stakeholders feel they have a voice in the process, they are more likely to support our strategy. The key phases include: analysis, development, quality assurance, and publication.
Analysis: Product managers present the customer challenges or feature/product updates that require support. We discuss how in-product support can address challenge/updates, set goals, and timelines.

Development: We gather information and interview subject matter experts to help us design our scope for deliverables, write outlines, scripts, and determine the final deliverables.

Quality Assurance: We ensure that each deliverable goes through internal quality assurance, including usability testing.

Review process: All resources go through two reviews, an initial (alpha) review with all SMEs and key stakeholders. The alpha review focuses on content. The final review, involving only the product manager and product owner, focuses on content and customer impact.

Publishing: We publish the resources to be accessible within the product, using our Help Center or online resources library, Learn and Support. (See Figure 4.)
The Four Cs
We implement “the four C’s” approach to our resources: clear, concise, complete, and correct. Using this approach ensures that we are efficiently producing resources customers can easily absorb and successfully carry out. (See Figure 5.)

Clear: Keep message easily identifiable. Follow a logical progression.

Complete: Include all information required to make a decision and take an action is included.

Concise: Use plain language and keep sentences simple and direct.

Correct: Ensure all information is true and organized in a logical manner.

Following these production strategies helps us produce self-service resources that our customers can trust and our training and customer support and services teams can reference as they work with customers. Because of this streamlined approach to access help documentation and the accurate information we provide, we’ve created a path in which we are moving beyond just the how-to instructions. We create videos to inform, in-product messaging to announce important product information, and collecting data and feedback on usage of our resources.

Our training team, which onboards new employees, incorporate our resources into their training. Instead of explaining to new employees how to complete a task in our products, the training activity requires employees to sign into the product, access the Help Center, and use the resources there to complete the task. This not only gives them an experience similar to the customer’s, but also ensures employees incorporate the Help Center into their own work.

Data-Driven Design
Finally, how do we know we’re on the right track with this strategy? Data.

We have two main platforms for data collection: YouTube and WalkMe. Our YouTube data has directly influenced the content and length of our videos: our videos are short, no more than two minutes long, and our content is direct, with the most important information first. With WalkMe, we collect data on each help resource our customers access. WalkMe collects data every time a customer opens a “Help Center” menu, clicks a resource, or types in a search term.

All this data we analyze to see which resources are being accessed, what search terms customers are using, and how long customers are watching our videos. This data not only demonstrates the

Figure 5. Four Cs of In-Product Support
effectiveness of our strategy, it influences how we move forward. We provide usage data to our stakeholders monthly. Search term data tells us whether we have the resources teachers are searching for. If we don’t have resources for popular search terms, we refine the metadata or create new resources. This also gives product managers visibility to where customers may be struggling. For example, if a frequent search term is “edit users,” that may mean this feature is difficult to find or that we need to create additional support for it.

Conclusion

Obtaining the buy-in to implement a new strategy (for documentation or any other strategy) is challenging and takes time. By focusing on our role as customer advocates and sharing the data, we have become an integral part of the customer experience. This experience starts with our own internal partners. Employee onboarding includes product training, but instead of giving new employees the steps to complete a task in a product, training activities involve going into the product, accessing the Help Center, and using the resources there to complete the task. Once employees see how easy and helpful in-product support is, they’ll share their experience with their customers. When the Help Center is treated as an integral tool in the product, customers learn to go there, first, to find the answers to their questions. Our customer support team has seen the effect of this—they focus less on simple tasks, like finding a student’s password, and more on implementation questions. In fact, the Help Center is now part of their script.

Our next steps involve continuing to adapt to our customers’ needs. We also evolve with our products, implementing new strategies and tools to meet new demands. But our overall strategy to provide clear, concise, helpful resources to our customers, when and where they need them, remains as our foundation.

Resources


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Patty Viajar has over 15 years’ experience in the learning and performance field and holds a PhD in Education, specializing in Training and Performance. During her career she has led global training and eLearning initiatives and designed and delivered content for innovative and customer-oriented organizations in diverse sectors. Implementing a solid instructional design approach and the use of technologies, she helps her audience meet their instructional and learning goals. Her specialties include implementing instructional strategies, video production, project scoping, developing training initiatives, and high-quality facilitation. As the Sr. Integrated Experience Designer at Edmentum, Patty has fused her passion for learning and technology by implementing an in-product support strategy to enhance Edmentum’s customer experience.

Sarah Bosak has experience as a technical communicator in the private sector, government, and education technology. As a member of the Experience Design team at Edmentum, Inc., Sarah Bosak is passionate about empowering her audience with the resources and tools they need to be successful in implementing Edmentum solutions.
Managing Service Outages: Getting Users Back to Success Quickly, Clearly, and Transparently

Vanessa Wilburn and Arthur Berger

Your users rely on your company’s products and services to satisfy a real-world need they have—whether it’s connecting with potential buyers in your e-commerce app, or it’s using your line of B2B tools to build something. When your service experiences an outage, your users rely on communication products not only to understand what they can do but also to figure out how your company cares about their experiences. Planned maintenance, incidents, outages, recall notices—all of these critical communication products can empower your users to get the most out of your company’s products, even in a potentially painful situation. Nobody wants messages that are vague, inaccurate, delayed, noisy, or undiscoverable. Technical communicators can improve their company’s incident notification processes through user advocacy, stakeholder management, research & design, and technical content development.

In the cloud world, outages can make or break your product. Your company’s service level agreements of five 9s (or more!) for 24x7 availability (24 hours by 7 days a week) are just the table stakes. In the digital age, customers expect their websites, mobile apps, and other services to never be down. For example, when a major hurricane headed towards a highly populated coast, The Weather Company’s website and all associated cloud services experienced a huge demand from consumers, business partners, and even governments. A 404 Page Not Found or 500 Internal Server Error message is simply unacceptable to their users. Even for sites that people do not depend upon for safety information, your users might abandon ship or commiserate on popular forums, swearing to use a competitor and lowering your product’s brand reputation. They might seek answers from the “wisdom of the crowd” and follow incorrect instructions or Stack Overflow “hacks”—and your company has lost control of the conversation and credibility to resolve the issue.

Fortunately for your company, they have invested in a quality technical communication resource—you. With your content skills, you can get your users back to success by managing the incident communication process:

- Develop incident messages
- Verify that your communication process is meaningful to your users

The lessons learned that are presented in this article are drawn from real projects at IBM and other companies to improve the incident experience of our users, particularly by using communication self-service products to help them understand the incident, take any recovery or next steps, and reduce the need to open support tickets.

Bringing Together Stakeholders from Across Your Company

When you begin to tackle incident notifications, you need to understand your company’s organizational processes and history. In earlier times, companies rarely shared details about anything that might be construed as making them look bad, like a major outage. The Public Relations (PR) field has a whole discipline called Crisis Communications. Depending on your product’s prominence in the company, you might or might not need to work directly with PR. But even if you don’t, quite a lot can be learned from crisis communication and its focus on truth, transparency, and action plans. The PR team is also closely connected with Marketing and their concerns on how the product’s performance can drive the company’s bottom line, which is always a consideration in every business effort. Together with
Finance and Legal, these stakeholders represent the corporate constraints that your incident notification process must take into consideration. For example, your company might have certain policies or formal procedures for notifying users, especially if service level agreements (SLAs) are involved.

Your Product Managers, Support, and Sales Account teams also need to be involved in the process because they have direct experience with your product’s users and purchasers. Reviewing the Account team’s notes about how they communicated a particular incident with a particular customer can provide good field data to inform your incident process.

And finally, the engineering team of Operators and Service Reliability Engineers (SREs) are critical since they are often the owners of the customer incident notification process. Not only are they your Subject Matter Experts (SMEs), but they are also your incident process’s “users,” in the sense that they will be responsible for implementing and using the process that you are helping to steer. In fact, they probably already have detailed processes in place but might need your help. For example, an incident was handled poorly, and user surveys cited “poor communication” as an issue. After all, in the heat of the moment, the SREs are busy trying to fix the problem. When we interviewed SREs, they used words like “chaotic” and “intense” to describe the activity during an incident. That environment doesn’t lead to quality writing, especially if it’s midnight and English isn’t your first language. Later, we’ll look at some ways your communication products can help these SRE users, such as templates to improve not only the speed but also the quality of the notifications that go out.

Researching and Designing a Better Incident Messaging Experience

Now that you have a good idea of who in your company should be involved in developing a process, and the unique perspectives they offer on the issue, you can begin to research and design. At IBM, we follow the Enterprise Design Thinking framework to center our work products on our end users. Some of these Design Thinking tools that we used to improve our incident notification process include:

- Stakeholder and empathy maps
- As-is and to-be journey mapping
- Process workflows
- In-field user research
- Stakeholder interviews
- Competitive evaluation
- Playbacks

As you’re conducting research for an incident notification process, it’s important to keep in mind that you are not conducting a root cause analysis for a particular incident. Instead, you are trying to get at the root of perennial process problems. For example, it could take a while for a user to receive a notification of an incident. There are many potential reasons for that, such as few users are impacted, the feature isn’t used often, people are off because of a holiday, or monitoring automation failed to catch the error or to page out the appropriate team.

By interviewing your stakeholders, you can identify these reasons. It can be helpful to map these out against when and where in the user journey these issues appear. You might even create multiple concurrent user journeys that represent different players in the process, such as SREs and users in the following Figure 1.

![Figure 1: Mapping out the workflow process by stage in different types of users’ journeys.](image-url)
After you map out a typical incident workflow, you might find that notifications aren't always sent when an incident is identified. Given the complexity of cloud products, an incident needs some analysis to determine how large the impact is: number of users, scope of features, and number of regions affected. It's not helpful to users if you post a message that says:

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Uh-oh, something’s wrong. Maybe the whole service is down. Or, it might just be AI apps in Houston.
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When generic messages are posted, users tend to worry and start immediately checking their apps.

What we’ve seen through user observation is people posting several messages asking for help, speculating about the extent of the incident, and generally inducing more panic with other users. Crowd psychology confirms these panic behaviors, now played out in the digital realm.

To get a feel of the user’s perspective during an incident, try to create as-is and to-be user journeys by stage. For example, Figure 2 shows part of an as-is journey map. This map summarizes our field research into stages and what the user was doing (partially shown), feeling, saying, and thinking (not shown).

Finally, an effective way to study the actual communication products (as opposed to internal processes) is to look up what messages and tools your competitors are using. Maybe one of your competitors has a really great tone and voice when they reach out to users via Twitter. Or you can use a public style guide for error messages, if your own company does not have a guide. You can also funnel this research back to your Product Manager and Marketing stakeholders, as they are probably interested to see what pain points their competitors have.

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**Forming a Coherent Incident Communication Strategy**

With sound research of both your internal stakeholders and external users under your belt, you are ready to hammer out an incident communication strategy.

**Be Clear on Your Terminology.**

First, you need to decide what it is that you are even communicating. The following terms are often used when reporting a customer-impacting event.

*Incident, according to ITIL,* is an “unplanned interruption to a service,” but it might not actually be a full-blown, SLA-breaking outage. You can use this term as a softer catch-all for incidents as well as interruptions that you still want to notify your users about. You might wonder why you would communicate something that’s not “bad enough” to be an incident, but this can be a great way to build customer trust in your product.

*Outage* implies that user apps literally don't work. But not every cloud issue causes a full app outage for your users. For example, an incident in one data center in Europe might not cause an outage if an app is hosted in multiple data centers with a load balancer.

*Notification* is the message that tells users what's going on. The notification could be an email, a message on a status webpage, a Slack post, a Tweet, or an update to an RSS feed.

*Status* describes the state of the cloud. A user app on the cloud could be broken, but the underlying cloud is not, so it's critical for the status to indicate whether the cloud’s OK or having problems. That either-or language is important to the users who are debugging their own apps.

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<tr>
<th>STAGES</th>
<th>Normal operations</th>
<th>Outage occurs</th>
<th>Aware of outage</th>
<th>TS to see if local</th>
<th>Look for help</th>
<th>Notified about outage</th>
<th>Resolution</th>
<th>Check for repopularity</th>
<th>Normal operations</th>
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Figure 2: As-is journey map based on design research.
Connect to Your Users and Build Trust with Transparency.

Enterprise software typically runs or influences big swaths of people’s lives these days. Think about airline online reservations, 401K account trading, multinational shipping, or oil refinery automation. An easy way to win and bolster trust is to be transparent when things go wrong.

Transparency doesn't mean that you have to share intellectual capital, to expose sensitive data, or to air dirty laundry. But transparency does mean that you share the relevant details to the target audience, and you share with sincerity, while not obscuring the meaning. When you gain users' trust, they have confidence that your software will run their business well. Customers who are confident are the ones who will be your best advocates and help increase your sales with no marketing spend. Users who have lost confidence in your software can be the ones who can start an embarrassing social media storm.

An example of transparency analysis comes from the well-known Target security breach: "His (Target's CMO) post replaces excuses with acknowledgement, caveats with candor, and hubris with humility—and it also starts the timer on his ability to match his prose with execution."

So what does relevant, transparent writing look like? Generally, start with the incident summary in clear, brief language, and don’t let any other text go first. Say what you're doing or have done to fix the issue. If applicable, tell users what they need to do. Overtly state who takes which action when you have multiple audiences, such as the system administrator, the database administrator, the developer, or the end user. Each of those people will likely have different permissions and can't perform the same operations.

Describe underlying causes. But don't get lost in the weeds. Brief is good. This is not the time to do a root cause analysis. Apologize, sincerely. Don’t forget that a sincere apology can go a long way with mending damaged relationships. Sincerity means that you take ownership for the issue and not try to assign blame elsewhere.

Post to Social Networks with Credibility and Authority.

Another thing we observed in support channels is credibility issues. Social networks have a variety of people in them. Some of them are helpful experts, but not official company representatives or SREs. Sometimes, seemingly random people post what looks like official notifications, but they are not authorized to make public statements about incidents. Unsurprisingly, other people in those channels can be a bit skeptical about the information they find and start to doubt the credibility of the notification.

To address credibility issues, the people (including bots) who post the incident information must have a complete profile in Slack, Twitter, or whatever channel you use. This includes a name, understandable title (not jargon or abbreviations), and a photo. If it is a bot, make this clear and perhaps have a bot icon.

Break Radio Silence.

When you are ready to break radio silence, do it as quickly as possible. Different teams have varying processes to get messages out. We've mentioned templates as one mechanism to speed up the notification creation. Another option is to use APIs or other automation to decrease the time between learning about the incident and publishing its notification.

In cloud, you can also use updates to iteratively improve a notification. The first posting might have simple details. The next update might include actions that your company has taken to diagnose the problem and even scope the impact up or down ("now we've discovered that only the European region is affected.") A final update is necessary to indicate that the incident is resolved, including any actions users might need to do. For example, users might need to restore from backup or to use a different configuration.

Consider how frequently you plan to follow up after breaking the silence. While this might vary by industry, especially in the cloud world, you should make updates every hour, so that your users don't think you've gone "radio silent." In other words, don't make your users wonder whether a problem still exists, or when it was fixed. They might be observing a different issue but assume that it's related to the published incident, when it's not.
Developing Useful Incident Messages

The incident message that you publish has a lot of ground to cover per your content strategy: transparency, credibility, reassurance. Yet, when things are on fire, the message is often hastily dashed off by an SRE who really just wants to focus on resolving the issue. One of the most useful ways to address this is to develop incident message templates and embed them in the tools and processes that your SRE team uses.

Create Quality Error Templates.

A typical cloud product is made up of several architectural components, so your customer-facing statement should describe how an issue with the component is experienced by your users, whether that component is a back-end server, front-end server, database, network, underlying compute, and so forth. This might be the hardest thing for you to uncover. We developed our templates from our research, interviews with SREs and Support, and from previous messages of common or recurring failure scenarios. On top of that, we quickly realized that cloud incidents have variables that need to be replaced, depending on which customer-facing aspects were affected, such as specific locations, the type of interruption (intermittent, delays, total outage), the scope of the incident, and what specific actions are or are not impacted.

Here’s one of our templates:

The IBM Cloud Kubernetes Service console can’t be accessed in <REGION>. In the meantime, you can still use the API and CLI for our service and also for Kubernetes. To access your Kubernetes dashboard, follow the instructions for the CLI: ibm.biz/kube-db. We apologize for the inconvenience.

We have a formula that we try to cover in every notification. Sometimes, that’s not possible, so we also have more generic templates that might only incorporate some of these facets:

- What’s happening
- Where it’s happening
- Why it’s happening
- What’s still working and what’s not
- Any actions users must take and by when
- Possible recovery steps or temporary workarounds
- Apology and indication that your company is working to resolve the issue
- Estimated time to resolution, if available, and next update time

Keep in mind your audience and how a templated message might come across to them. For example, a younger audience of gamers who use a video hosting service might want a template that is more conversational, such as:

Rats! Looks like some of you are having trouble <DOING XYZ>. If this is happening to you, try switching <THIS SETTING> to <THIS VALUE>. We’re sorry for the trouble and expect to have a fix before dinner.

Finally, the message templates should conform to your company’s style guide, with proper grammar and punctuation. This can be particularly helpful if your Support team is located around the world and includes non-native English speakers who would otherwise have to figure out syntax. A good resource for developing the right style is Developing Quality Technical Information, particularly Chapters 5-7 on Completeness, Clarity, and Concreteness.

Automate Posts to Slack, Twitter, or Similar Channels.

In Slack, we’re trying out bots to help facilitate communication in private channels with the SREs. The SREs can ask the bot to access the templates and include them when opening an issue that they use to manage an incident. The bot can also be used to post official notifications in public channels. You might also set up this bot to pull information from Support runbooks and other troubleshooting information to better inform the messages that the SREs post. Slack could also pull in RSS feeds. If you do use RSS feeds, be careful not to inundate your users with messages that don’t matter to them, such as incident notifications for every product in your company, not just the ones that they’re using.

Your company might have an official status page, and that page might also have built-in integrations with Slack, Twitter, or RSS feeds. Either way, the page is also an area that can benefit from some technical communication and user-centered design. Work with your stakeholders to update the page around the results of your user research.

Some best practices for the status page follow. A clean tab layout synchronizes various types of information together in one place for the user:
status, planned maintenance, security bulletins, and announcements. Users can also subscribe to products of their choice. Additionally, pages should take a “changelog” approach that emphasizes the team’s history of resolving issues and includes the original incident message.

Verifying That Your Communication Is Meaningful to Your Users

A final word on your incident communication process is that it is never truly “done”: you always have the opportunity to iterate and revise in response to real-world conditions. Instead of waiting for a user to give you feedback (or leave after an outage!), you can proactively plan activities to collect such data ahead of time. Some ideas include conducting internal and external pilots before rolling out a new system, implementing some type of feedback mechanism into an incident notice, developing a closed loop analysis (CLA) business intelligence process with defined success metrics or other key performance indicators (KPIs) that are based on product usage, and quarterly meetings with the stakeholders to confirm that the process is working. For some ideas on gathering feedback on quality documentation, check out a recent article by Yoel Strimling in Technical Communication Online.

Even if you don’t have the resources to conduct in-depth, external user research, you can often gather quick data from your internal users or even development team. After all in cloud, your product probably depends on other cloud products and microservices that deliver their own incident notifications, so your developers are in some sense users. They can often tell you what they like and dislike seeing in a message. Even if you don’t have metric tracking embedded in your system right away, Support and SRE teams can also provide feedback on whether they are using the templates and other tools and whether they are seeing a reduced number of questions or complaints about the quality and frequency of incident notifications.

Conclusion

Tackling your company’s incident notification process is not a one-person job (or if it is, that person is wearing a lot of hats!) and might also seem outside the scope of a traditional technical communicator’s job. However, because of the importance of communication during this process, technical communicators can contribute meaningful expertise and can also be in the best position to steer the strategy due to their unique role as a liaison among Product Development, Customer Support, Marketing, and the end-users. By following the ideas for stakeholder management, research and design, strategy, technical writing templates and tools, and verification data, you can develop an effective incident notification process for your company, and more importantly, for your users.

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A Tale of Two Podcasts

Ben Woelk, Associate Fellow, and Allie Proff

More Americans know what podcasting is than who the vice president is, and 12 million Americans listened to their first podcast last year. Of people who are podcast listeners, 80% listen to all or most of each episode, and listen to an average of seven episodes each week. Given that sort of engagement, it’s no wonder that businesses are starting to seriously explore podcasting as a new method to reach customers and other businesses.

Podcasts Are a Legitimate Media Channel

New tech trends pop up all the time. Some quickly fade away, while others stay around for years. As a company, it’s important to stay on top of trends, but only the ones that will provide a return on time and money invested.

Edison Research, in partnership with Triton Digital, gathered these statistics in 2018 from United States listeners and published them in The Infinite Dial, a yearly report dating back to 1998 on consumer use of media and technology.

- In 2018, 64% of Americans, or 180 million people, have heard of podcasts. Just after the 2016 election, only 60% of Americans know who the vice president is. (It’s Mike Pence.)
- 44% of Americans or 124 million had ever listened to a podcast, up 4% from 2017, mostly due to growth in Spotify, Apple Music, and Alexa-driven Amazon Music listening. 12 million people listened for the first time this past year.
- 26% of Americans or 73 million people listen monthly, and 48 million people listen weekly. By way of comparison, about 20 million people watch NFL Sunday Night Football.
- 26% of Americans or 73 million people listen to podcasts at least monthly, including 17% or 48 million Americans who listen weekly, which is more than twice as many Americans who watch Sunday Night Football (around 7%/20 million).
- What’s really cool is that of these weekly listeners, 80% of them listen to the entire episode. That’s down from 85% last year, but the number of weekly shows grew from 5 to 7. They’re downloading more episodes and listening to slightly less of each.
- The age group that listens the most are 25 to 55, followed by people 12 to 25, but not a lot of people over 55 listen (though it’s growing). Men used to listen to podcasts more, but the numbers now are about equal.

While the numbers prove the legitimacy of podcasting, it’s not a strategy for everyone.

Why to Start and Not Start a Podcast

Just because you can do something, doesn’t mean you should. Three things to consider when deciding whether or not to start a podcast are audience, resources, and purpose.

Consider your ideal customer or avatar. When looking at the statistics of who is listening to podcasts, is this the best way to reach him or her? Podcasting has a lot of novelty, which is good because it means the space is less crowded, and podcast listeners give you attention not necessarily found in print or video. On the other hand, if your ideal customer isn’t the type of person who would listen to a podcast, then all of your effort is for naught. Above all, the value that brings a listener back time and again is if the content is engaging, entertaining, or informative.

Another reason people may start a podcast is that they think podcasting is easier than perhaps writing a blog article or creating a video. In some situations and for some personality types that may be true, but there is more to podcasting than people often realize. In addition to recording the episode, it takes time to edit the audio. And it’s important to get a written transcript of the audio as well. The transcript
is important for including users with disabilities, and a transcript is able to be crawled by search engines, improving search engine optimization (SEO). While you can just put the podcast out there on players, a website is highly recommended to host all the content together as well as providing a way to convert traffic into customers if you have a business.

Finally, how will you know if your podcast is a success or not? What is your definition of success and how will you know if you have a return on your investment (ROI)? For a company podcasting, the value of your podcast might be in content marketing, storytelling, or relationship building. It might be difficult to get metrics that directly link what customers hear with any purchases, so you might measure customer sentiment or interactions via comments and reviews. For an individual podcasting, the goal may be to gain exposure to a wider audience, to be seen as an expert in their field, or simply to just have fun creating something.

**Types of Podcasts**

Most podcasts are episodic, in that each episode stands alone like an issue of a magazine. You can listen to any episode in any order, and it will still make sense. Some podcasts, however, are serial like a TV series or a book series. If you jump into the middle of the season, you may be lost.

People typically release episodes on a regular basis, whether it’s monthly, daily, or weekly. A few shows release in batches called seasons. Even if the show is an episodic show, the season might be a collection of five or ten podcasts released once a quarter around a specific theme. There are shows that release on a sporadic basis, but since followers don’t know what to expect or when to check back this method is the hardest to build a following with.

Within episodic podcasts, most shows are solo shows or interview shows but you can also have answer the question shows, read the news shows, and everything in between.

Here is a list of some of our favorite shows related to technical communication, in no particular order:

- **Hope for the Introvert**—Ben Woelk interviews introverted leaders about tips they have to give other introverts in leadership.
- **Technically Eclectic News Podcast**—Allie Proff narrates and occasionally discusses with others articles from technical communication, content strategy, and user experience blogs.
- **I’d Rather Be Writing**—Tom Johnson reads and talks about some of his more popular blog posts.
- **The Not Boring Tech Writer**—Jacob Moses gives you the tools to prove to your peers that you’re a not-boring tech writer.
- **Content Content** by Ed Marsh—“Interviews with technical communication, content strategy, and web content professionals.”
- **Scriptorium**—The Content Strategy Experts by Scriptorium is a series of interviews hosted by Gretyl Kinsey
- **LavaCon Speaker Series**—Also presenters and highlights from their conference.
- **Write the Docs**—The group is a series of conferences, local meetups, and Slack groups focused on software documentation.
- **Boagworld Web Show**—Paul Boag covers digital strategy, user design, and user experience. Mixture of original content, reviews, and interviews.
- **UIE Podcast**—Jared Spool interviews people in the user experience (UX) field.
- **Hurley Write**—Tips from technical writing, scientific writing, manuscript writing, and other documentation.
- **ISTC** (the Institute of Scientific and Technical Communicators)—Presenters and highlights.
- **Cherry Leaf**—A business based in the UK that focuses on becoming a better technical and business communicator. There’s even a URL where you can leave questions for them to answer.
- **10-Minute Tech Comm** by UAH Technical Communications—10–minute interviews with technical communication practitioners, scholars, and innovators.
- **Insert Content Here**—Interviews with people in the content strategy arena. “Cheeky conversations about content strategy, riveting tales of projects gone off-the-rails, and reflections on life in the trenches of digital publishing.”
- **Content Strategy** by Kristina Halvorson of Brain Traffic—Also an interview show about content strategy.
• **Content Strategy Interviews** by Larry Swanson and Elles Media—“Every week we bring you the unique perspective of an experienced content strategy expert.”

**Podcast Show Information**

Whether you are creating a podcast or just listening to one, all podcast shows have the same requirements.

**Cover Art**

The cover art is a square that is displayed at various sizes and resolutions by different podcast players and devices. iTunes sets the standard, and the maximum size of art you can upload is 3000 x 3000 pixels, so that’s the size your cover art should be. However, it should be designed simple enough to look good even when viewed as a thumbnail.

**Podcast Description**

Every podcast must have a description of what the show is about. You want to be descriptive, but not too long-winded. Since podcast players are search engines, you want to include your important keywords.

**Link**

Accompanying the podcast description is an optional place for a URL.

**Keywords and Categories**

You have the ability to categorize your show under general headings, such as “business and leadership” or “lifestyle” or “education.”

**Show Type**

When you sign up, you have only two options: episodic (no order) or serial (first episode first).

Most people listen to podcasts on their phone while they commute or take a walk, but sometimes they listen at home through personal assistants. Below are screenshots from the desktop version of iTunes (Figure 1) and from the phone interface of Google Podcasts on an android smartphone (Figure 2).

The cover art and beginning of the show description are shown at the top, followed by a quick summary of each episode. The iTunes version displays the category and links, as well as a place for customer ratings.

**Podcast Episode Information**

In the podcast player, an episode usually inherits the overall show artwork. However, you can take the time to give each episode its own artwork.

Each episode has its own description that should also include keywords because in a search, individual episodes can appear as well as overall shows. In the episode description, remember to link to your show notes on your website. (See Figure 3.)

People’s show notes typically include a longer summary of the episode as well as a transcript, sometimes downloadable. A good way to encourage listeners to transition from your podcast to your website is to include a free e-book or worksheet lead magnet, which users can download in exchange for their emails. And having more in-depth show notes and transcripts increases the ability for search engine optimization (SEO) for your desired keywords.

The actual podcast listening experience usually consists of an intro, the body, and an outro. Collectively, the intro and outro are called the bumpers.

An intro typically has music, and you might pay a voice actor to introduce you. The thought is that someone else introducing you gives you more credibility. At the very least, though, you want to introduce your show, say what the episode is about, and provide a hook for staying the rest of the episode (even though they’ve already made a start by reading the episode title and description).

The body is the main content of the episode. People often ask how long a podcast should be, and the answer is as long as it needs to be. Some successful podcasts are only a few minutes long. Other successful podcasts are an hour or longer. Your podcast should be of a length that your target audience will listen to it, and your show is interesting and engaging, neither going into too much detail nor skimming over information.

The outro summarizes the show and often includes a call to action, or the desired action that you want the listener to take. You have your listener’s attention—make good use of it! Do you want them to leave you a review to bump your visibility in iTunes? Visit your website? Leave a comment?
How a Podcast Gets Published

Before you begin planning a specific episode, we recommend having some sort of content calendar so you can schedule guests, coordinate episodes around a theme, build hype for a conference or other event, and generally plan.

Another tip is to batch your content. Record four to six episodes at once, or schedule a few guests during the course of one day. Then edit all of the episodes at once. Finally, write all the show notes at once. Then schedule your episodes to be released over the course of four to six weeks. Since task transitions cause lost time, doing similar tasks at once will help make you more efficient.

From start to finish, here are the general steps it takes for a podcast to go from concept to reality.

1. Plan: Even a simple bullet script will help you stay focused and prevent you from verbally meandering and being unfocused.
2. Record: Prepare your equipment (discussed below) and capture the audio.
3. Edit: Remove unwanted sounds and pauses, combine bumpers and body, equalize the sound, and create the transcript.
4. Upload to host: Write your episode description, upload your MP3 file to your host, and prepare the show notes page on your website in draft mode.
5. Release: Set a date for your episode to be publicly available on your host and your website.
6. Really simple syndication (RSS) feed: Podcast players check hosts at regular intervals. Your episode will be available for people to listen within 24–48 hours after release.
7. Listen: People listen to your episode!
8. Measure: Analyze the reach and impact of your episode via your player’s analytics and analytics on your website.
Equipment, Software, and Cost

While it is true that you start a podcast with an existing headset and a free high-quality voice recorder phone app, you can also get a good basic setup for well under $200.

Microphones

The two most popular basic microphones are the Audio Technica ATR 2100 and the Blue Yeti. The ATR 2100 is a dynamic microphone, which is more directional and better if you need to record where there may be background noise, and the Blue Yeti is a condenser microphone, which is very sensitive and best suited to a quiet room without background noise. Although you can use a headset, the quality just isn’t there. It’s okay if your guests use a headset, as long as they are audible and you, the host, sound good.

Software for Recording Interviews

Although you can use pretty much any webinar software such as Zoom or Citrix, Skype is attractive to many because it is free and Zencastr is useful
because it records two different channels. That way if one person coughs, the cough can be edited out of one channel without affecting how the other person sounds in the other channel. If you do use a webinar software, the video helps you make a connection with your guest, and then you can strip the video and keep only the audio.

**Recording and Editing software**

Garage Band (Mac) and Audacity (Windows or Mac) are free and have many tutorials on YouTube. Adobe Audition is used by many, but will cost money. If you don’t have the time or energy, you can always hire a freelancer or contractor to edit your recordings for you.

**Post-editing Tools**

Even though editing software helps equalize sound levels, consider running the final file through a post-editing tool such as Auphonic or Levelator. That way you and your guest have a consistent volume, as well as your podcast from episode to episode in case people are binge listening to your show.

**Hosts**

You pay a host to store your audio files and metadata (information about your show). Your host provides the RSS feed that you copy and paste into the various players and something you can embed on your webpage, and then provides you with analytics. Some hosts also double as players. If you are creating a corporate internal podcast, you might skip having a host and use an internal site instead. Some popular podcast hosts in no particular order are Buzzsprout, Libsyn, Podbean, Blubrry, Soundcloud, Transistor, Fireside, and others.

**Players**

Players are free. Your listener will probably have a player of his or her choice, and use that one player to subscribe and listen to all their favorite podcasts. As a podcaster, you create a free account and give them the link to your host. You’ll want to sign up for the top players or else people might not be able to find your podcast on your player. The top players are iTunes, Google Podcast, Spotify, Stitcher, Soundcloud, and TuneIn. Some of the smaller players auto-pull everything on iTunes.

**Transcription Resources**

If you don’t have a good voice-to-text software already, and you’re not willing to transcribe everything by hand, many people recommend Temi.com. Regardless, always proofread your generated transcript before posting; you might find some unusual words.

**Analytics**

Almost all podcast hosts offer some sort of analytics, and you might also already have Google Analytics installed on your website.

Figures 4 through 7 show some analytics from the Hope for the Introvert podcast.

It’s fun to watch the vanity statistics: how many downloads, where from, when downloaded, which player, etc. But unless you’re just doing this for fun, remember to measure the analytics you decided on in the planning stage. Are you creating relationships with your listeners so they will know, like, and trust you? How will you know?

**Funding Your Podcast**

The initial equipment purchase will be $60–$100 for a microphone, $15–$20 for a stand, and $10–$15 for a pop filter (to help prevent plosive sounds such as p, t, s from overwhelming the audio). After that, you’ll be paying $10–$20 per month for your podcast host fee. And you might factor in budget for your transcript (Temi.com offers $0.10 per minute, so a one-hour podcast will cost $6.00). We are not assuming items that may be part of other budgets, such as your website hosting fees, email client, etc.

So assuming an initial startup cost of $85–$135 for equipment and about $44 per month if you release four sixty-minute episodes on a premium plan, how will you play for all of it?

**Corporate Budget**

If you are creating a podcast on behalf of your company, you may be able to ask for budget relating to content marketing or other outreach activities.
Complete history of downloads

1,612

Total Downloads

more stats

Program Summary

Number of Episodes: 17

Average Downloads per Episode: 94.82

Figure 4. Dashboard Analytics

Figure 5. Distribution Analytics
Figure 6. Distribution World Map

Figure 7. Downloads Trending Last 30 Days
Selling a Product
If you are in business for yourself or in a small company, you might pay for your podcast through selling your own product or services. Interviewing people and answering audience questions can give you authority and connect people to you to buy your consulting, your course, etc.

Advertising and Sponsorships
This is where you read ads aloud for another Advertising and Sponsorships. The advertising or sponsoring company usually pays you on your download rate at CPM or cost per thousand (M being the Roman numeral for 1,000). They might also pay different rates for different placement (in the intro, in the outro, in the middle of the content, whether you play their ad, whether you read their ad aloud, how long you talk about their product, etc.). The advertising or sponsoring company usually pays you on your download rate at CPM or cost per thousand (M being the Roman numeral for 1,000). They might also pay different rates for different placement (in the intro, in the outro, in the middle of the content, whether you play their ad, whether you read their ad aloud, how long you talk about their product, etc.).

Affiliate Marketing
This is where you recommend someone else’s product. They don’t pay you directly, but you receive a percentage of their sales when people buy using your affiliate link, at no additional cost to the buyer.

Crowdfunding and Patreon
You can set up a donation link or use a site such as Patreon, where people support the arts. You set contribution levels and people receive different rewards. A $1 per month contribution might get a thank you, whereas a $20 per month contribution gets physical swag, a mention on your podcast, etc.

Summary
New tech trends pop up all the time. Some quickly fade away, while others stay around for years. As a company, it’s important to stay on top of trends, but only the ones that will provide a return on time and money invested.

Resources

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Ben Woelk, CISSP, CPTC is an Associate Fellow and the 2019–20 President of STC. Ben has been a technical communicator for more than 20 years and a leader at the local and Society level for more than 10 years. Ben was the recipient of the STC President's Award in 2017. Ben is the host of the Hope for the Introvert podcast and his passion is helping new and emerging introverted leaders discover and maximize their strengths. Ben was a keynote speaker at the Technical Communication UK 2018 conference where he spoke on Introverted Leadership.

Allie Proff, CPTC, is passionate about technical writing because it combines both her loves of reading and writing with math and science. She has been communicating technical knowledge for over fifteen years, whether it be in the U.S. Navy, as a high school math teacher, or a technical communicator for other companies. Her aim is to help people do amazing things by connecting them with the content they need in a way they understand.