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April 2021

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Teaching the machine to teach us

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Usability testing for better content

Was it something I said?

Nurturing productive relationships with our coworkers

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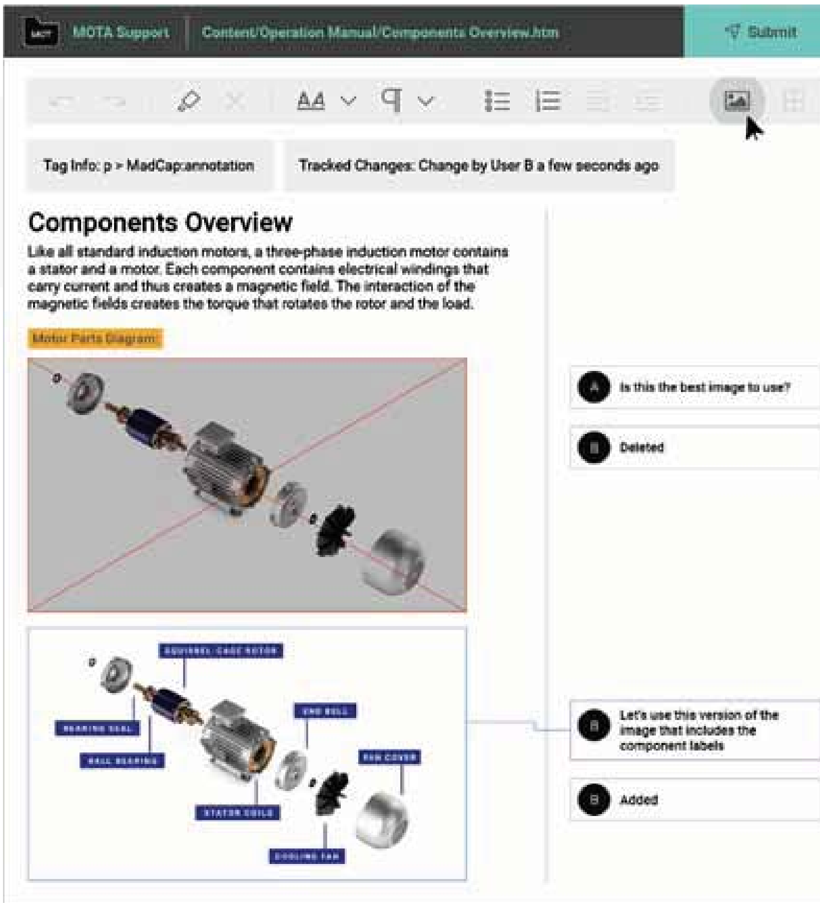

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From the editor

Many plots have been screened capturing the takeover of Earth, or perhaps the entire galaxy, by AI-driven robots. On a smaller scale (and usually lacking the telltale sound effects), we have all witnessed Artificial Intelligence slowly making itself at home both in our professional and private lives. But while on the movie screen the human race always comes out on top, we have yet to discover the outcome in real life.

AI has already changed our world more than anything in the history of humankind, and the journey is far from complete. Today, AI is offering unprecedented opportunities to enrich, simplify, protect, and even save lives – yet critics say that AI is augmenting our human capacities and disrupting our evolutionary learning curve. This begs the question: By placing essential tasks and decisions in the fleshless hands of the machine, are we boosting our human capacities or letting our minds atrophy? In other words: Will AI make us smarter or dumber?

Our author Ray Gallon believes that "the only way of enriching the whole picture is by combining human and machine information." As he records in our focus topic (starting on page 12), emotions play a crucial role in our learning success and ability to achieve our goals. So, in times when we increasingly rely on machines to teach us how to perform a task, we need to ensure that these emotionless artificial teachers take into account our human feelings and perceptions.

Technical communicators are in many ways at the forefront of paving the way to combine human and machine information, making the exchange of our expertise and knowledge more essential than ever. While the coronavirus pandemic has paused all physical conferences and other gatherings, we are pleased to say that our community has remained strong and well-connected, which was confirmed by the overwhelming attendance rates at tcworld conference 2020.

The upcoming tcworld conference 2021, to be held November 9-11, is scheduled as a hybrid event with presentations both on site and online. The program will cover a broad range of topics from content creation, visual communication, technical videos, legal standards, terminology, language and translation technologies to the intelligent delivery of information, Artificial Intelligence, new user interfaces, and immersive content. Our Call for Papers is now open and we look forward to receiving your proposals.

Corinna Melville

Content for the future

Artificial Intelligence is changing human learning. What you know is becoming less important than how well you understand to mobilize your knowledge. So how can we train AI to assist human learning?

page 12

How useful is your documentation really?

Usability testing provides insights on how we can improve not only our product, but also the documentation. Here is how you can test your content.

page 24

Was it something I said?

As technical writers we rely on our coworkers' knowledge and expertise. What are the special ingredients to create smooth and productive relationships with our colleagues?

page 42

The future of pricing models in translation

Per-word pricing as the fundamental pricing strategy for the language industry is under review as translation transforms from computers-aiding-humans to humans-aiding-computers. Word-counts are less of a simple measure of effort when the variables are not only the time and expertise of the linguist, but also the efficiency of the various forms and augmentations to machine translation (MT), translation memory (TM) lookup, workflow, and business processes enhanced by Artificial Intelligence (AI) and machine learning. Will translation follow the lead of industries like marketing and music that changed their pricing models to survive and continue delivering what the buyer wants? Or will it follow approaches inspired by Uber and other gig-economy entrants?

When purchasing or selling translation services, there are many considerations in addition to the per word rate. Based on interviews and surveys with 563 buyers of language services from 27 countries and with 430 LSPs in 63 countries, independent market research firm CSA Research has released a series of reports dedicated to pricing and procurement strategies for both buyers and vendors of language services.

"Competition in the language services market is ruthless. LSPs can always find competitors that are willing to undercut their rates. At the same time, though most buyers of language services view translation and interpreting as commodities, they still invest time and effort when choosing vendors and negotiating fair rates," comments Alison Toon, senior analyst, CSA Research. "The reports in this series present insightful data to help buyers of language services evaluate their purchasing strategy and alternative methods for buying language services, while providing LSPs with the tools and data they need to develop and grow their services and identify ways to help their clients optimize processes."

Image: © alexsl/istockphoto.com

In its pricing and procurement research series, CSA Research outlines the models that LSPs use to structure the cost of services and feedback on these pricing strategies: disruptive forces in the language sector; how other markets' pricing models affect translation through buyer expectations; buyer insights on pricing; translation model alternatives; recommendations for buyers when evaluating how they procure and pay for language services and for LSPs as they price these services.

Reports included in CSA Research's translation pricing and procurement series:

- Translation Rates and Fees: 2021
- Buying Translation Services
- How Popular are Per-Word Pricing Models?
- Procurement: Friend or Foe?
- Managing Multiple LSPs for Global Brand Support
- Working with Multiple Agencies
- What Buyers Think About LSP Pricing Models
- How to Engage Global Procurement as Your Ally
- How to Win the High-Stakes RFP Game
- The Future of Language Services Pricing
- LSP Pricing Strategies

The reports are published as part of CSA Research's syndicated research membership.

www.csa-research.com

AI spending remains high during the pandemic

Image: © metamorworks/istockphoto.com

The International Data Corporation (IDC) Worldwide Artificial Intelligence Spending Guide estimates that spending on Artificial Intelligence (AI) will reach US$12 billion in 2021 in Europe and will continue to experience solid double-digit growth through 2024. Automation needs, digital transformation, and customer experience continue to support spending on AI, even in times when COVID-19 has impacted negatively on revenues for many companies.

"COVID-19 was a trigger for AI investments for some verticals, such as healthcare. Hospitals across Europe have deployed AI for a variety of use cases, from AI-based software tools for automated diagnosis of COVID-19 to machine learning-based hospital capacity planning systems," said Andrea Minonne, senior research analyst at IDC Customer Insights & Analysis. "On the other hand, other verticals such as retail, transport, and personal and consumer services had to contain their AI investments, especially when AI was used to package personalized customer experiences to be delivered in-store."

The COVID-19 pandemic will have effects throughout 2021 and the years to come. It has revolutionized the way many industries operate, changing their business processes but also the products, services, and experiences they deliver. Many non-essential retailers are still closed today due to strict lockdowns, meaning that retailers were forced to shift their focus from in-store AI toward AI-driven online experiences and services. Customers also had to adapt to a new reality, and that triggered a change in their behavior. Shopping online is the new normal. For that reason, retailers are looking closely at use cases such as chatbots, pricing optimization, and digital product recommendations to guarantee customer engagement but also secure revenues from digital channels.

The same is the case for transportation, an industry that has been heavily affected by COVID-19. With travel being restricted to essential reasons only and quarantine measures widely in place, many travelers have stalled or canceled their plans, which has had a strong impact on transportation companies' revenues. In 2020, transportation's focus has shifted from AI-driven innovation to cost containment, at least until the industry recovers. For that reason, AI investments across transportation companies will grow below average this year.

www.idc.com

SDL ADDS NEW FEATURES

SDL, part of RWS Holdings plc, has added new smart features to its machine translation technology. New features include content insight, i.e. the automatic identification of languages and extracting meaning from content; adaptive language pairs (previously enabled for on-premise customers); and automated quality assessment, i.e. increased transparency into the quality of machine translation output.

www.sdl.com

MEMSOURCE PARTNERS WITH GRIDLY

Memsource, the AI-powered translation management system, has launched a joint integration with Gridly, a CMS tailor-made for multilingual game projects. The cooperation with Gridly allows Memsource to expand its offerings to the games industry and grow its customer base within the game localization vertical. Gridly CMS users will benefit from the translation management and automation capabilities of Memsource's TM system and AI technology to increase translation quality while reducing costs.

www.memsource.com

LINGOTEK AND INTENTO ANNOUNCE PLATFORM INTEGRATION

AI integration provider Intento and Lingotek, offering enterprise translation management, have partnered to incorporate Intento's AI-driven MT solutions into Lingotek's translation management platform. With the new Intento connector, Lingotek users will be able to take full control over their machine translation requirements by deploying Intento's MT Hub directly in their workflow.

https://inten.to

GOOGLE TRANSLATE NOT FIT FOR MEDICAL INSTRUCTIONS

A recent assessment of Google Translate for the written translation of commonly used emergency department discharge instructions has revealed that the MT still isn't reliable enough for people who don't speak English. The study assessed translations into Spanish, Chinese, Vietnamese, Tagalog, Korean, Armenian, and Farsi.

https://link.springer.com

Trends that will impact the future of work

Image: © Baramee Thaweesombat/123rf.com

Organizations can differentiate themselves from competitors during the COVID-19 pandemic by leveraging nine ongoing trends, according to research firm Gartner, Inc. These trends are broken into three categories: accelerating trends, new impacts that were not previously part of the future of work discussion, and pendulum swings – temporary shorter-term reactions.

Gartner recommends HR leaders evaluate the following trends to determine if and how they apply to their business:

Accelerating trends

Increase in remote work. Gartner's analysis shows that 48% of employees will likely work remotely at least part of the time after the COVID-19 pandemic, compared to 30% pre-pandemic. In fact, 74% of CFOs intend to increase remote work at their organization after the outbreak. To succeed in a world of increased remote work, hiring managers should prioritize digital dexterity and digital collaboration skills. HR must consider how the context of remote work shifts performance management, particularly how goals are set and how employees are evaluated.

Expanded data collection. Organizations have increased their passive tracking of employees as their workforce has become remote. According to an April Gartner survey, 16% of organizations are passively tracking employees via methods like virtual clocking in and out, tracking work computer usage and monitoring employee emails or internal communications/chat. In addition, employers are likely to have significantly more access to the health data of their employees. For example, employers will want to know if any of their employees have the COVID-19 antibodies.

Employer as social safety net. Employers will expand their involvement in the lives of their employees by increasing mental health support, expanding health care coverage, and providing financial health support during and after the pandemic.

Organizations are also considering the question of maintaining compensation for employees, even for those who are unable to work remotely or have been laid off.

Expansion of contingent workers. A recent Gartner survey revealed that 32% of organizations are replacing full-time employees with contingent workers as a cost-saving measure. Utilizing more gig workers provides employers with greater workforce management flexibility. However, HR will also need to consider how performance management systems apply to contingent workers as well as questions around whether they will be eligible for the same benefits as their full-time peers.

New impacts

Separation of critical skills and critical roles. Leaders are redefining what critical means to include: employees in critical strategic roles, employees with critical skills and employees in critical workflow roles.

"Separating critical skills from critical roles shifts the focus to coaching employees to develop skills that potentially open multiple avenues for them, rather than focusing on preparing for a specific next role," said Emily Rose McRae, director in the Gartner HR practice.

Humanization (and dehumanization) of workers. Throughout the COVID-19 pandemic, some employees have formed more connected relationships, while others have moved into roles that are increasingly task-oriented. Understanding how to engage task workers in the team culture and creating a culture of inclusiveness is now even more important. To deliver on employee experience, HR will need to facilitate partnerships across the organization while working with managers to help employees navigate new norms and expectations.

Emergence of new top-tier employers. As the labor market starts to return to normalcy, candidates will want to know how companies treated their workforce during the COVID-19 outbreak. Organizations must balance the decisions made today to address immediate concerns during the pandemic with the long-term impact on their employment brand.

Pendulum swings

Shift from designing for efficiency to designing for resilience. Prior to the COVID-19 crisis, 55% of organizational redesigns were focused on streamlining roles, supply chains, and workflows to increase efficiency. Unfortunately, this path has created fragile systems, prompting organizations to prioritize resilience as equally important as efficiency.

Providing more varied, adaptive and flexible careers helps employees gain the cross-functional knowledge and training necessary for more flexible organizations. Additionally, organizations should shift from trying to "predict" (targeting a specific set of future skills) to "responding" (structuring such that you can quickly course-correct with change).

Increase in organizational complexity. Over the next several months there will be an acceleration of M&A, nationalization of companies, and bigger companies becoming even bigger. This rise in complexity will create challenges for leaders as operating models evolve. HR will need to take the lead on shifting to more agile operating models and helping leaders manage greater complexity.

www.gartner.com

Turn to the future

To stay relevant, we need to question some old habits and embrace new ones.

Text by Leah Guren

Whether you are a TechComm novice or a well-established expert with more than a decade of experience, you will have noticed the drastic speed of change in our industry.
Most of you are experienced. When we survey participants at tekom events, we find that at least half of them have over 15 years of experience. For my part, I began my career in TechComm over 40 years ago, placing me at the far end of the spectrum for working TechComm professionals. And, quite frankly, it puts me at risk of becoming set in my ways and not evolving to meet the changing landscape of our field.

An industry of change

Change is constant and inevitable in all professions, but it seems particularly dramatic in our field. Not only are we constantly learning new applications, but the rate of change with the technologies that we document has been astonishing. New standards, new business methodologies, and new work systems for our developers have all impacted our jobs. Further, our users have changed in their reading habits and expectations, and will almost definitely continue to evolve. This means that we have had to rethink how we push content out to a wide range of platforms and devices. In short, we must cope with dramatic changes that affect almost every aspect of our work.
Personally, I find the opportunity to continue to learn and grow appealing, but the constant pace of change can also be stressful. If you want to instantly feel dated and irrelevant, look at recent job postings. You'll see requirements jam-packed with all the latest buzzwords and acronyms (whether or not they are actually applicable to the position). I saw a job posting in 2019 that required eight years of experience in Slack, which is impossible (Slack was first released in 2013). It is funny, but it is also frustrating. So what can we do? How can we, as responsible, ethical TechComm professionals, stay current and relevant without giving up our sleep and sanity?

1. Recognize your "soapboxes"

A soapbox is a topic for which you have taken a (very passionate) stand. You feel strongly about it. Some soapboxes are big issues (such as minimizing our carbon footprint), while others are preferences that really don't matter. I've seen TechComm professionals argue for an hour in a meeting to passionately defend French spacing (two spaces after a period). Yes, there are arguments to be made for and against, but are you investing a disproportionate amount of your energy in fighting for (or against) something that has little impact on either our users or our clients?

Image: © limbi007/123rf.com

I've been teaching TechComm courses and workshops for many years, and I have come to recognize a few of my own soapboxes. I may still feel passionately about them, but I have learned to let them go in deference to the bigger picture. In fact, I've sadly said goodbye to entire topics that no longer seem to be as important, in favor of new topics needed to address modern challenges.

As new things appear faster than old things drop off, TechComm students now need to learn perhaps 50 percent more than their counterparts did 40 years ago. Think about the field of medicine. A student in a nursing program in the 1950s had to learn how to re-sterilize syringes and catheters – equipment that is now always single-use disposables. They learned how to treat diseases that have disappeared. It is only sensible that those topics are no longer taught. There is so much new material that has to be covered!

2. Be honest about outdated preferences

Sometimes, we fall into habits of doing things a certain way. We find our writing style and our layout defaults, and we tend to stick with them. But just as a person can look very foolish for maintaining a hairstyle that was popular 40 years ago, so can our habits and preferences make our content look and feel outdated.

Those of you with a basic understanding of linguistics will recognize that language shifts and evolves. Usage patterns and rules change. We have to be willing to graciously (and gracefully) let go of some of our rules that may have been required in the 1980s, but are no longer relevant. A great example of this is all the time and energy that we used to put into developing good double-sided, two-page spread layouts for manuals. But with most content delivered online, those preferences no longer make sense.

3. Don't blindly embrace all changes

This doesn't mean that we can accept all trendy changes. We must always be the voice of clarity, usability, and unambiguous content. This means that we have to reject stylistic changes that work against our users' best interests.

To do this, you need to have a clear understanding of how your users parse text and understand layout. Make sure that the choices you make are actually useful, and not simply the latest craze. Over the years, I have had client SMEs want to copy stylistic things they saw elsewhere without understanding the ramifications. I have learned to accept the requests that don't have a negative impact, while digging my heels in and explaining why other changes will reduce the content usability and customer satisfaction.

4. Invest in tools that match your work

With so many new things to learn, you can end up feeling pulled in too many different directions. Should you learn another tool? Should you learn one of the hot vertical areas, such as instructional design or API documentation?

Don't try to do everything. Think of things that will be most useful for the kind of clients and projects that you handle. For example, if you don't document software, why should you spend any time learning about UI labels and error messages? If you work in a world that is far removed from Agile, why invest in learning about Agile development and documentation methodologies?

Beyond the practical side of what makes sense for your current career path, you can focus on where you want to go. If you don't currently develop marketing content but are interested in doing so, then it makes sense to invest in learning in that area. Bottom line: you cannot learn everything, so invest your time and energy wisely.

5. Skim shamelessly

With buzzwords flying around like alphabet soup, how do you maintain any sense of professionalism? How can you sit in a meeting and be able to understand what a client is talking about?

Recently, I ended up in a meeting with a software vendor. The client had me sit in because they thought the software might be a solution. I had never heard of the tool or the company, but was able to figure out what it was within the first 60 seconds of the presentation, based on a very superficial awareness of some key concepts. The client, a reasonably intelligent person, failed to recognize enough of the buzzwords in the initial sales pitch to know that this was not even remotely a match to what they needed.

So how am I able to do that? Simple. I don't try to read everything. I skim. Every headline, every story lead, the first paragraph or two of every article… all of this is rich fodder for the part of my brain that stores "Stuff I Might Need To Know".

Most people feel daunted at trying to keep up with all the magazines, journals, ezines, blogs, podcasts, and other content available for our field. Quite frankly, it would be more than a full-time job to try to do so. But you can definitely skim each issue, and maybe read a few articles more thoroughly. Sometimes it helps to say the new acronyms and buzzwords out loud, so that you quickly recognize them if a client mentions them.

Conclusion

We all need to continue learning throughout our careers. But start by honestly recognizing your own soapbox issues (which may not be important) and your stylistic habits (which may be out of date). Make room for new skills and knowledge, but pick those things that will help move you along your desired career path. If you find the right balance, you can grow to be a tribal elder, rather than a dinosaur!

Do you have a different perspective on change in our profession or a tip for staying current? Let us know!

ABOUT THE AUTHOR

Leah Guren

is the owner/operator of Cow TC. She has been active in the field of technical communication since 1980 as a writer, manager, Help author, and usability consultant. She now devotes her time to consulting and teaching courses and seminars in technical communication, primarily in Israel and Europe.

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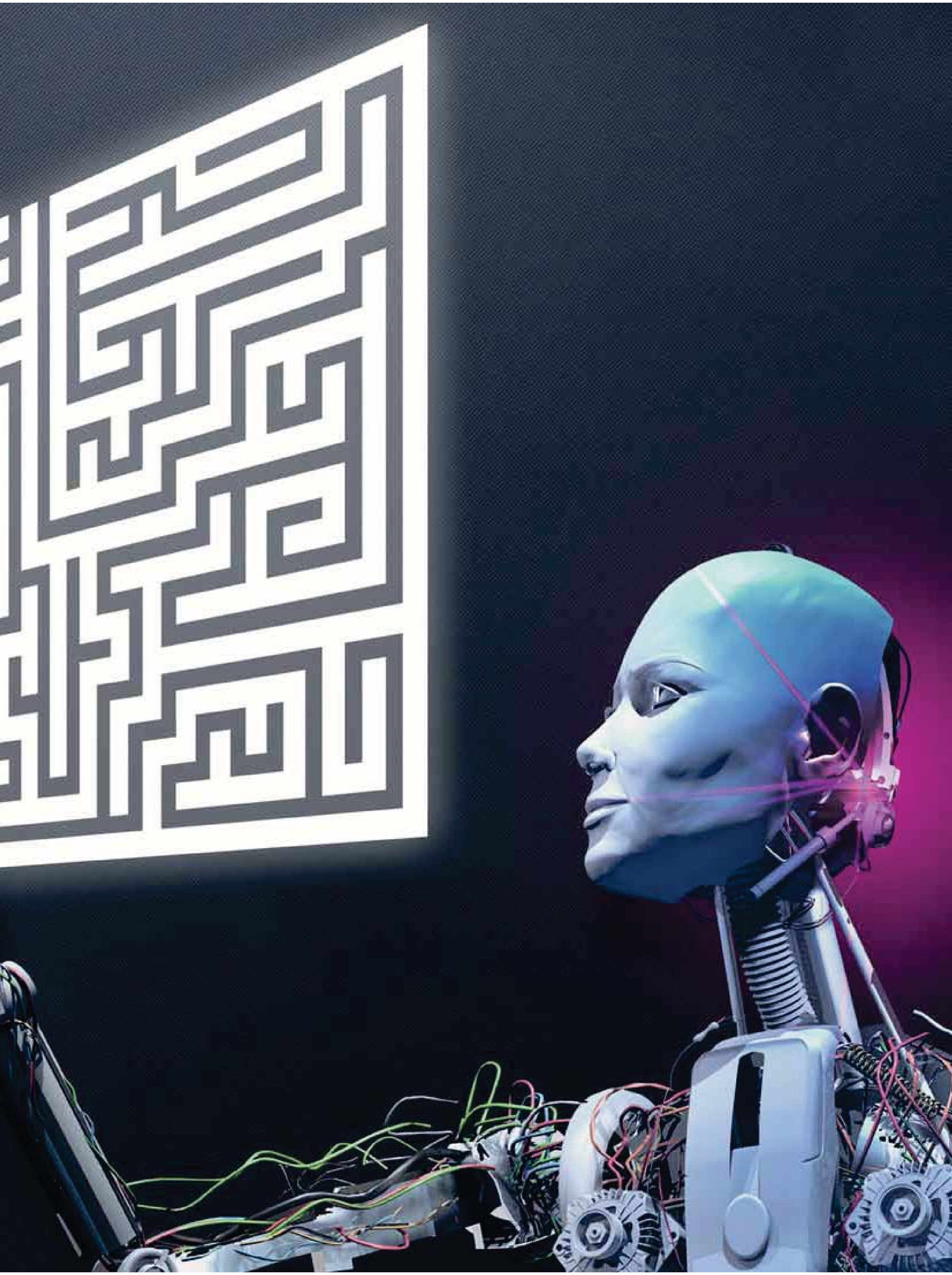
Content for the future

Teaching the machine to teach us

As technical communicators it is our job to assist the user's learning journey. To do so we need a thorough understanding of the user experience against the backdrop of their subjective perceptions. A peek into the philosophical concept of qualia and quanta provides new guidance.

Text by Ray Gallon

Image: © Devrimb/istockphoto.com



In all our discourse about content – how to create it, manage it, reuse it, massage it, value it, govern it, and so on – how often do we consider its basic purpose? In my view, content has only two purposes:

Learning
Building relationships

In technical communication, we are most often concerned with learning, while our colleagues in marketing focus more on building relationships, though we all need to be concerned with both. Indeed, I would argue that, if we do a good job facilitating our users' learning processes, then we are also helping to build a relationship between them, our products, and our companies.

The COVID-19 pandemic has changed the learning landscape dramatically, and probably permanently. Teleworking and eLearning are now planet-wide obligations. Our daily processes at home and in our professional lives have been reshaped by this reality, and pundits say this might not be the only such situation we'll have to face in coming years. This "new normal" comes with an increasing dependency on communication technologies and on the connected objects of the Internet of Things driven by some sort of Artificial Intelligence (AI) which is fed by machine learning of one sort or another.

As researcher Ilkka Tuomi points out, when we talk about AI, we must be aware that we are not dealing with one technology, but with a series of layered sub-disciplines, each with its own history, domains of expertise, and developmental dynamics. [1] The parts of AI concerned with learning, with some examples of each technology, are shown in Table 1.

Some additional applications that come out of these technologies include:

- Speech recognition
- Virtual agents such as "chatbots"
- Decision management
- Biometrics
- Textual analysis
- Modeling and "digital twinning"
- Content creation
- Emotion recognition
- Image and sound recognition

By the time this article is published, this list will probably be much longer – such is the pace of AI development today.

AI and human learning

As machine learning advances and changes, so does human learning. Traditionally important epistemic components of learning, such as domain knowledge, experience, tools mastery, or acquired skills, are taking a back seat to "soft skills" such as:

- Creative problem-solving
- Learning to learn
- Meta-cognitive capabilities:
  - Self-reflection
  - Emotional intelligence
  - Capacity to mobilize social resources and knowledge

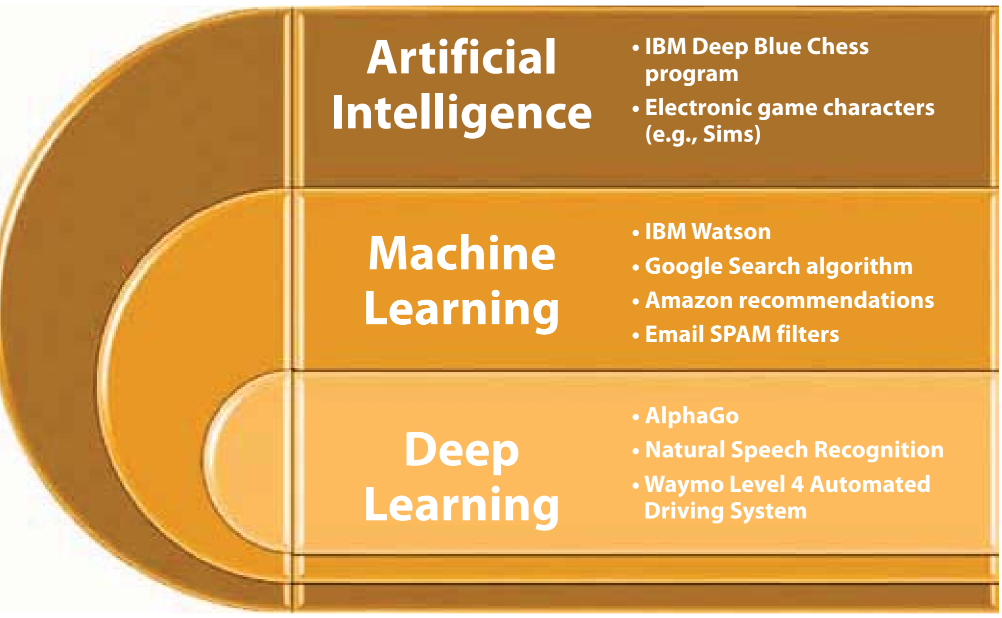


Table 1: Learning domains of Artificial Intelligence *Source: Ray Gallon, after Ilkka Tuomi*

Above all, the prime skill today is connectivism. In today's hyperconnected, AI-driven world, where more and more machines are making autonomous decisions without human intervention, what you know is less important than how you mobilize your knowledge. Social, cultural, and communicative abilities are more important than epistemic learning; critical thinking and design thinking are more important than skills acquisition – or rather, they have become the skills we need to acquire so that we can continue to learn throughout our lives and our careers. Traditional user manuals and online help systems are rooted in epistemic learning. Can we develop new learning paradigms for technological products that are in step with the educational evolution?

AI is clearly an important motivating force that is changing our learning paradigms. It can also offer a variety of tools to facilitate these new modalities. In their 2019 book, *Artificial Intelligence in Education: Promises and Implications for Teaching & Learning* [2], Wayne Holmes, Maya Bialik, and Charles Fadel identify two classes of learner-facing applications:

- Applications that teach:
  - Intelligent tutoring systems (including automatic question generators)
  - Dialogue-based tutoring systems (similar to chatbots)
  - Language learning applications (including pronunciation detection)
- Applications that provide support:
  - Exploratory learning environments
  - Formative writing evaluation
  - Learning network orchestrators
  - Language learning applications
  - AI collaborative learning
  - AI continuous assessment
  - AI learning companions
  - Course recommendation
  - Self-reflection support:
    - Learning analytics
    - Meta-cognitive dashboards
  - Chatbot training as a learning experience

Clearly, the support domain is where most of the interest lies, and one of the chief aspects of support is providing highly personalized, contextualized learning. This means conditioning the material to learners' strengths or weaknesses, modulating the way it is presented based on their emotional responses, detecting what tasks they need to accomplish and providing appropriate help, etc.

While the grail of deeply personalized learning may appear imminent, there is less evidence about how effective it may be. Ilkka Tuomi, in a report to the European Parliament, declares that

> *There is relatively scarce evidence about the benefits of AI-based systems in education… learning outcomes do not depend on technology. It depends on how the teachers can use technology in pedagogically meaningful ways. An appropriate approach, therefore, is to co-design the uses of technology with teachers.*

In other words, as we already know in many other domains, we will not improve learning (including of technical content) by throwing technology at it. The real solution lies in a blended collaboration of human and machine learning and intelligence.

In a technical communication context, then, where do teaching and learning take place? How can we evaluate the effectiveness of the solutions we employ? How can we adequately measure how our users experience the learning process in hybrid human-machine systems?

Qualia – the experience of experience

AI is still far from achieving the complex qualitative perception that humans experience when communicating with and learning from each other.

Machine learning focuses on data. Processing big data is critical to its algorithms that recognize images, texts, sounds or objects, and interact with humans. While human-to-human communication is simultaneously multisensorial and plurifactorial (even endorphins have their role), human-machine interaction is still limited to a reduced number of channels at a time, and at most bi-sensorial (audio-visual).

The characteristics of these complex human subjective experiences are known in philosophy as *qualia* (singular *quale*), and they are viewed as unique and untransferable. Philosophers relate them to feeling, resistance, mediation, or intuition. The philosopher Daniel Dennett identified four properties that are commonly ascribed to qualia:

- **Ineffable:** they cannot be communicated or apprehended by any means other than direct experience.
- **Intrinsic:** they are immutable and do not change based on the experience's relation to other things.
- **Private:** therefore, all interpersonal comparisons of qualia are systematically impossible.
- **Directly or immediately apprehensible in consciousness:** to experience a quale is to know one experiences it, and to know all there is to know about that quale.

They are considered too diffuse and intangible to add scientific value to studies on human cognition. As an example, when you drink a particular cup of coffee at a given moment, you have a singular experience that is your perception of what it is like to drink that particular cup of coffee in that particular moment. Such an isolated experience is a quale, unique to you, to the moment, and the particular cup of coffee you are tasting. This makes it clear that the experience of a quale is totally subjective, a response to the question "what is it like" to have an experience or to be somewhere, do something, etc. As such, it is untransferable and should be considered an inappropriate theme for scientific investigation. By its very nature, this understanding of qualia is also a concept about which Artificial Intelligence can know nothing.

On the other hand, as a modern philosophical concept, qualia can refer not only to personal perception, but also to its individual interpretation, and includes personal awareness of both. Under this extended definition, qualia can be commonly represented using explicit communication (messages), fixed language and, in part, by certain external relations between individuals and their environments, also shared through language. Continuing with the previous example, the taste of a cup of coffee is a general, subjective experience that many people can share collectively with texts, images, sounds, etc. as common codes that help understanding and that represent a special social atmosphere or a shared cultural context.

In User Experience (UX), we are also dealing with subjective impressions that can be difficult to define or communicate. Every user's experience with a product is unique, personal, subjective, and intangible – a quale, or a set of qualia. To help us evaluate user experience, we content specialists can borrow from the realm of philosophy and build UX descriptions based on different qualia. When these experiences are shared – i.e., made visible – they suddenly become relevant as objects for study. We can use them to build models such as ontologies, classified according to specific instances of subjective perceptions, personal interactions (with the product and with other users of the product), and social models that grow out of these interactions.

How to measure qualia?

Industries are driven by metrics, and although intangibles are gaining importance in parallel with soft skills, we still need to justify the approaches we use in some quantitative manner. If we stay with the coffee-drinking example, we could study measurable aspects of human behavior and social attitudes when drinking a cup of coffee, and find correlations, similarities, and differences about the act (data on coffee consumption, mapping, cost, and price per kilo), communication trends about the act (e.g., industry publications, publication frequency, trends in coffee advertising and marketing materials), or even the impact and consequences of the communication process itself (e.g., impact on the stock market from a study of coffee and health, product image based on feelings or opinions about such information, etc.). All these collective responses generate a visible flow of *quanta* – the Latin word for amounts (singular quantum), usually used today to refer to the smallest possible discrete unit of any physical or virtual element. Such quanta, when correlated and aggregated, form a usable pool of measurable big data about subjective experiences. These data are accessible to AI, and the hopes for delivering highly contextual, personalized information in real time stem from the analysis of it.

Data-driven AI, still the most common type of machine learning algorithm, is a very sophisticated form of statistical analysis. Combined with personal profiles of each user and data from the user's context in real time, AI can make correlations about what kinds of information to deliver in that user's current situation, and even in what voice and tone that information should be delivered. In other words, contextual machine-to-machine information provides enormous possibilities for personalized machine-human information delivery.

Ultimately, however, the driving energy for this transformation does not come from technology, but from the manner in which people experience and react to technology. Analyzing these layers of people's explicit information is not easy for obvious reasons (language, subjectivity, arbitrariness, sincerity, etc.), and this fact has marginalized qualia compared to objective data that is commonly collected automatically. But there are strong reasons to start integrating qualia as valid information to better understand the UX and the users' learning processes.

While explicit information can be communicated by people (e.g., I drink a cup of coffee every morning, and one in the afternoon but never after five o'clock), AI is able to detect, recognize and learn directly from the event plus the environmental correlation (e.g., how many cups of coffee are paid with a card in a particular time, place or currency).

At the same time, care must be taken to manage the sort of cognitive bias that enters regularly into machine learning algorithms when the training database has not been vetted by humans (e.g., in the previous example, gender and location can take on different significance in different cultures. In some places, men are expected to pay for a woman's consumption, women can't consume coffee in public places, and tea is a culturally oriented alternative at a particular hour). Human intervention is essential to correct data processing and help the algorithm adjust for qualia that are invisible to machine learning processes. This has already raised, and will continue to raise, a plethora of ethical questions that are far from being resolved.

Consequently, the only way of enriching the whole picture is by combining human and machine information. We know that emotion plays a critical role in learning success, and if we want to build engagement with our users and, ultimately, adhesion and loyalty to our products, we need to act on both quanta and qualia, and be able to evaluate and report our results.

Fortunately, there are tools we can borrow from the world of education and adapt to our needs. One example is the Short Grit Scale Test, developed in 2007 by A. L. Duckworth, C. Peterson, M. D. Matthews, and D. R. Kelly, shown in Table 2. This scale of eight items can be used to assess a learner's level of "grit"– sustainable motivation based on personal passion and the perseverance to achieve goals. This example has been slightly modified by the author and Neus Lorenzo to be more specific to learning in technological, and especially AI environments.

Evaluating user experience – not just "likes"

Social media scoring methods (views, likes, responses, retweets, star ratings, etc.) are just the tip of the iceberg of indicators that can be

Characteristics	Scoring	
1. New ideas and projects sometimes distract me from previous ones.		1 = Very much like me 2 = Mostly like me 3 = Somewhat like me 4 = Not much like me 5 = Not like me at all
2. Setbacks don't discourage me.	5 = Very much like me 4 = Mostly like me 3 = Somewhat like me 2 = Not much like me 1 = Not like me at all	
3. I have been obsessed with a certain idea or project for a short time but later lost interest.		5 = Very much like me 4 = Mostly like me 3 = Somewhat like me 2 = Not much like me 1 = Not like me at all
4. I am a hard worker.	5 = Very much like me 4 = Mostly like me 3 = Somewhat like me 2 = Not much like me 1 = Not like me at all	
5. I often set a goal but later choose to pursue a different one.		5 = Very much like me 4 = Mostly like me 3 = Somewhat like me 2 = Not much like me 1 = Not like me at all
6. I have difficulty maintaining my focus on projects that take more than a few months to complete.		5 = Very much like me 4 = Mostly like me 3 = Somewhat like me 2 = Not much like me 1 = Not like me at all
7. I finish whatever I begin.	5 = Very much like me 4 = Mostly like me 3 = Somewhat like me 2 = Not much like me 1 = Not like me at all	
8. I am diligent.	5 = Very much like me 4 = Mostly like me 3 = Somewhat like me 2 = Not much like me 1 = Not like me at all	
Add up all the points and divide by 8.	• The maximum score on this scale is 5 (extremely gritty) • The lowest score on this scale is 1 (not at all gritty).	

Table 2: The Short Grit Scale Test

tracked and collected with context sensing in smart devices during digital interactions. Platforms can track not only raw quantities such as how many "likes" a post receives, but the flow across the network as users influence each other through their scoring of different posts. These platforms are profiting from metadata-rich information. For AI learning systems, we need new specialized metadata taxonomies to help track information in ways that can be extremely relevant when processed for learning purposes, but also extremely worrisome if used without ethical concerns or respect for privacy.

Explicit quantitative information on what a user does when learning a task needs to be complemented with information about the factors that condition their knowledge-building process and examined against general trends of common behavior (social expectations). As we explore how people react, we are effectively adding a new set of qualia related to digital ethics and the common good.

To evaluate all this, we need to be able to track the strategies learners use, and how they apply them when learning with AI technology. An existing taxonomy, the Big Five, or OCEAN model, has been evolving for decades. The author and Neus Lorenzo adapted Lewis Goldberg's work on this model to create an evaluative scale for AI learning. See Table 3.

While there is no one-size-fits-all magic solution, the study of qualia in user experience can help us understand how humans and machines need to interact in the 21st century. Adding qualia into the mix provides us with tools for evaluating and enhancing user experience in AI learning environments.

AI learning indicators, adapted from Goldberg's Big Five structure

AI learning need	Indicator	Descriptors
Plasticity in AI learning interaction (the learner's capacity to learn in an AI environment; the ability to flow or to transform when subjected to digital stresses).	*Extraversion:* • Enthusiasm • Assertiveness	*The learner's ability to be sociable, talkative, and comfortable in social situations.*
	Openness: • Intellect • Curiosity	*The learner's positive attitude towards curiosity, intellect, creativity, and innovative ideas.*
Stability in AI learning interaction (the learner's stability when learning in an AI environment, capacity to maintain shape, state, quality, or degree in spite of external stress)	*Agreeableness:* • Compassion • Politeness	*The learner's sensitivity and affability, tolerance, trust, kindliness, and warmth.*
	Conscientiousness: • Industriousness • Orderliness	*The learner's organization, systematization, punctuality, diligence, orientation to achievement.*
	Neuroticism: • Withdrawal • Volatility	*The learner's irritability, anxiety, and moody temperament in certain circumstances.*

Table 3: Big Five Scale for AI Learning

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Ray Gallon is president and co-founder of The Transformation Society. He has over 30 years' experience in the technical content industries, including major companies such as IBM, Alcatel, and General Electric Health Care. He has contributed to numerous books, journals, and magazines, and is the editor of *The Language of Technical Communication (XML Press).*

www.transformationsociety.net

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Let's get ready for Gen Z

If we've learned anything from 2020 it's that change is the only constant. And with a new generation of users entering the market, we need to be more agile and nimble than ever to produce content that meets their needs.

Text by Yoni Palmer

From floppy discs to online downloads

I think it is quite safe to say that the world we live in today is very different from what it was at the beginning of the 21st century. Technology has changed considerably and the pace of change is constantly increasing. The technology (r)evolution of course has an impact on us as technical writers.

I've been working in technical writing for just over two decades. Back in 2000, we were producing mostly printed content, whereas today hard copies are seen as expensive, inefficient, and harmful to the environment. Though hardware companies are still required to produce some printed material to accompany equipment, more and more of them are looking for ways to include just the bare minimum.

Maintaining our position as successful technical communicators requires us to adapt to the

Image: © ViewApart/istockphoto.com

ever-changing landscape we find ourselves in. A surefire way of analyzing change is to compare situations at different points in time. In 2000, besides writing primarily for hard-copy, printed manuals, many of us were using tools that either no longer exist or have fallen out of fashion. I first started working on Corel Ventura and a help authoring tool named HDK (Hypertext Development Kit). To create PDFs, we had to go through a complex process of creating postscript files and then using Distiller for the final PDF.
In the realm of formats, there have also been tremendous changes: The primary online help format back in the day was Windows Help. We then moved on to CHM (Compiled HTML) Help and got to where we are today with HTML5 becoming the dominant online format.
If you worked on software products as I did, multiple floppy discs were used for product installation. They were thankfully soon replaced by single CDs, and later on by online downloads.

Socioeconomic and cultural changes

This snapshot of the last 20 years shows just how much things have changed and indeed are continuing to change. The year 2020 also showed us just how fast the pace of change can be and that it's not entirely limited to the tools we use, but also affects our jobs and the way we work. We're deeply impacted by outside factors as the last year has revealed to us like no other.
At the beginning of 2020, the term "pandemic" was not widely used and perhaps not even widely understood. Though Zoom was becoming increasingly popular with geographically distributed hi-tech companies, its use by schools, local government, broadcasters, and for family get-togethers was pretty rare. All this of course changed with the onset of Covid-19. And indeed, like so many other tech phenomena, through its use as a communications lifeline during the pandemic, "zoom" is no longer just a brand name but is used as a verb ("let's zoom") and a noun ("just going on a zoom").
Furthermore, while we may have thought 2020 was eventful enough (who even remembers the Australian bushfires at the beginning of 2020?), there were other developments that will have a long-term impact on our work: The Black Lives Matter protests that followed the killing of George Floyd in May 2020 have left their own imprint on culture. The protest movement has led many countries and organizations to assess their involvement in what could be termed racist in 2020, as well as looking at any historic links to the slave trade.
As technical communicators, we have been speaking about using gender-neutral language for many years. Following the anti-racist protests and campaigns, organizations are now challenged to address terminology that either is or could be perceived as racist. This has had an almost obvious and immediate effect on those of us working in technologies that include a network-security component. From June onwards, organizations have been addressing the concepts of "whitelisting" or "blacklisting" a network, IP address, etc. Tech giants such as Apple, Google, and Microsoft all tackled the issue as well as platforms such as Linux and RedHat. Currently, there is no new standard for replacing "whitelisting" or "blacklisting", but most companies have updated their style guides with their own recommendations.
From my research on the issue, the most commonly accepted changes are:

- "Allowlist" instead of "whitelist"
- "Blocklist" instead of "blacklist"

The Microsoft Style Guide was updated very quickly in the middle of 2020. A further update in January 2021 gives an additional suggestion of talking about "a blocked senders list" where relevant.

A new generation on the rise

In no fewer than twelve months, a pandemic, a new technology platform, and new terminology have greatly changed the way we live and work. That's pretty big! But can we expect the same pace of change in the future? And what will this change be? "Prophecy was given to fools," says the Talmud, so I'm not going to make any attempt. However, there is one change that's definitely on the way and maybe coming sooner than we think.
The change I'm talking about is the next generation of users that we're going to have to think about. We've had Baby Boomers, and Generations X and Y (Millennials). Next to arrive is Gen Z and I'll defer to Wikipedia for the definition of who is included in this new cohort:

> "Generation Z (or simply Gen Z), colloquially known as zoomers, is the demographic cohort succeeding Millennials and preceding Generation Alpha. Researchers and popular media use the mid-to-late 1990s as starting birth years and the early 2010s as ending birth years."

According to this definition, the earliest Gen Z individual may have born in 1995, making them 26 today. On the other hand, the last to join the cohort are ten or eleven years old. There are, however, a lot of people in their late teens and early twenties who are on their way to becoming the new addressable consumers and the users of the products we document. Many technical communicators may still be coming to grips with Millennials, but very soon we're all going to have to factor in Gen Z.
Incidentally, the Wikipedia reference to "zoomers" was coined in early 2020 as a word being watched by Merriam Webster. It has nothing to do with the Zoom platform but rather is a play on words between "boomers" and "z". How ironic (or prophetic) that today it could be said to have a totally different connotation.
Now, I should point out that I'm not an anthropologist, so I'm no expert on these different cohorts. I am, however, the father of a 16-year old, who sits right in the middle of the Gen Z spectrum. With home-based schooling over the last twelve months and my own working from home, I've received a close-up insight into how this generation thinks.
Let's look at some of my observations and my analysis of what this could mean for how we document in the future:

- **Social media**
  If, like me, you look back on around two decades in our industry, then the chances are that your choice of social media is Facebook. If you're a 16-year old, then you will be talking about possibly Instagram, but TikTok may be your platform of preference. In the cases of both Instagram and TikTok, individuals are actually finding and sharing information there. Today's 16-year old may be discussing the latest fashion trend, but who's to say that in five or ten years' time (assuming no new platforms come online), that same individual won't be looking for product information on one of those platforms. Many companies

indeed use Instagram at least as a promotional channel, but I wouldn't be surprised if we need to think about using something like TikTok for short instructional videos in the future.

- **Thought leaders**
  I started to hear this term in the mid-2000s as companies sought to cement their positions in an industry. So, how did companies become thought leaders? Your marketing team had to make sure your company wrote articles that were prominently placed which, while not directly promoting your product, would nevertheless cover the sector your company was involved in. Over time, your organization would be regarded as the experts in that field. Today, we would probably think of this as something like an "influencer".
  Influencers are present today in the different social media channels popular with Gen Z. They have millions of followers each and zoomers will hang on their every word. What they say influences probably tens of millions around the world. It's big business too. Brands pay these influencers hundreds of thousands of dollars to showcase their products and give favorable reviews. While it's relevant for brand promotion, I wouldn't be surprised if this trend is extended to involve influencers in product documentation on some level.
- **How we write**
  Zoomers write very differently from previous generations. When they communicate with each other, they'll write many short messages as opposed to longer, single ones. Also, they take the use of emojis and contractions to a whole new level. When I'm in my home office, my 16-year old will often WhatsApp me a piece of school work to print with just a simple "cyp?". I'm still not sure if that means "can you print", or, because it's obvious that it should be printed, "can you please". How will we write content for this generation that they'll both understand and also be able to consume? I'm pretty sure that pages and pages of instructions will be close to useless for them.

At this point, and I hope I'm not going to disappoint, I'm not going to come up with any practical suggestions. That's because I don't yet know this audience fully and I'm also not sure what their actual needs will be. However, I have started giving the matter some thought and asking questions of what may be needed in the coming years.

Getting to know the zoomers

I do think it's important for all of us to keep a level head and not get too worried. That's for the following simple reason: Gen Z, at the end of the day, is just another type of audience we need to think about when we write or create content to help people use products. As technical communicators, we always need to be thinking about who our users are and what they need to make their product journey easier. User profiles can change every twelve months, and their needs and the way they want to consume content may change just as rapidly. Therefore, if we want to be good at our jobs, we have to be prepared to constantly assess, analyze, and change as required. Catering to Gen Z will be no different.
What can help us with this challenge is to broaden our skillsets, and that's never a bad idea. What's the greatest addition that could help us? In my view, it is the adoption of UX principles, especially looking at how to create personas. UX methodology requires building profiles for usually three typical users of your product (and your documentation), even giving them names to humanize them. I am not a UX expert, but over the last few months, I've been reading and learning a lot more about the field, including taking an online course.
I have been encouraging my team to do the same. I don't think we can do our job properly anymore if we don't do this. In fact, if you look at job postings over the last two to three years, you'll see that many tech-writing jobs have incorporated some aspect of UX.
Here are some pointers to help you get started:

1. **Ask questions**
   Speak to the people in your organization who have the closest contact with customers. Find out the customers' pain points, what type of people they are, and their roles.
2. **Interact with customers**
   Make sure you can have access to a sampling of end users. Build a core group of users that you can talk to periodically.
3. **Find a champion**
   You need someone in your own organization in a position of influence who buys into your vision. You may need budgets, other resources, and some gentle persuasion, and without having someone with influence on your side, you'll be at a disadvantage.
4. **Educate**
   Sometimes, technical communicators can find it hard to make their voices heard. You need to work hard to educate your colleagues and bosses about what it is you do, and why it's important to the organization.

Accepting change as a constant

Don't get me wrong, I don't believe for a minute that trying to do any of this is going to be simple, certainly not in many organizations. But if we want to be good at what we do, then we have to at least try. I believe that a good technical writer will have and must have the end user in the focus of everything they do.
To summarize, the way we do our job has been affected by changes around us and continues to be affected by change. To ensure that we do our jobs properly, we need to accept the change and move with it. These days, this means learning to be extremely agile and nimble and making sure we're aware of the changes and how they are affecting what we write, who we write for, and how we get that information to them. Concentrate on the user and you should be fine.

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Augmented Reality: the new normal in technical writing?

Required by law to be delivered with every product, the written manual is here to stay. But using Augmented Reality, digital instructions can enhance the classic manual, making the information more intuitive and easier to understand.

Text by Jens Vanacker and Katrien Devulder

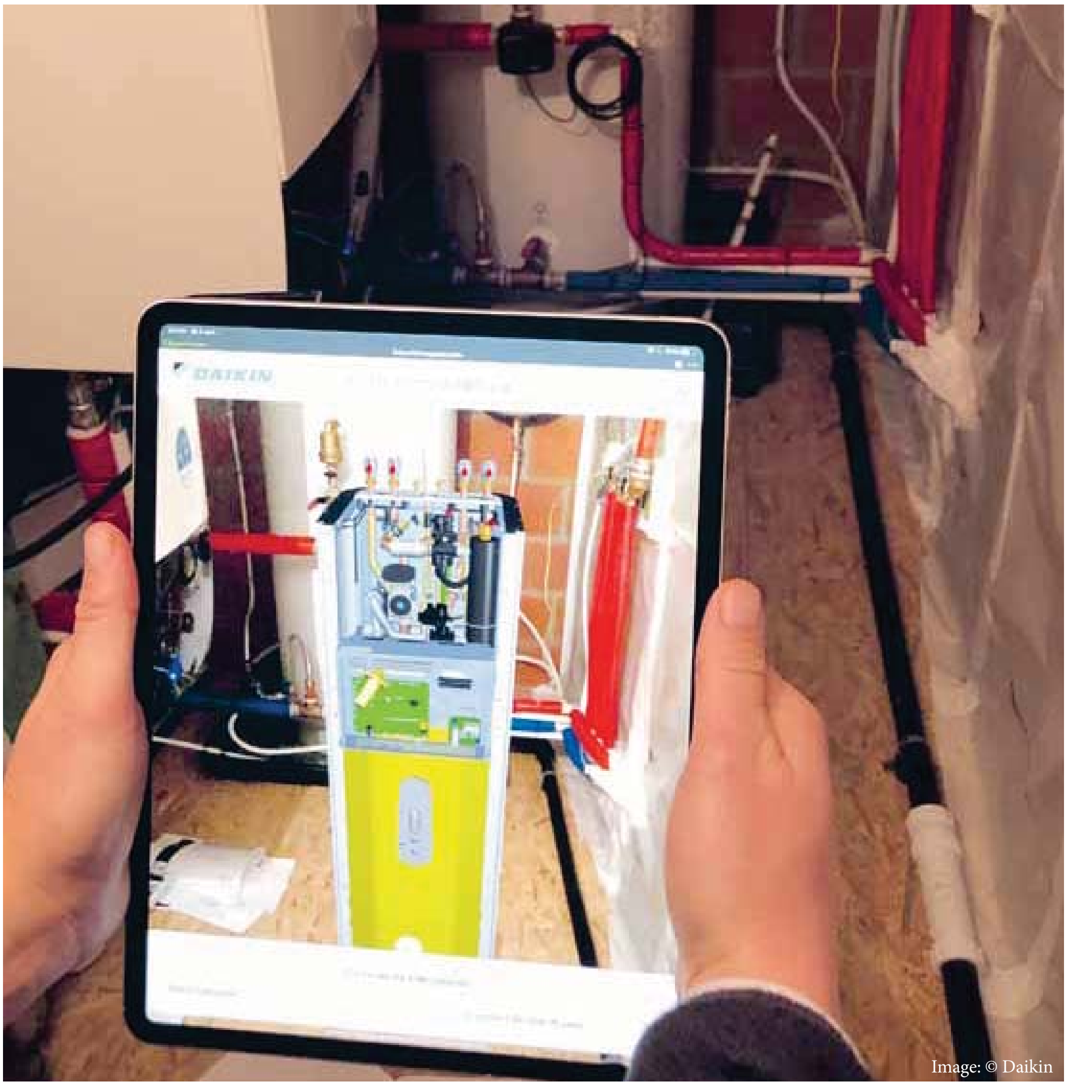

Image: © Daikin

Figure 1: Instructions in Augmented Reality allow the installer to see digital information along with the physical product.

From your washing machine at home to complex industrial machinery, every device with the least bit of complexity comes with an installation manual. In fact, installation manuals constitute one of the main sources of product information shared between a product's manufacturer and its installer. Especially for complex products requiring specialized installation procedures, clear installation instructions are crucial. Manufacturing companies have long relied on the installation manual, combined with installer training and certification, to guarantee high-quality installation of their products. But classic manuals have limits. As such, they often fall short when an installer runs into an issue during installation.

New emerging technologies provide opportunities for enhancement. What if, for instance, installers could rely on Augmented Reality to get clearer installation instructions on site, while installing the product? Daikin, a leading manufacturer of heating and cooling solutions, joined forces with Savaco, a Belgian IT service provider, and Yamagata Europe, a technical writing and translation solution provider, to investigate how installation manuals can be upgraded toward clear digital instructions providing benefits for both manufacturer and installer.

The limits of classic installation manuals

At Daikin, manuals are provided with every piece of equipment delivered. As Daikin's heating and cooling systems consist of several units, this means various manuals are needed to complete one installation. "Take for instance a residential solution for heating. Such a system consists of a heat pump installed outdoor, an indoor unit, a hot water tank, a controller, and more. Each of these products requires specific installation procedures: fixing the unit, connecting pipes, connecting electrical wires, starting up the system," explains Bram Lowagie, product documentation manager at Daikin Europe. "As you can imagine, installing a complete heating or cooling system is a complex matter. That is why we require installers to get certified for installing our products, in order to guarantee a correct installation for our end customers." Currently, Daikin provides a written manual for each of its products. A printed short version is delivered along with the unit, and the full version of the manual is available online via Daikin's business portal. But these manuals have limits, as they contain only written descriptions and static, 2D representations of the product. This often makes instructions harder to understand. If an installer runs into a problem during an installation and does not find the solution in the manual, installation delays are inevitable. And these in turn lead to more delays at the construction site, where every action is interconnected.

Bridging the gap between manufacturer and installer

One way to reduce errors and delays in installation would be for manufacturers to make their products easier to install. But for complex products and systems, this isn't always feasible. Another way to bridge the knowledge gap between a product's manufacturer and its installer or end user is to make installation instructions easier to understand. Converting installation manuals into digital instructions is an important step forward in increasing understandability. Today, more and more installers are digital natives who have grown up using digital tools such as smartphones and tablets. They are no longer used to reading written instructions, and they expect their supplier to support them using the same modern tools they use in their daily life. "Technology can help us improve our installation instructions and adapt them to customers' and installers' changing expectations," says Bram. "We believe digital instructions can make our manuals more intuitive and easier to understand, even by less experienced installers. This way, we want to better support our installers, guarantee a higher quality installation of our product, and finally ensure timely delivery and a happy end customer."

Steps towards a better understanding of installation instructions

A first step in making installation instructions more intuitive and understandable is to build digital instructions focusing on a visual representation of the product and the instructions. Today, manuals rely heavily on text. Replacing this text with visual instructions enhances understandability. Secondly, it can be of great help to include animated 3D images of the product in the instructions, instead of photos and videos of a physical product. This makes it easier to give a full view of the unit (not only the visible parts) or to highlight important parts where needed. Finally, as an installer, it can be of great value to be able to do a virtual installation of the product off-site, by way of training, or as a preparation for the installation itself. "If an installer can get to know the product and go through the instructions virtually before starting the actual installation, he or she will be better prepared for the work on site," says Bram.

Today, the written manual cannot be replaced. Providing an installation manual with each delivered product is required by law. But it could have great benefits for the installer if the classic manual were enriched with digital instructions, available for instance in an app on the installer's smartphone. So what technologies can help achieve clear, visual digital instructions in an existing classic written manual?

From text-to-speech to Augmented Reality

Yamagata Europe and Savaco investigated the possibilities using a Daikin installation manual to build a proof of concept. In the first step, written instructions were tackled. Using text-to-speech technology, Yamagata Europe converted all textual instructions in the manual into spoken words in multiple languages. As the instructions were available in multiple languages in Daikin's SCHEMA ST4 CMS, multilingual instructions are included easily in subtitles and spoken words.

Next, an instructional video was created using the spoken instructions. One option was to take a camera and record how a person installs the product. But for that, you need the physical product, actors, a studio… And often, the result isn't clear, as the actor's hands block the view when performing an action. Instead, Savaco decided to use the product's 3D CAD model as a basis for an animated instructional video. A product's 3D model is available from the moment its design is released, and if the product is changed, the 3D model can easily be replaced by the latest version in the video. This makes it possible to update the instructional video each time a new version of the product is released.

Finally, the process was taken even further by enriching the digital instructions with Augmented Reality. AR is a powerful technology that allows you to project digital information, such as a product's 3D model, onto the physical world. In this way, you can visualize the product in its physical context, such as a construction site, without having the product itself on site. What's more, it allows you to see aspects of the product that usually remain invisible, for instance, the inside of the product. In this way, AR can give a whole new dimension to digital instructions.

Savaco used PTC's Augmented Reality tool Vuforia to convert a selection of complex procedures in the Daikin installation manual into an AR experience. The AR experience was created using existing content: the product's 3D model and the instructions from the manual that were previously converted into voice instructions. In order to make the AR experience available for the installer, a QR code was added in the paper manual, which can be scanned by the installer using a smartphone or tablet.

A new normal in technical writing?

The result of Daikin's, Yamagata Europe's, and Savaco's joint effort is an installation manual enriched with digital instructions in animated video and Augmented Reality in multiple languages. For every complex procedure during installation, an installer can scan a QR code using a smartphone or tablet, and watch clear visual instructions to fully understand what needs to be done. When watching an AR instruction, the installer can even project the digital instructions onto the physical construction site, in order to get a full view of what the end result should be.

This type of digitally enriched manual has benefits for both manufacturer and installer. First of all, having clear visual digital instructions at hand makes it easier for the installer to complete an installation without running into problems or making mistakes. Especially if the installer is less experienced in installing a certain type of device, digital instructions can be of great help. This results in shorter installation times, a higher quality installation, and a perfectly satisfied end customer.

For the product manufacturer, a higher rate of successful installations increases its status as a reliable supplier and decreases the number of calls or questions from installers with specific issues. Moreover, creating digital instructions doesn't require a lot of extra effort. No new content needs to be created, as written installation instructions and a 3D model already exist. Using text-to-speech and AR technology, they can quickly be turned into much richer, easy-to-understand digital instructions.

For Daikin, Yamagata Europe, and Savaco, this proof of concept confirms that enriching manuals with digital instructions can have a lot of added value. In times when both installers and end customers expect manufacturers to provide innovative support at all times, digital instructions in local language could become the new normal.

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How useful is your documentation really?

Usability testing provides insights into how our users interact with or think about a product. It helps us to test not only our devices but also our documentation. Here are some examples of and tips on how you can test and ensure the usability of your documentation.

Text by Dimiter Simov

Let's start with a definition. For the purpose of this article "usability" is

> a quality of a thing that shows how fit, convenient, and easy to learn and use it is for particular **people** in a particular **context** for a particular **task**.

People, context, and task are critical and need to be clearly defined. These parameters can, for example, include documentation as an aid that people use to accomplish their task. Usability testing thus also helps us to measure the usability of the documentation.

We can measure usability by asking experts to review the product against certain criteria or by testing it with users. In this article, we take a look at usability testing as a way to evaluate, with the help of users, how usable something is.

The results of a usability test can assure you that you are on the right track or, rather, that you are headed in the wrong direction and need to correct course. Usability testing can speed up your development process as the time spent on testing will pay off later with fewer reworks and user complaints. Usability testing can even earn you money – check out The $300 Million Button story [1] of how usability testing led to renaming a button on an e-commerce website, and the change increased the site's revenue by $300 million within a year.

Testing documentation with users

There are three ways to test the usability of documentation:

1. **Directly:** test your content
2. **Implicitly:** join tests of the product and watch as users consult (or omit) the documentation
3. **Combined:** use other methods and techniques to evolve the documentation and explain your findings

We will look at three usability studies that illustrate each of these approaches.

Example 1: Testing the content

We tested a piece of documentation – a tutorial on using the Node.js technology to create a simple business application. [2]

Our goals were to

- Discover how users find information about the scenario
- Observe users as they use the tutorial
- Check how experience matters for three different user groups:
  - **Novices** with no or little experience with the product
  - **Builders** with no scenario experience but other experience with the product
  - **Extenders** who are masters of the scenario

We presented all participants with the following story:

> You are a lead developer in The Good (a fictitious company). You are following SAP's technological development and are especially interested in the cloud area. Now your company wants a solution for the following problem:
> You have a backend with customer data. You ask employees to start proposing new customers to their manager. The manager will receive a list of proposals where he or she can accept or reject the proposed customer. If the manager accepts the proposal, it will be stored as a customer in the backend system. If rejected, the proposed customer will be deleted from the list.
> Because a proposed customer must be kept temporarily, until the manager's decision, it must not be stored in the backend system. So, you need a web application and an intermediate cloud database to store the proposals.

The tutorial on Note.js provides a perfect guide for building the application that the story describes; however we did not point participants to the tutorial straight away. Instead, we let them explore on their own for about ten minutes and watched their actions, what they searched for, and what they tried to do. Then we asked them to use the tutorial if they had not found it already.

Here are some of our findings:

Search. We were interested in the words and sources participants used when searching. They used seven sources of online information and 41 different expressions. This variety surprised us. Only one participant started his search in the documentation, and he was a technical writer. We were also surprised that no one started with the product.

Terminology. We wanted to know if participants understood the terms in the tutorial and discovered that a few terms caused trouble.

Completion. It was much harder for inexperienced users to complete the tutorial than for experienced ones. A surprising result was that the more confident a user was in his or her skills and knowledge, the harder it was to follow the tutorial. Confident users often skipped steps, which resulted in errors, reworks, and delays.

Sufficiency. We also wanted to check if the tutorial provided enough information for users to understand what they were doing and why. In general, the results were good. However, we observed two gaps:

- Code samples lacked descriptions. Participants read the code to understand the step they needed to perform and what the code does. Developers are expected to be able to read and understand code. However, if there is a description, the process is faster and easier.
- Not enough links to definitions or details of concepts. Some participants needed to stop their work, do a web search, and find the needed detail. Most of these details could be found in our own documentation.

Skipping steps. Participants didn't follow the tutorial in order. Instead, they skipped texts, phrases, and entire sections. This is the interaction pattern that we observed in most participants:

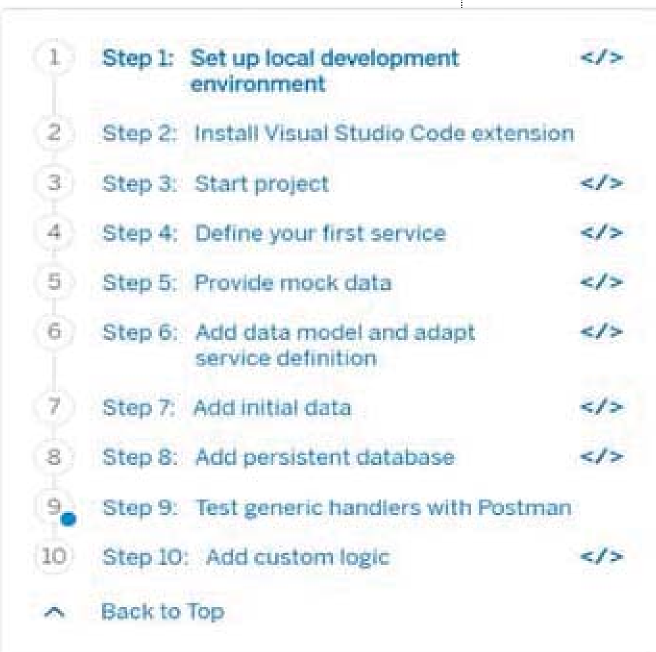
1. Scroll up and down many times to skim the tutorial
2. Go to a step, scroll down to skim the whole step
3. Scroll back up, and start following the instructions

The reasons for this behavior are the big size of the tutorial, the many screenshots and code samples, and the excessive amounts of empty space.

Navigation. Our tutorial is a long piece with its own navigation. We wanted to know if participants used the tutorial navigation and if the navigation worked for them. Navigation aids included:

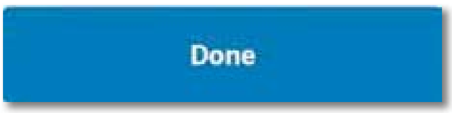
- **Numbered circles** that represent the steps in the tutorial. Nobody used them, so we can safely remove them.

- **Table of contents** that shows the full names of the tutorial steps. This box is constantly



  visible on the screen. Nobody clicked on it. However, we think that users noticed it and perhaps used it as a visual orientation aid.

- **Done buttons** after each step allow the users to track their progress through the tutorial.



Three of the 13 participants used these buttons. Those who did not use the buttons said that they did not need them, but did not perceive them as an obstacle. Those who did use the buttons said they liked the idea of seeing their progress.

Example 2: Testing a product use case

We tested a specific scenario with the product and observed if participants used the documentation and, if yes, how. We discovered a few interesting things about our documentation.

Contextual help must be integrated into the main help. In the product UI, there is a contextual help button that is prominently located in the top right corner (see Figure 1). We observed several users clicking on this button. The help button opens a pane within the product that shows information about specific areas of the current screen. Participants who needed information about a specific field or area on the screen and used this contextual help pane did not find the needed information. All participants who opened the contextual help needed to go to the main help. The contextual help pane was ineffective due to the following issues:

- No links to the documentation. There was no generic link nor links to specific details. In some cases, the contextual help offered deep links, but our participants did not find them.
- No option to search the entire documentation. The search box searches only locally within the content shown in the contextual-help pane. Participants did not understand this, so those who tried the search did not find anything and assumed that the information they needed was not in the documentation.

Words matter. We watched a participant who used the main help to understand a concept and then create a new item in the product. She located the topic that explained the concept (subaccount) rather easily and quickly understood the concept. The next logical step for her was to find instructions for creating a new subaccount. The link was there in the topic, right before her eyes, but she did not recognize it because it appeared under a different term (see Figure 2).

She was looking for the word "creating" and the word we have in the link is "managing". To her, there was no adequate link to create subaccounts. The participant scrolled up and down several times. She also tried searching but the search did not return an adequate topic on creating subaccounts because she searched

Figure 1: The help button shows information about specific areas of the current screen.

Figure 2: A single word can make or break the success of instructions.

1. Make a list of objects, concepts and tasks that are relevant to the domain of the product.	2. Give the list to users and ask them to arrange the items in groups that make sense to them and label the groups.	3. Combine the groupings of all users into a unified model and build the documentation structure from it.

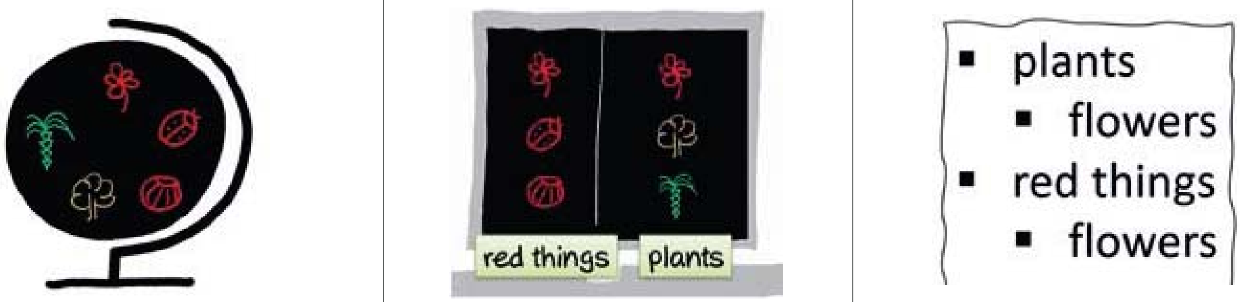


Figure 3: Card sorting can help you to restructure your information.

Period	Dec-13	Apr-14	Jul-14	Aug-14	Dec-14	Apr-15	Jun-15	Mar-17
Visits	21,100	13,700	26,800	21,500	34,900	52,000	48,900	136,000
Users	11,400	6,700	6.400	10,000	18,600	27,100	25,800	67,300
Pages per visit	19.9	12.4	6.12	5.8	4.6	4.3	4.5	3.42
Bounce rate	2%	19%	33%	30%	39%	40%	39%	48%
Avg. visit duration	05:39	06:41	06:18	06:51	05:39	05:33	05:42	04:50
Avg. time on page		00:35	01:14		01:34	01:40	01:38	

Figure 4: A growing number of users viewing a decreasing number of pages

explicitly for the keyword "create", and the word that the documentation uses is "manage".

Example 3: Card sorting for new information architecture

We did a user study to restructure the documentation based on how users order the information in the product domain.

We used a method called "card sorting". Figure 3 summarizes how this works.

We did the study at the beginning of 2014 and released the new structure in June of the same year. Figure 4 shows the results.

The number of users and visits kept growing in the following months and years. The number of pages that users visited decreased noticeably in July 2014 and kept going down. The bounce rate went in the opposite direction. This is due to the new structure: It became easier for users to navigate to the topic they needed. They began to visit fewer topics because they did not need to hop from topic to topic in search of the right one. The average time they spent in the documentation and on any single page declined as well. This is another excellent sign. Users could now do their work with the documentation faster.

We also collected feedback in the documentation that allowed users to rate each topic that they visited as helpful or not helpful. This helpfulness score went up after the change.

Tips for better test results and experiences

Like any other tool, usability requires specific tools and skills. Here are a few basic tips:

1. Do usability tests to end opinion wars

In a development project team members might hold different opinions about how to approach a certain task or how to organize and present information. Sometimes these different opinions can even lead to conflict. In such arguments, the person who wins is often the one who is more vocal, has higher authority, is more convincing, or has a higher rank in the hierarchy of the company. If you run a usability test, you will be able to decide on the best approach based on data, not on opinions.

2. Ask someone else to test your baby

If you have created the product (i.e., written the documentation), you are too familiar with it to spot problems even when watching users interact with the product. In addition, you are

also positively biased towards your product. You are more likely to disregard certain observations or diminish the severity of issues. This is why it is better to have someone outside your team do the testing.
Of course, if there are no external people available, biased testing is better than no testing.

3. Define points of interest

When preparing the study, identify places, features, and behaviors that you want to observe and collect information about. List them in your study script. This is especially helpful when doing exploratory testing in which you do not give participants explicit tasks but rather a general direction and let them roam.

Here are some possible points of interest when testing documentation:

- Will they notice the subtitle?
- What do they do first when they open the page (perhaps scroll down and up to get an idea of the length of the article)?
- What do they think about the font size?

4. Focus on red-route tasks

When testing, cover the basic and critical user tasks first. Test less important tasks and features only if time and resources permit.
For example, in an email application, replying to an email and sending emails are critical tasks. Setting stationery and a signature are less important.

5. Give scenarios and goals

Present your test tasks to participants as stories rather than as explicit tasks. Let's say that we want to test a tutorial on making birthday-wish videos. Telling your participants to "use the tutorial to learn how to make a birthday-wish video…" means they will go to the tutorial not knowing why they should learn how to make such a video. Instead, tell a story: "Your niece has a birthday and you want to make her happy. Her mother told you she would very much enjoy a birthday video. You want to give it a try." The story introduces a scenario and sets a goal – to make a girl happy – thus adding purpose to the exercise and making it closer to life. The story will also allow you to observe whether and how participants will look for the tutorial, which you will not observe if you give a direct instruction.

6. Select representative participants

Test with participants who are representative of the users of the product. For example, it will be a waste of time to test an IDE (Integrated Development Environment) with students of English studies (unless, of course, the students are also software developers who use IDEs in their work). Include participants from all user groups (personas).

Cover both experienced people and novices. If you are launching a new product, your experienced participants will be those who are using another similar product.

7. Start with a proper introduction

Tell them in the beginning what will happen during the session. You know well what the session will look like, but participants don't. Do not scare them. For example, avoid the word "test". Telling someone "we are not testing you but the product" will easily convince people that you are in fact testing them. Something like "together we will review the product" is much better. Give them a few minutes to play around with the product, then follow with a relatively easy first task.

8. Leave them on their own

Do not help participants unless it is necessary. You want to see how they can do it on their own. You can step in and help when you see that the inability of participants to complete a task will prevent them from continuing further with the testing. Watch your body language. There are so many cues that our body gives, and we humans are very good at reading other humans' bodies.

9. Learn what they think

Participants often feel uncertain whether they are doing something correctly, so they ask questions for reassurance. If we answer such questions directly, we don't learn much. Therefore, it is better to reply with a question.
For example, the participant may ask "Will this button open the form?" Instead of answering yes or no, we can say "What makes you think this button will open the form?" or "How do you think you can find out what this button does?"

10. Look for patterns

Wait and observe a specific problem or behavior in several users before you jump to conclusions. If it is just one participant who encountered an issue, it might be due to chance or other factors. Once you have identified a pattern, you can skip specific tasks or stop asking users to perform a given activity, especially if it is something hard or painful for users.

11. What users say is not what they do or need

During usability sessions you might hear participants say, "I know how to do it; others would not" or "I am not good at this". Tell them that they were chosen for their qualifications and that you want to see them using the product. Of course, don't push them too hard. Relating to documentation, we very often hear requests such as "I want images in the documentation". The truth is that they do not really need images. They need better documentation, and most likely, they need a more usable product.

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Dimiter Simov (Jimmy) helps businesses and people make their software products understandable and easy to use. He spends most of his time as a usability consultant and interaction designer. He also has a background in quality assurance and technical communication. His career revolves around how people are expected to use software and devices.

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We-attitude in user instructions:

Enhancing the writer-user interaction

User instructions are all about the user and the content, while the technical writer usually remains invisible. But could we perhaps improve the user experience by making the writer more visible and creating a stronger writer-user interaction?

Text by Tytti Suojanen

Image: © photografier/123rf.com

One of the key competencies of technical communicators is to analyze their target audience. Writers should have a command of different user research methods as well as expertise in designing information to meet the needs of the users. These are deciding factors in the design of text and visuals in user instructions, which writers will modify based on feedback from the users. Writers are thus the user's advocate throughout the documentation cycle.

This user-centered cycle, which is self-evident in technical communication, made me pause: What if we concentrated on the writer for a change? Would we have something to gain if we enhanced the interaction between the writer and user in user instructions? How could writers engage more with their users, keeping in mind the aim of optimal user experience? For enhancing the idea of writer-user interaction, I created the concept of the we-attitude.

What is the we-attitude?

The concept of the we-attitude was a by-product of my PhD. [1] This dissertation examined the ways Finnish household appliance manufacturers domesticated their products through the use of domestication strategies in the user instructions in the period 1945–1995. Domestication refers to the ways people start using new technologies and eventually integrate them into their everyday lives. [2] I was especially interested in the interaction between the writer and user as part of the domestication process and how this had changed over time.

As an aid in the study of this interaction, I used the Aristotelian modes of persuasion: logos, pathos, and ethos. Logos refers to content, pathos refers to the mood and emotions of the audience, and ethos refers to the character of the writer and how they perceive the audience. While applying these three modes, however, I came across the *you-attitude*, a well-known concept in business communication. It refers to strategies used to persuade readers and prioritize their needs. It provides the reader with empathy. [3] The you-attitude had similarities to pathos, and more importantly, it seemed to be a richer and more well-rounded concept in the context of domestication.

The you-attitude thus became the first domestication strategy I studied in my data, which comprised 132 user instructions. In practice, I analyzed the following features:

- the pronoun "you"
- verb forms addressing the user (imperative 2nd person singular)
- user roles; in other words, what the users were called in the instructions (for example, "user", "customer", "housewife")
- how the users were motivated

However, I was now left with no counterpart to ethos and no match to counter the you-attitude. So, I came up with the *we-attitude:*

> The we-attitude refers to ways in which the text builds the relationship and commonality between the writer and the user and maximizes interaction between them. It is the presence of the writer and the company in the text. [1]

The we-attitude became the second domestication strategy I examined. Campbell [4] advocates for the increased use of ethos – or in my study, the we-attitude – because it could mediate powerfully between the technical material and the needs of the reader, particularly in answering the question so often neglected in user instructions: Why would I want to use this feature in the first place? How could it relate to my needs?

Means of showing we-attitude

Following the model of the you-attitude, I analyzed the following features from my data as manifestations of the we-attitude:

- the pronoun "we"
- verb forms: indicative 1st person plural
- company mentions
- the writer's role in motivating the user

This is by no means an exhaustive list; it is a list that was appropriate for the research setting in question. We need more studies that include different elements as part of the we-attitude and look at a wider variety of materials. We also need more real-life examples: what kinds of elements of the we-attitude do you use in your documentation?

The first three elements on the list are self-explanatory, so in the following, I will concentrate on the writer's role in motivating the user. Motivational elements are textual additions or modifications to user instructions to motivate the user without changing the content of the instructions. [5] Motivation is thus a rhetorical device: it aims to keep the user reading and trying until the task is successfully completed.

I studied two motivational elements from the data, namely, confidence and relevance. Confidence refers to the users' self-assurance in their ability to learn and perform a task. [5] The following elements related to boosting the user's confidence were discovered in the data:

- The use of the product is said to be easy and safe.
- Users are encouraged to get to know the appliance through practice: practice makes perfect.
- The writer takes on the role of the manufacturer [6]: they congratulate the user and promise that life will become better and that the user will be much happier.
- The writer takes on the role of tutor [6]: the tutor guides and supervises reading by encouraging users to read and continue reading, and they use face-saving strategies to boost the user's self-confidence.

In the second motivational element, namely relevance, users must believe that the instructions are related to their personal needs or goals. [5] Relevance includes two main types of arguments: rewards and threats. [6] Arguments related to rewards that writers use in the data can be divided into two groups:

- **Arguments connected to the device.** For example, the writer argues that if the user acts in a certain way the device will work perfectly; it will be steady and last longer; it will stay nice and clean; the user will avoid damage to the device; and the device will always be in working order.
- **Arguments connected to the user.** For example, the writer argues that the user will benefit from different kinds of savings (water, energy, cost, time); they will receive detailed information, help, and good results; they will get to know the device, use it correctly, and take full advantage of it; the device is easy to use and clean; the user's safety is guaranteed; the device will meet the user's expectations; and the user will gain joy, satisfaction, and energy.

Arguments related to threats that writers use in the data can also be divided into two groups:

- **Arguments related to the detailed functioning of the device.** Arguments in this group are varied and device-dependent; for example, the user receives the threat that if they do not act in a certain way, water may flood the floor, the program might get stuck, or the enamel may become damaged.

- **Arguments connected to the device or the user.** For example, the writer argues that incorrect use will generally affect the operation and use of the device, and no guarantees can be given; the working life and capacity of the device may decline; there will be waste such as greater electricity consumption; the effects of use will be poor; the warranty will be voided, and the responsibility for the damage will fall on the user; and there is a danger of an accident or threat to life.

Boosting the user's self-confidence and introducing the rewards and threats connected with an action are concrete means that the writer can use to increase interaction with the users. They are also the kind of elements that Campbell calls for, mediating between the technical material and the needs of the reader. Relevance in particular answers the user's question of why they should or should not act in a certain way in a certain situation.

Change in you- and we-attitudes

In addition to the qualitative manifestations of the you- and we-attitudes, clear changes were detected in the domestication strategies over time. Both the you- and we-attitudes are stronger and more wide-ranging in the older material extending up to the 1970s. The writer is clearly visible in these early instructions: They aim to convince the user of the rationality of acquiring a new appliance; they help users accept and tame new technology, and they persuade users to believe that learning to use an appliance is not difficult. As one would expect, the we-attitude is rarer than examples of the you-attitude in the overall material.

Based on this data, the newer the user instructions are, the more they seem to become a spectator manual [7], detached from their user and their context, and lacking the strong presence of the writer. The older instructions have a more human touch, while the more recent ones are abstract and impersonal.

In assessing these results, however, it is good to bear in mind that the you- and we-attitudes are deeply intertwined, as are the original Aristotelian modes of persuasion. Elements of the we-attitude, such as motivation, also serve the user and help to build you-attitude, because they reveal the writer and their perception of the audience.

Benefits of motivation

My PhD reveals something of the you- and we-attitudes in a limited set of data, which is, above all, historical in nature. So, the basic question remains: Why would writers want to use motivation as a sign of the we-attitude? First, motivation can have positive effects on usability when it is defined by effectiveness, efficiency, and satisfaction. However, positive effects depend on the task and user group characteristics.

Second, using motivation results in higher text appreciation: in Loorbach et al.'s study, student participants rated the motivational version as more popularly written, more personal, friendlier, and more fascinating than those who were using the control version. Thus, motivation can have positive effects on users' satisfaction and may keep them trying when faced with difficulties.

And third, motivation in the same study by Loorbach et al. positively affected senior participants' effectiveness in task performance and their persistence in completing tasks. Users with low self-confidence levels might thus benefit more from motivational elements than those with a higher level of self-confidence. [5]

Conclusion

The we-attitude was created to be used as an overarching concept to cover different means of showing the presence of the writer and the company in user instructions. It gives a name to textual elements that build the relationship and commonality between the writer and the user. It was also created out of necessity in a situation where there was no suitable analytical tool available. With the concept, I also wanted to emphasize the role and importance of the writer in engaging users.

Different means of the we-attitude build stronger writer-user interaction. At least in the case of motivation, the interaction has many positive effects that undoubtedly contribute to a better overall user experience. We now need more real-life examples of the we-attitude as well as more research on their role in various use contexts.

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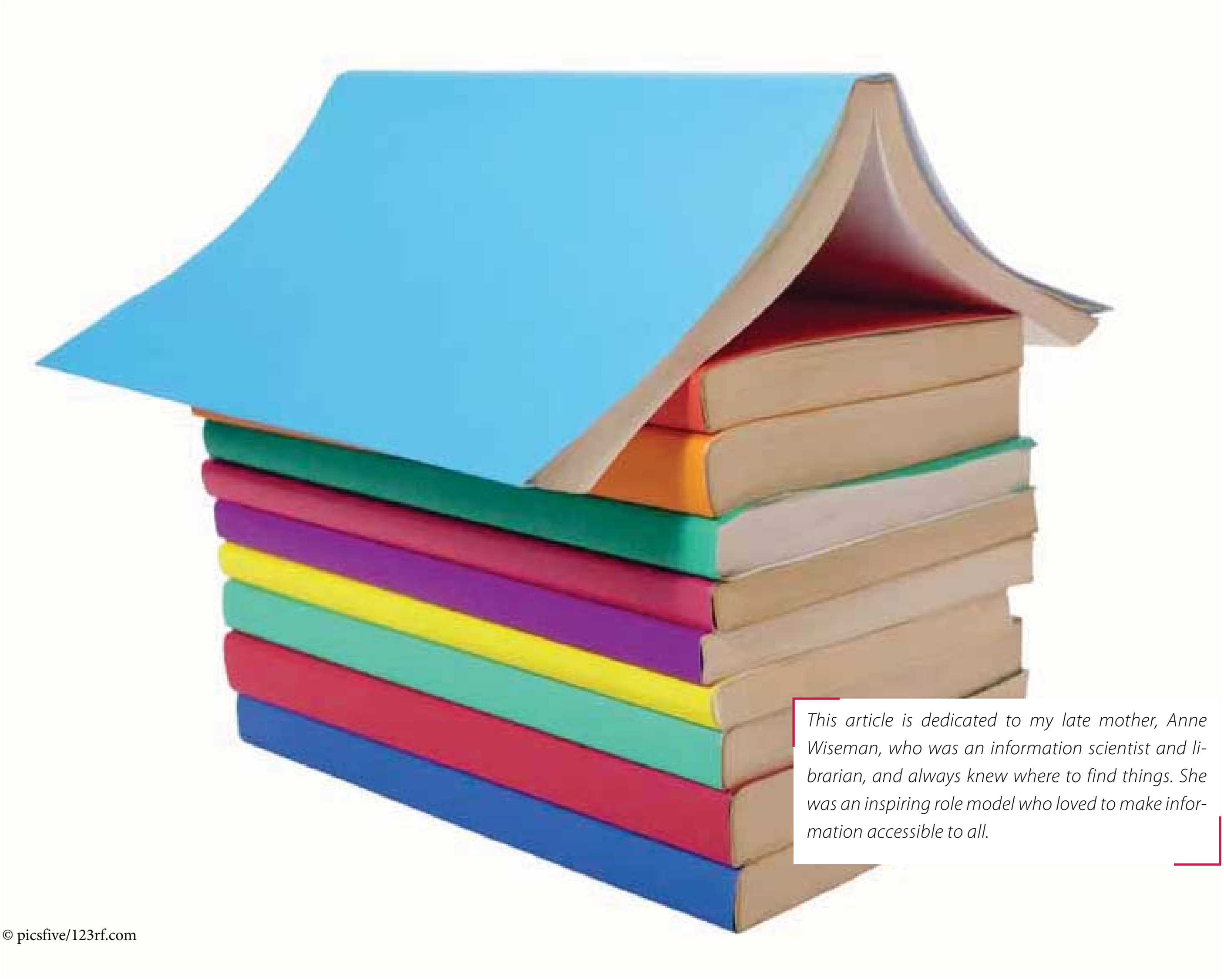
Documentation architecture

How to help our audience find what they need

Ensuring that our audience can find and access the information they need when they need it has become just as essential as the information itself. Documentation architecture helps us to structure information and limit the amount of content we expose our users to.

Text by Sara Stein



This article is dedicated to my late mother, Anne Wiseman, who was an information scientist and librarian, and always knew where to find things. She was an inspiring role model who loved to make information accessible to all.

Image: © picsfive/123rf.com

The volume of digital information we produce continues to grow exponentially. For customers consuming technical documentation, this information explosion poses a potential hazard: Can they find and access the information they need? As a technical writer producing documentation for a company with many products, I also have to wear the hat of information architect. The question of "Where is the information?" has become more important than the content itself. With so much documentation available online, we risk the customer experience becoming like the proverbial search for a needle in a haystack. In an ideal world, we want our customers to find the information they need quickly and easily. But how do we accomplish that when faced with so much information spanning years of development across different products and versions?
To get information to customers, a documentation site needs to achieve these primary goals:

- **Findability** – Information should be accessible and findable. When customers wonder, "Where are the release notes from a previous version?" or "Where are the upgrade procedures to install feature X?" we want them to find it themselves via clear and logical information categories. In Peter Morville's user experience honeycomb, a pivotal aspect of user experience is findability, the measure of how easily users can find information. [1] If users cannot find the content they need, chances are they will leave the site.
- **Context** – We want to show customers where they are. No one wants to get lost, especially in the middle of a complex installation or configuration procedure! Customers don't like to leapfrog from one topic to another in online help, especially if they lose the overall picture. A sound information architecture allows us to understand where we are as users, and where the information we want is in relation to our position. The ability to convey the big picture to customers while not getting lost in a myriad of details is what distinguishes good websites from not-so-good ones.

For anyone involved in building and maintaining a documentation site, this article outlines guidelines on how to develop clear information architecture and provide context so that users can easily access information.

Structure information with useful categories

When we build a documentation site according to clearly defined categories and sub-categories, it becomes much easier for users to find what they're looking for. This is where information architecture comes in.
Richard Wurman, the founder of information architecture, described it as "the practice of deciding how to arrange the parts of something to be understandable". [2]
The more complex the content, the greater the need for clear and logical categories that are understandable to the user. Ultimately, we want our users to find the content they need as quickly as possible without having to hunt for information, or worse, give up in frustration after a few seconds.
Complexity also depends on the number of product versions. If the customer base uses a wide range of product versions, then the site map schema must accommodate branches for all version numbers so that all relevant documentation can be accessed from the site.

What types of categories are meaningful to the user?

It's important to consider the use case of new employees at customer organizations. They in particular find it difficult to navigate a mass of documentation when everything is new, and they lack the pre-existing knowledge that seasoned employees may have.
If your organization produces documentation for different products, it makes sense that the primary category is the product. When a customer is looking for information about product <x>, she or he can find all the relevant information under the product category.

Guidelines for categorizing information

When defining information architecture, it helps to view the information categories as building blocks. These blocks can be chunked together at the same level or arranged hierarchically in different levels.
Here are some general guidelines for defining information categories in a documentation site:

- **Chunk from general to specific.** Start with the broadest or most general category and drill down to more granular or specific categories. In a hierarchy, the broadest category includes all its sub-categories.

  Example
  If a line of business is the broadest category, it can include products, major versions, and minor versions as different sub-categories.

- **Each category should be mutually exclusive.** Documentation for a specific product should not belong to more than one category. If the categories are not mutually exclusive, it will be confusing for users.

  Example
  If you have documentation for products A, B, C, and D, they should be represented as separate product categories. Documents for product D should appear only in its category, and not under product categories A, B, or C.

  Ideally, each document should have a defined place in the information hierarchy. When documents can logically belong to more than one place, the structure is not coherent. It becomes an erratic and unpredictable user experience to see the same document appearing in multiple branches in the tree. Users end up asking: "Is this new? Didn't I see this document already?"

- **Each category should be of the same type.** When defining categories for information architecture, you cannot mix apples and oranges. All the categories on the same level should be of the same type.

  Example
  Say you have a line of business category that includes products A, B, C, and D as sub-categories. You cannot add features E, F, and G at the same level of the product categories, as they are not products.

- **The categories must be meaningful to the user.** It's important to see the categories from the customer's perspective, and not only from the viewpoint of sales or development teams.

  Example
  Some categories might be meaningful to internal users and developers such as the year

the product was developed or the marketing SKU, but it's unlikely that these categories are relevant to a customer. The name of the product as known by the customer is probably the most meaningful category.

- **Ideally, the hierarchy of categories should be standardized across the documentation site.** When a logical information architecture repeats itself across different lines of business and products, customers can intuit where to find the information they need. Even though the hierarchy can contain several levels, users can easily navigate the site and know where to go next. A sound information architecture helps to facilitate a positive user experience.

Example
A customer is familiar with product documents in a specific line of business. After recently purchasing a product from a different line of business, he'll be able to find the documentation easily as the information structure is identical. He knows what to expect.

Visualize information categories

It's helpful to use a mapping tool such as MindManager or XMind to visualize the information architecture of a documentation site. Technical communicators can visualize information as hierarchical building blocks when they add major categories and sub-categories to the schema (see Figure 1). The structure of this conglomeration of major and minor branches forms the documentation site map.

When thousands of documents from different products and versions are uploaded to an online site, it's crucial to have a logical site map that classifies information in a hierarchy, from the most general category to the most specific. The site map depicts the exact structure of the documentation site with major and minor branches reflecting information categories and shows where individual documents reside within that structure.

In the example in Figure 2, the documentation site consists of four schema levels, from a line of business as the highest or most general level, down to the document content as the lowest or most granular level.

When the information hierarchy is viewed online in the documentation site, the categories are dis-

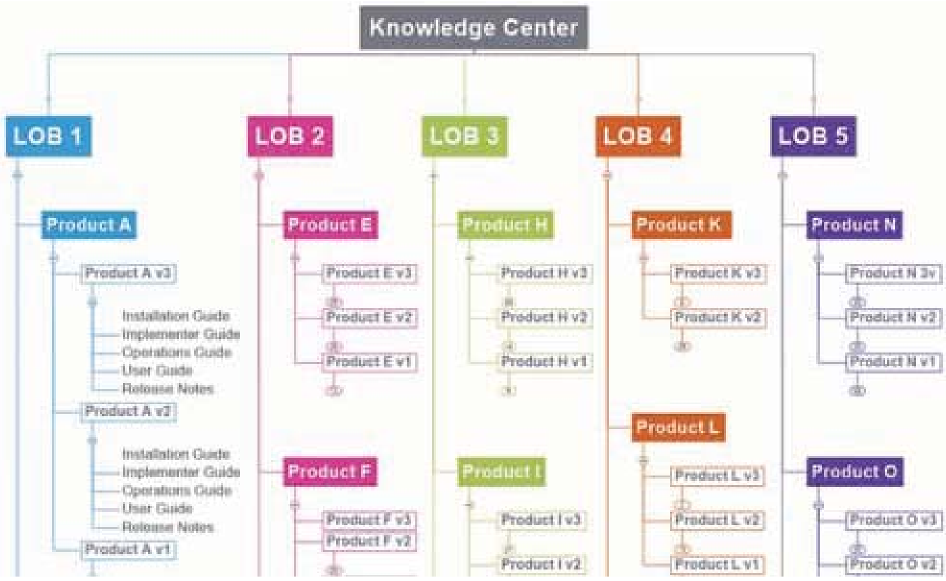


Figure 1: Visualizing the information categories for a documentation site with MindManager

Level in Schema	Category	Representation
1st level	Line of business	LOB 1
2nd level	Product	Product A
3rd level	Version number	Product A v3
4th level	Available documents	Installation Guide Implementer Guide Operations Guide User Guide Release Notes

Figure 2: Information categories reflected in schema levels from 1st (most general) to 4th (most granular)

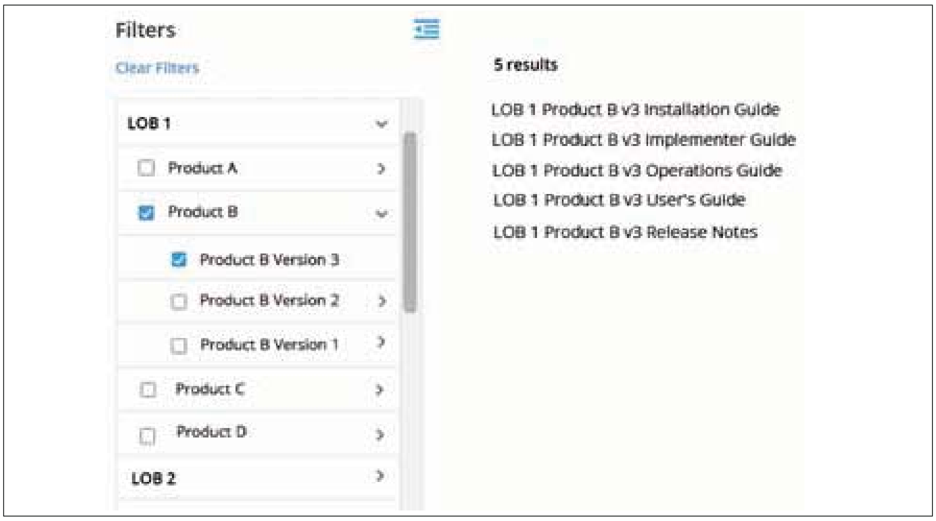


Figure 3: Information categories in the documentation site

played in a navigation bar on the left as shown in Figure 3. Clicking the arrows next to each information category expands its subcategories. The most granular level in the information hierarchy – the document type – is displayed on the right. Clicking the document type opens the entire document.

Personalize information with tags

Even after categorizing information in a structure with four schema levels, too many documents or search results might be displayed at once. This is especially the case when users don't select a specific version number, and all documents for all versions are displayed.
Personalization creates the perception that the information was tailored to address the needs of a specific individual. In her study of customization in online environments, Laura Bright found that people respond more positively when exposed to a customized online environment as compared to a standard online environment. [3]
To help users find the documents relevant to them, tagging and sorting mechanisms can be used in a documentation site:

- **Tag** – If documents are tagged according to audience type – for example, front office, back office, and marketing – then users can filter the documents according to what's relevant to them. In Figure 4, if the user selects the back office type, then only documents relevant to back office, such as installation and configuration procedures, are displayed.
- **Sort** – When the displayed documents can be sorted by date – either newest first or oldest first – users can easily access the most recent documents as they're displayed at the top of the list. A sort-by-date mechanism means that users don't have to scroll through tens of documents to find the most recent. In Figure 4, the sorting mechanism is set to "Newest first," so documents for version 3 are displayed before versions 2 and 1.

Give context

No one likes to get lost, especially in the middle of a complex installation or configuration procedure. Customers also don't like to jump from one topic to another in online help, in particular, if it means losing orientation.

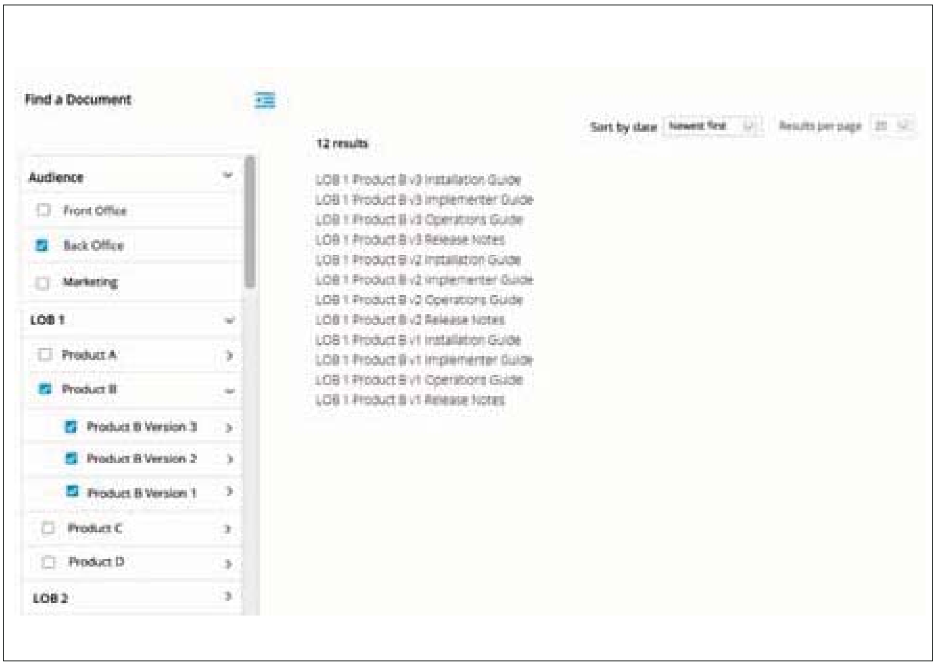


Figure 4: Personalizing documents with tags

With so many topics and documents, what does one thing mean in relation to another? By providing context, we show how different information elements are linked. It's important to show customers where they are or the context of what they are looking at with regard to the big picture. The ability to present the big picture to users while not getting lost in endless details is what characterizes good documentation websites.

Guidelines for contextualizing information

Here are some general guidelines for contextualizing information in a documentation site:

- **Use breadcrumbs.** The trail of breadcrumbs at the top of the navigation bar indicates to users where they have come from and provides context for what they are currently looking at. The breadcrumbs are clickable links so users can easily navigate between breadcrumbs without losing their context.

  Example
  Once inside an Installation Guide, the breadcrumbs might look like this: LOB 1 > Product B > Version 3 > Installation Guide > Prerequisites

- **Provide easy-to-navigate TOCs.** The table of contents (TOC) for each document usually appears in the navigation bar on the left. The topics should be arranged in a logical order, so users can easily navigate from a single TOC to all document-specific information. When users don't know what topic to search for, they can browse the TOC. The faster users can answer their own questions, the less time you'll have to spend answering them or showing them what they're looking for.

  Example
  The table of contents varies for different document types. All TOCs usually begin with an overview topic, followed by procedural, user, or reference topics. Reference content and troubleshooting topics are at the end.

- **Start every major topic with an overview.** It's best to assume that users are not familiar with a specific product or feature and don't have preexisting knowledge. Many users may be new employees who are just beginning to learn about your products. When developers focus on the technical details of a new feature, they often forget the overall context of the feature. From the customer's perspective, the overview is crucial! Previously called an "executive summary", an overview provides the big picture.

Example
In an overview for feature <x>, describe the feature, its importance, added value, and intended audience or use cases. This gives customers the big picture before they deep-dive into technical procedures for configuring and operating the feature.

Infographics provide the bigger picture

For major topics with multiple procedures, it's best to use a workflow infographic at the beginning of the topic to summarize visually what has to be done.

An infographic is a chart, flow, or diagram that visualizes the relationships between concepts.

Infographics convey information graphically, so it's much easier for users to process and understand than text. Infographics grab the reader's focus and convey a bird's-eye view of the entire process, so it's easy for users to understand at a glance what has to be done. Most importantly, infographics provide context so users can see how the details relate to the whole.

In tools such as Flare, infographics can be converted to image maps. You can create multiple hyperlinks for specific sections of the image so that when users click on a specific part of the infographic, it jumps to the relevant topic.

Workflow navigation bar

The need to provide context is evident in complex installation and configuration procedures. Often these procedures consist of multiple sub-procedures, where each one is a topic with multiple steps. If the sub-procedures are to be performed sequentially, then the entire procedure is a good candidate for a workflow navigation bar.

In a workflow navigation bar, each topic in the TOC is indicated with a radio or metro button. These buttons indicate where the user is located in the context of an ordered process. At a glance, users can see where they are or what needs to be done.

In Figure 6, light blue buttons indicate those topics the user has already viewed, white buttons indicate those topics yet to be viewed, and the dark blue button indicates the topic currently viewed. With color-coded radio buttons in a navigation bar, users can discern at a glance their position in a complex sequential procedure.

To sum up

While we cannot curb the exponential growth of information, we can limit how much data is exposed to our users on a documentation site. The last thing we want is to overwhelm our users with TMI – too much information – that causes cognitive overload and gets users annoyed.

Building a sound information architecture with logical categories will help users to find the information they need. Applying customized tags to documents based on audience type adds a personalized layer so that users feel the information displayed is targeted to them.

This perception of choice, or ability to customize an online environment, may result in a perceived decrease in information overload, as users notice and appreciate information that is personalized to their needs. [4]

Users do appreciate personalized documentation and will come back for more. As the saying goes, "The proof of the pudding is in the eating."

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ABOUT THE AUTHOR

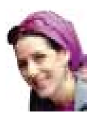

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Figure 5: A hyperlinked workflow infographic provides the big picture

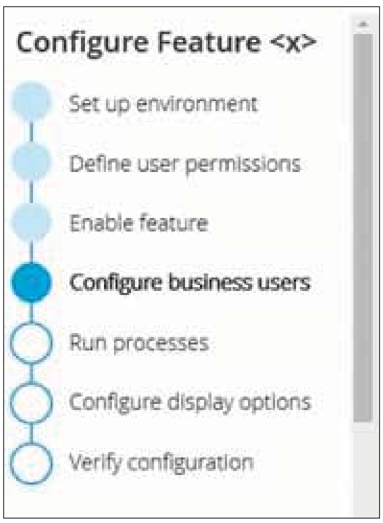

Figure 6: Using a navigation bar to give context in a sequential workflow

Better practices for structuring style guides

Linguistic style guides help to ensure the best possible global customer experience. What should be included and what not? And how can you develop, maintain, and improve your style guide?

Text by Rebecca Ray

The customer is always right

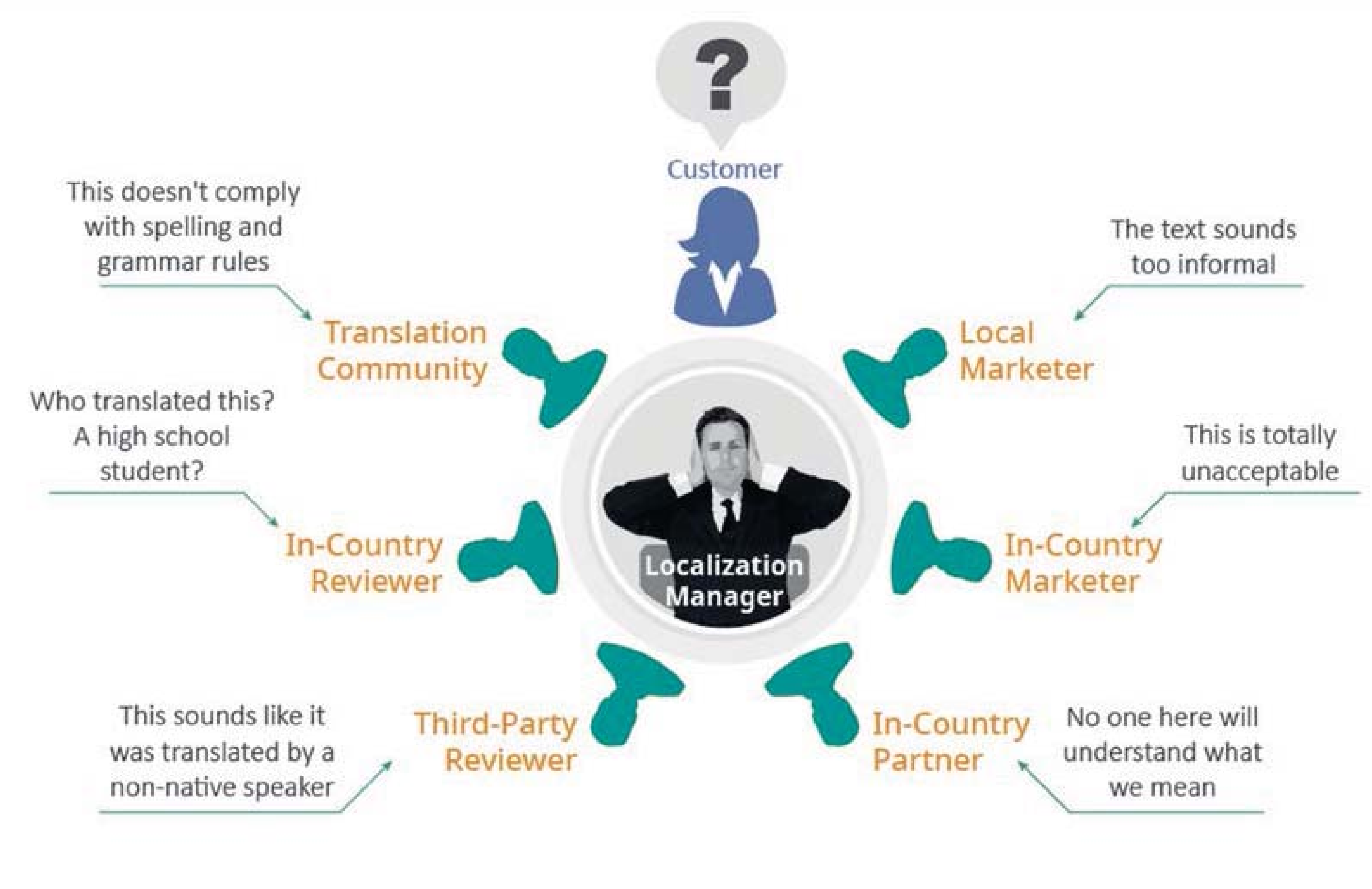

Image: © CSA Research

Every time you translate or localize your organization's content, control of your brand is handed off to third parties – linguists, copywriters, marketing agencies, partners, resellers, and more. When you don't provide strong guidance on how to communicate your presence in each market, it is open to interpretation by each one of these players. In this article, CSA Research shows you how to control and improve your global customer experience through the creation, sharing, and management of style guides.

What should you include in style guides?

Even though it is a best practice for maintaining acceptable levels of linguistic quality, many organizations do not produce style guides. Those that do often create documents that are too brand-centric, including information mainly related to fonts, logo sizing, and color schemes. Or they focus only on the source language while attempting to duplicate a reference such as *The Chicago Manual of Style*. Language service providers (LSPs) report that useful style guides are rare – even for mature companies.

To avoid these common mistakes, concentrate on the following areas when creating style guides:

- **Cover the basics.** Document spelling and style conventions for specific languages as they relate to various types of content. For example, whether to use the infinitive or imperative for instructions in French or whether to abide by a new spelling reform in a particular country. Tone of voice may also vary by target market in terms of vertical, geography, or age group – a common issue in Japanese, for example. You may employ a different voice for mobile apps versus catalog content or sales training material, or if your portfolio includes services for government users, academic researchers, new parents, or teenage gamers.
- **Be specific with real-life scenarios.** Support your guidelines with examples so that translators and reviewers quickly grasp how your company wants to present itself. Include text and images that make it easy to understand the brand and its voice. Avoid rules that are too simple or too complex. For example, instructions such as "Keep your text punchy" or "Apply a folksy style" don't offer the explanations required by linguists.
- **Provide more granular directions.** Specify buyer personas so that translators know exactly who will consume their localized content. Indicate how much freedom they have within a content category to focus on the intent of the message, rather than on mirroring the source text. Transcreators and local copywriters can then adapt the text, taking into account local preferences by generation, income level, and education.
- **Expand the global brand style guide.** Include a section on visual elements that stipulates how to treat logos, brand colors, and fonts. Explain your rules for captions, tables, and embedded images. Verify that your headquarters brand font is available across all languages – and that it plays well with non-Roman character sets. If you cannot apply the same font internationally, ensure that a replacement is easily available to all linguists and content creators. Make an urgent appointment to discuss this issue with your brand team – there is little excuse today for imposing a font on global customers that is not world-ready.
- **Avoid including issues that don't belong in style guides.** Put your company-specific terminology – words and phrases – into a termbase, not into style guides. Code frequently applied rules into translation memory or quality-checking software to ensure consistency across all content streams.
- **Automate where possible.** Explore the options included with your translation management system (TMS) – or that of your language partners. Can it present elements of the style guide at the moment when it is most needed? If so, how must you create or format the information? Or does the entire guide travel with the translation job to all linguists and reviewers? If so, how can you limit the document to cover only the minimum, critical information? You are not paying a translator to read a 200-page manual of style when translating a single paragraph of text. Make it painless for your linguists to comply.
- **Ask your partners what they need.** They may have a template you can use or recommendations on how to structure the guide according to their own best practices. They can also share useful insights based on what other clients have provided for their use.

How to develop style guides

Begin by tracking down existing materials and identifying which stakeholders to work with. Analyze the information and decide how to share it. You may require multiple guides or multiple formats and delivery methods. Identify real-life examples for translators, reviewers, and editors. Create the guides, train people, and make sure the rules are easily accessible.

When developing these documents, focus on synthesizing and automating input from the right stakeholders to meet the access and usability requirements of the translation supply chain. Automate your style rules to ensure compliance and consistency, for example, within your TMS or QA tools, rather than relying on humans to remember to abide by the rules. Do not let the guides gather dust – constantly improve them by proactively managing them.

Gather foundation materials and stakeholder input

When creating style guides for the first time, a lot of information and knowledge is probably available within your firm – you just have to find it and put it together (see Table 1).

Verify compliance

Style guides are effective only when applied systematically. If they are not observed at every stage of the content delivery process, inconsistencies occur, and you risk over-spending on translation. Delve into non-compliance to identify root causes and then address them.

- **Implement spot-checking as part of the linguistic QA process.** Determine if your style guides – and the way people access them – fit well within the context of the workflow and tools used by your supply chain. Ask linguists non-confrontationally why they missed or ignored something. Then use the answer to find a better way to share information or enforce a rule.

Where to find the best input for linguistic style guides	
Source of input	**What to look for**
Prospects and customers	If you do not already have a reliable way to segment international demographics or to garner feedback from customers and prospects, enlist your company's user groups and other communities to provide input and test your guides.
Your organization's own marketing experts	How does each of your brands define style for its domestic market? Is it unified across all products and services? Work with your marketing gurus to zero in on the criteria for international consideration. Even if these experts lack global experience, you will learn enough to decide whether you require unique guides for each brand, local market, or product.
In-country staff and partners	Colleagues responsible for marketing and selling internationally are excellent at analyzing local preferences for trends.
Translation supply chain	Talk to your supply chain stakeholders, whether internal or outsourced. They often maintain guides by language that already include rules for issues such as uppercasing and spacing. They may even have forms for you to fill out to address common questions. Address previous questions and comments submitted by translation suppliers.
Translation technology providers	Some TMSs include templates for creating simple style guides online.
Style guides from other companies	Ask peers in other organizations to share their guides. Larger tech companies are known for granting public access. For example, Microsoft offers its guides in 107 languages and Facebook in 73. LSPs often blog about style guides and share downloadable resources that you can use to improve yours.
Legal teams	Legal requirements for product positioning and marketing differ around the world and change frequently. For example, comparisons and superiority claims allowed in the U.S. when describing a product may be illegal in the EU or China. Include this information in your linguistic style guide, if your company policy does not yet mandate market-neutral source content.

Table 1: Finding input for linguistic style guides *© CSA Research*

- **Find ways to automate checks.** For example, set an alert in your TMS for ignored terminology. Sometimes linguists correctly override terms. However, if it happens frequently, update terminology and style guides or provide remedial training.

Continually improve

Your brand and how you express it constantly evolve. CSA Research recommends establishing a process to solicit feedback, review comments, and update your style guides to match.

- **Hold periodic reviews with your original stakeholders.** Don't forget to include third-party partners, social media fans, user groups, and translation communities. They can all provide feedback to help maintain style guides as living documents that remain relevant and useful.
- **Establish ownership for the change approval process.** Account for the impact of decisions on translation memory and terminology – and have a process or workflow ready for essential updates to style or terminology. You cannot retranslate everything, so plan the scope of how to handle legacy content when you update a key component for brand, voice, tone, or terminology.
- **Set up a clear arbitration process that includes all stakeholders.** Unless you're a talented polyglot, it's difficult to objectively weigh linguistic feedback from all sources for all languages. Implement a straightforward and well-communicated process to resolve linguistic disagreements to generate even more mileage from style guides. Include steps to 1) review primary and secondary resources; 2) delineate who has final sign-off; 3) evaluate the impact of a change in style; 4) set a time limit for the process; and 5) notify all stakeholders of the change.

Together with your global brand and terminology, linguistic style guides help ensure the best possible global customer experience. Every one of your stakeholders will have a valid opinion, but the opinions that matter most are held by your customers. They are the ones comparing what they see and hear from you versus the output of your competitors, allowing them to quickly spot any missteps. You can't talk to every individual in every market, so connect with your in-country social media team or other groups that monitor customer feedback. And keep reminding all internal stakeholders that local customer input takes precedence over theirs.

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Why English adaptation is your key to entering the UK market

An excellent guiding principle when entering a new geographical market – no matter how similar it may appear on the surface to your home market – is not to underestimate the need for a tailored approach that respects local consumers' needs and preferences.

Text by Max Naylor

Thanks to the status of the English language as the world's lingua franca, the needs of native British English speakers can sometimes be neglected in the UK market entry process. If you're a U.S.-based company launching, e.g., a new app, translating your user interface into French, German and Spanish for your European launch is a no-brainer. But what about English?

In this typical expansion model, English is often overlooked. As Brits understand – or think they understand – American English with ease, what's the incentive to localize your product for the UK market? Many new entrants make the mistake of thinking that there's little value in UK localization.

Traditionally, many software companies haven't invested in localizing their product for the UK market. British users were used to seeing Microsoft Word offering options to change the font *color* or *center* text. In recent years, however, there's been a change in expectations among UK consumers, and they now expect products and services to be available in their variety of English.

Here, I'll dispel some of the myths about English adaptation and explain why it's a worthwhile – or even vital – investment.

1. U.S. English can be a barrier to entering the UK market

The debate about who English "belongs to" is as old as the hills. Many Brits have a sense of ownership of the English language – the attitude that American spellings, grammar conventions, and vocabulary are "incorrect" is extremely prevalent. Although this viewpoint doesn't stand up to much linguistic scrutiny, this could create a barrier to entering the UK market, depending on your product.

Take the example of Grammarly, the writing tool. As the product originates in the U.S., its initial offering didn't cater to different dialects of English. Grammarly was therefore offering its users in the UK suggestions that didn't make sense for them – insisting on inserting a comma before *and,* for example, or marking UK spellings like *realise* and *endeavour* as incorrect. It now offers users the option to

Image: © Rawf8/istockphoto.com

choose their dialect of English, making the offering much more relevant for a UK audience. [1]

Differences in dialect aren't just about grammar and spelling though – they reflect cultural and consumer expectations. When it comes to marketing food products, for example, U.S. consumers will be used to seeing terms like *GMO-free, trans fat*, and *low cholesterol* on their products. Referring to GMO may actually create a negative perception among UK consumers who generally don't expect food to be genetically modified – their first thought will be "Why do they have to specify that the product is GMO-free?" UK consumers are unfamiliar with the term *trans fat* (their addition to food is restricted by law), and products generally don't focus on cholesterol content in the same way as they do in the U.S.

With this in mind, you might want to emphasize different features of your product. UK consumers value foodstuffs free of artificial colors and flavorings, for example. Labels like *free-range, organic*, and *Fair Trade* are also highly prized, although these come with certification requirements.

Take the time to research the UK market and understand what the expectations of your new customer base are. This will inform how you adapt your marketing copy for local consumers. Getting in-market expertise is vital here – don't try to manage this remotely from the U.S.

2. UK English brings you closer to your customers

The adage goes that the U.S. and UK are two countries "separated by a common language". This shared linguistic heritage can gloss over some of the differences. However, there's a stark contrast in the business cultures of the two countries. Americans' enthusiasm and initial warmth can be mistaken for interest in doing business, whereas Brits may seem cold and standoffish to Americans in the same situation.

Brits also value small talk as an icebreaker in the first interaction with a new business contact and may be offended if this is dropped in favor of a "let's get down to business" approach. This aspect of the business culture tends to slow down deal-making, which may be frustrating to Americans used to closing faster.

The differing ways in which politeness is expressed in the two countries can also be problematic. Brits tend to pepper requests liberally with *please*, for example when ordering in a café: *Can I have a black coffee, please?* This use of *please* is a standard way of softening the request in the UK and to omit it would be considered rude. In the U.S., however, this use of *please* can often seem passive-aggressive, so it's more common to express politeness with the use of a conditional verb like *would* or *could* and drop the *please* altogether.

When it comes to English adaptation, the principle is the same as for any other language you localize into: If you're selling to someone, sell in their native language. By sticking to U.S. English, you pass up the opportunity to build a strong relationship with your customer base – it will be hard for them to overcome the perception of your business as "foreign". Many U.S. companies successfully enter the UK market, but there have also been plenty of high-profile failures stemming from a lack of consideration for cultural differences: Best Buy [2] and Chick-fil-A [3] to name but two examples.

One aspect mentioned in the failure of Best Buy [4] was their neglecting to use a local voiceover artist for their TV advertisements. As a result, UK viewers deemed the brand "too American" and weren't able to connect with it.

Of course, failing to adapt to the UK market is about more than just language: You have to look at your marketing efforts as a whole and think about how to make your offering relevant. Language is a great place to start though. Being open-minded about adapting your marketing copy can make it easier to adjust other aspects of your brand proposition to ensure a successful UK expansion.

3. Adaptation prevents misunderstanding (and embarrassment)

Most of the time, English speakers from both sides of the Atlantic can understand each other perfectly well – or at the very least get by. When speaking, a lot depends on the dialects and accents of the speakers and how far apart they are on the spectrum of English varieties.

The written standards in the U.S. and UK appear much closer because, in writing, we don't have to worry about differing pronunciations. There's also more of a shared standard grammar, which minimizes the differences between dialects. However, this doesn't mean that there's no potential for major misunderstandings.

Investing in British English localization should be a central part of your UK marketing strategy.

Let's take a look at a few examples. In the UK, if someone's *full of beans*, they're lively and full of energy, whereas in the U.S. this expression normally means that someone is incorrect (*full of s**t*).

In the U.S., *chat up* is increasingly used as a synonym of *talk up* "to speak positively about" or "to promote". The meaning is completely different in the UK, where chat up means "to flirt".

Then there's *spunky* – a classic example that is a resounding compliment in the U.S. I'll allow readers to consult definitions 2 and 3 of the word on Wiktionary to find out why it should be avoided in the UK! [5]

An excellent guiding principle when entering a new geographical market – no matter how similar it may appear on the surface to your home market – is not to underestimate the need for a tailored approach that respects local consumers' needs and preferences.

Do plenty of market research and take advantage of the expertise of local translation and marketing agencies. Investing in British English localization should be a central part of your UK marketing strategy, as tempting as it is to overlook. Why risk failure and damage to your brand?

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Was it something I said?

As technical writers, our work relies on good relationships with our coworkers. Here is how we can create more satisfying interactions that will help us produce more collaborative documentation.

Text by Jeff Klein

Image: © Sergey Nivens/123rf.com

One day, after a brief, but frustrating, interaction with a coworker, I was left feeling exactly like the poor guy portrayed in this image – like I had got kicked in the head and my head was spinning. As I walked away from that interaction I, only half-jokingly, said to myself: "Was it something I said?" Despite recognizing that my coworker was at fault in this situation, I also knew that the burden of finding a solution was on me.

One of the fundamental skills needed to be a successful technical writer – in addition to being able to, you know, actually write coherently – is the ability to work with people. As technical writers, we typically have a veritable plethora of in-house experts we call on to extract specific, detailed information about the subject we are writing about: product owners, product managers, programmers, QA, IT, UX designers – we must interact with them all. We do our part: read the epics and stories, review the specs, prepare questions for them. They do their part: pontificate and bloviate, and hopefully answer all our questions. More often than not, this regular routine interaction hums along nicely enough. And all is good in our happy little tech writing bubble.

And then there are those few "special" coworkers or experts we must interact with. We might charitably describe these coworkers as merely unhelpful, unpleasant, or just plain difficult to work with. After interacting with these coworkers, we walk away in a daze, thinking, "Was it something I said?"

Resorting to violence is, obviously, not an approved solution to this problem. Instead, we resort to venting to our significant other, tearing our hair out, or perhaps binge-eating ice cream to soothe our stress.

The problem

I view the problem we face dealing with these colleagues as: we need them as much as they need us! As difficult as these colleagues or subject matter experts may be to work with, we need them. They provide us with the technical details and particulars that are necessary for producing our documentation. At the same time, they need us. We write that brilliant documentation that makes the company's products and services accessible and usable.

So simply put, we're stuck with each other! We may dream of devious ways of ridding ourselves of that colleague (the Space Station needs a new long-term resident, right?) but can we really get that to happen? It seems like there's nothing to be done about that "special" coworker. Or is there?

The solution

To paraphrase the brilliantly scheming cartoon character Dogbert, you can make it your goal to:

Dominate your coworker!

Not for kicks and thrills, of course. We are nothing if not benevolent tech writers. But dominating them just enough to get the info we need, when we need it, seems like a perfect solution.

But before we get to the details of how to dominate ~~the world~~ your coworker, let's do a quick thought exercise… about shopping.

Thought exercise

Our thought exercise starts with us looking to purchase a simple, plain, ordinary can of beans. There is absolutely nothing unique or special about this can of beans.

In our thought exercise, there are also only two stores. The stores themselves are exactly alike. The two stores even sell the exact same brand of beans at the exact same price.

How do you choose which store to go to? Think about the instinctive or intuitive factors that might dictate your decision about which store to choose. Most importantly, what keeps you returning to one store, or even deciding that you are never stepping foot into the other store ever again?

Typical responses I've received generally follow this pattern:

I'll happily return to this store because they

- Make me feel good
- Provide trustworthy answers
- Hear me
- Speak to me nicely
- Respond to my specific question
- Are honest

or

I'm never coming back here because they

- Ignore me
- Talk unpleasantly to me
- Talk down to me
- Lie to me

The common denominator between the responses can be summed up in two words: customer service. More specifically, these responses reflect the attributes or principles of customer service. When you receive good customer service – feel appreciated, heard, spoken to nicely – you want to return there. When you receive bad customer service – feel ignored, belittled, dealt with unpleasantly, lied to – you never want to return there again.

Right now, as you read this, I'm pretty sure many of you are thinking the exact same thing: "We're technical writers. We're not on a shopping spree. And we don't even talk to customers! So how is customer service going to help us dominate our coworkers?"

Let me answer with a story about one of those "special" coworkers that we hope will get relocated to the Space Station.

Story time

I once had a programmer coworker named Jackson [1], who required a lot of text reviews for user prompts in his application. While some were simple and easy to write, many were complex, requiring difficult and arcane configuration choices, which of course they wanted shortened into twelve characters or less – you know the pain! Jackson would always magically show up at my desk for wording assistance. I always prioritized him, made him feel welcome, and worked patiently with him. My only problem with this ongoing interaction was that Jackson's thinking was convoluted, and before we could even begin fine-tuning the text, I had to spend hours with him simply figuring out what he meant. In the end, he was thrilled. And I never complained about how difficult the process was. [2] Whenever he thanked me for my assistance, I only repeated my tag line, "Always a pleasure to assist you." To sum up, I not only always provided Jackson with brilliant text but, more importantly, with an always-positive experience.

One day, I had a real-life documentation emergency. (Yeah, we all know they're not real emergencies. But when the CEO wants that document yesterday, the CEO gets that document yesterday.) I was down to one last detail, and then that document would be ready to go. By sheer coincidence, the guy who had the answer I needed was Jackson! Yes, the very same Jackson. I'm thinking to myself, "Piece o' cake! Easy street." So, I did what Jackson did. I walked over to his

desk and asked him for help. And Jackson said, "Sorry. Too busy now. Come back next week." I was flabbergasted. You've got to be kidding me! But I had an ace up my sleeve. I said to Jackson, "I know you're swamped. But I have a real, high visibility, CEO-level emergency. Every time you needed assistance, I provided it to you right away. This time, my emergency can't wait." He looked startled, and then said, "Sure!"
What was my "ace"? Very simply – he owed me! I knew it. Jackson knew it. And I rather unabashedly told him so.

Yup! It is about customer service

As you're beginning to see, I've been preparing for this scenario since my first day on this job. But "you owe me" is merely one small detail in my methodology for dominating coworkers. My system for changing a coworker dynamic is to use the principles of stellar customer service, which companies have honed for years to successfully empty your wallets and bank accounts. The principles and attributes of stellar customer service are well documented. [3] But they can be summed up in one sentence:

Make it easier!

In a nutshell, if every interaction with coworkers goes easily and smoothly, they will start to help you more and more. Next thing you know, they'll be going out of their way to help you. I've used this principle, again and again.
But do you want to know why I know it really works? Simple... because coworker domination has been used against me! I've found myself quite often putting myself out to help coworkers when I really didn't have time for it. In other words, I got "dominated" right back. It works!
But the reverse – making it harder – also has an effect, a negative and deleterious effect. The squeaky wheel may get the grease but, eventually, you change that wheel for one that works more easily and smoothly. To put it in "coworker" terms, the annoying, hard-to-get-along-with, always-angry coworker is the one whose emails get ignored, whose meeting requests get pushed off, and whose questions go unanswered. So, don't be that hard-to-get-along-with coworker. Be the coworker that everyone wants to help.

If you treat every interaction with coworkers the way a concierge of a 5-star hotel would, you will reap the rewards again and again.

Customer service – in tech writer speak

Let's reframe customer service attributes into tech writer guidelines, which you can put to immediate use.

1. Respect their time

- Are you calling a meeting? Provide an agenda in advance; follow that agenda; start and end on time. Didn't cover everything on the agenda? Schedule a follow-up.
- Attending someone else's meeting? Show up on time; read the agenda and, most importantly, be prepared for it. [4]
- Make it easier for your coworkers by respecting their time. Remember Jackson, the programmer? I skipped over one small detail in that story. After I pointed out to Jackson that he owed me, I quickly added, "But I promise not to stay longer than 15 minutes." I mitigated the inconvenience and made it that much easier for Jackson to help me.

2. Organize your words and thoughts

Make it easier to understand your communications:

- All communications, whether verbal or electronic, should provide the necessary context up front. No one can read your mind and emails do not make mind-reading any easier either!
- Emails should have informative subjects, should clearly state the objective right at the top, should clearly identify the specific questions you need answered, and should succinctly specify any action items.
- When replying or forwarding emails, don't make the recipient read through the entire email thread to find that one nugget of info you want them to see. Copy it right up front, at the top.
- Don't spam email. Spam puts you on that secret "I ignore them" list that no one admits to having... but we all actually have.

3. Be understandable

Write and describe things in ways that make it easier to understand you. For example:

Hard to understand: Ponderously protracted electronic missives, containing voluminous tomes of verbiage, are arduous to grasp.
Easy to understand: If it's too convoluted, no one will understand it.
Now that we have identified the customer service guidelines, let's put them to work.

The 4 C's

The 4 C's form the implementation methodology of putting "make it easier" into action. Whether starting a new job, breaking the negative spiral with a "hostile" coworker, or planning a team-based mechanism for raising the stature of a team within a company, this implementation methodology can be applied to ensure you get what need, when you need it.

1. Earn credibility

The better we treat our coworkers, the more credibility we have with them. The better our customer service is, the more we can ask of them. Over time, as you incorporate that customer service attitude (think timeliness and professionalism) into your daily interactions with all your colleagues, the more your credibility quotient goes up.

2. Stay calm

Be professional at all times. Blowups, tantrums, and anger are not acceptable in the workplace. Vent to your spouse or a good friend perhaps. But never vent to the coworker you are upset with. If you are not calm, if you explode or yell, you destroy your credibility.

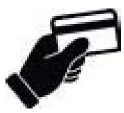
Having provided ongoing credible interactions with your colleagues in a calm manner, what have you gained?

3. Create capital

You've gained goodwill capital. And capital is something you can hold on to and spend when needed. As with all savings plans, you keep putting that capital into the piggy bank, keeping it at hand for a rainy day.
And what can you do with all the capital you've banked?

4. Cash it in!

When you need it, you can spend that capital – just like I did with Jackson the programmer. You can cash it in. Newly elected politicians often refer to "spending goodwill capital" as a way to push their legislative agenda through the legislature. To me, it sounds quite synonymous with "spending goodwill capital to dominate the legislature!"



Make it easier and the SME interview

The Subject Matter Expert (SME) interview is the life-blood of how we technical writers gather information, so it gets its very own section in this article. You can make it easier with the skills and knowledge you are already familiar with.

1. Prepare

- Do your homework. Read the relevant epics, stories, and specs.
- Gain a broad understanding of the topic being discussed.
- Prepare prompting questions that elicit a conversation.

2. Engage

SMEs are passionate about their work and love to talk about it.

- Engage in a conversation – this is not a lecture.
- Ask those prompting questions you prepared.
- Never ask "What should I write?" That's your job, not theirs.

3. Listen to learn

- Go in with the intent to listen, more than the intent to talk.
- Don't talk over them.

4. Summarize

- Succinctly summarize what you think you understood. This lets the SME confirm that you understood correctly or clear up any misunderstandings.
- Clearly identify any follow-up actions by either you or the SME.
- Create an opening for follow-up clarifications. "Can I get back to you for more details on things I may not have fully understood?"

These are some of the many ways we can make it easier for the SMEs [5] as we put our new customer service mindset to work for ourselves. And remember, the more of these positive interactions you have with your SMEs, the more credibility you gain as capital to put into your piggy bank, which you can cash in when needed.

Conclusion

"Make it easier" is the underpinning of how to put a customer service attitude to work for you in your quest to dominate your coworker. It works because positive interactions with coworkers are as infectious as COVID-19, only in a good way. Let "make it easier" ensure you never walk away from another coworker interaction feeling stunned and thinking "Was it something I said?"

ABOUT THE AUTHOR

Jeff Klein has worked in a variety of roles in hi-tech over the last 30 years, including IT, programming, software architecture, QA, product management, sales engineering, and customer support. He has spent the last decade working as a technical writer and is currently the technical communications manager at Tufin.

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Footnotes

[1] Names have been changed to protect the guilty. All other facts are true!
[2] Spoiler alert: I was accomplishing my goal of coworker domination – but more on that later.
[3] A very short sampling:
www.salesforce.com/products/service-cloud/best-practices/important-customer-service-skills-list
www.hatchbuck.com/blog/qualities-customer-service-rep
www.providesupport.com/blog/personality-traits-for-perfect-customer-service-representative https://harver.com/blog/characteristics-of-customer-service/
[4] Andrew Grove, former CEO of Intel and author of *High Output Management*, writes at length about meeting etiquette and the disrespect you show your coworkers when you show up to meetings either late or unprepared.
[5] For a more in-depth treatment of the SME interview, request that this publication have me write another article.

events

tcworld 2021

Global Ready Conference

April 14, 2021
Online
www.smartling.com/conference

tekom Frühjahrstagung

May 5-7, 2021
Online
https://fruehjahrstagung.tekom.de

Elia's Networking Days

May 5-6 and May 11-12, 2021
Online
https://elia-association.org/our-events

International Conference on Artificial Intelligence & Robotics

May 24-25, 2021
Dubai, UAE
www.meetingsint.com/conferences/artificialintelligence

Evolution of TC

June 9-11, 2021
Online
https://evolution-of-tc.com

Evolution of TC is the annual meeting point for all technical writers with a focus on innovations in software documentation and is the only conference for technical communication in southeastern Europe. All professionals in the industry come together at the conference – technical writers, information developers, and technical translators, mainly with a software background. The conference will take place as an online event.

Machine Translation Summit XVIII 2021

August 16-20, 2021
Orlando, FL, USA
www.gala-global.org

tcworld China

September 16-17, 2021
Hybrid event
(location to be announced soon)
www.tcworld-china.cn/en

Languages & the Media 2021

September 20-22, 2021
Berlin, Germany
www.languages-media.com

NORDIC TechKomm

September 22-23, 2021
Copenhagen, Denmark
https://nordic-techkomm.com

Content Marketing World 2021

September 28-October 1, 2021
Cleveland, OH, USA
www.contentmarketingworld.com

MadWorld 2021

October 3-6, 2021
Austin, TX, USA
www.madcapsoftware.com/madworld-conferences/madworld-2021

TAUS Massively Multilingual Conference & Expo 2021

November 1-3, 2021
San Jose, CA, USA
www.taus.net/events/conferences

tcworld conference

November 9-11, 2021
Stuttgart, Germany and online
www.technical-communication.org/tekom/conferences

Mark the date for this year's tcworld conference! This is a hybrid event, offering participants presentations and workshops both on site (at the Messezentrum Stuttgart) and online. Our program will cover an extensive range of topics from content creation, visual communication, technical videos, legal standards, terminology, language and translation technologies as well as the intelligent delivery of information, Artificial Intelligence, new user interfaces and immersive content. Think you've got something to share? Our Call for Papers is now open. For more information visit
https://tcworldconference.tekom.de

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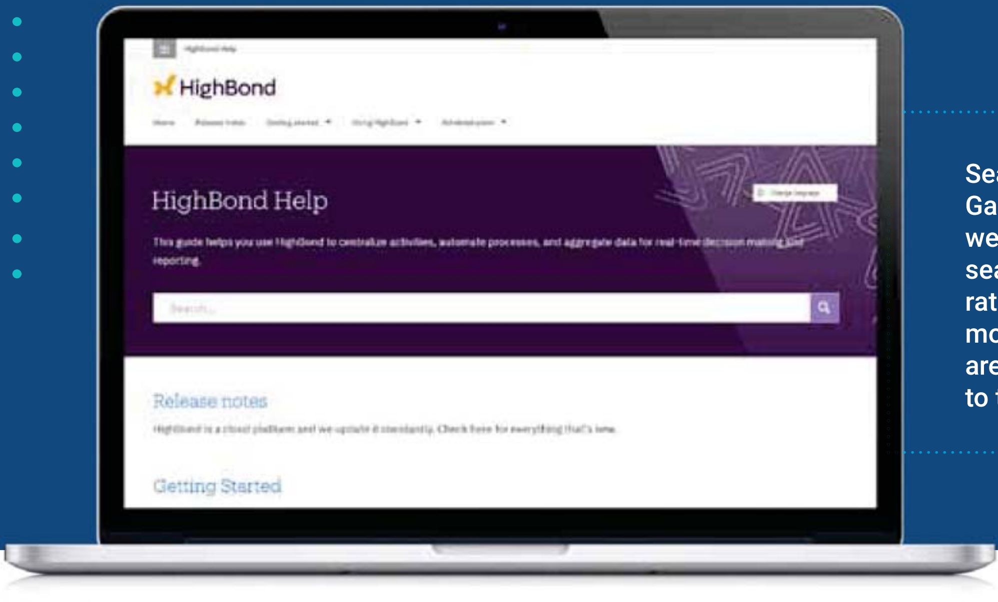

Searches per session on the Galvanize HighBond platform were down 21% while the search result clickthrough rate was up 23%, suggesting more accurate search results are quickly getting customers to the information they need.

ROI Success Story Highlights

- High-Quality Localized Content in Six Languages
- 43% Increase in Customers' Use of the Documentation Sites
- Single-Sourcing Streamlines Content Delivery
- Role-based Documentation Creates Superior User Experiences

> A hallmark of cloud computing is the ability for customers to get up and running quickly and easily. The documentation and Help sites we're delivering with the solutions from MadCap Software are playing an important role in delivering this value to customers of our HighBond platform.

IAN ALTON
Manager, Technical Writing
Galvanize