

SMEs and technical writers: a win-win relationship

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Abstract

This paper focuses on the relationship between subject matter experts and technical writers, in the context of two software companies and an optical systems manufacturer. More specifically, this paper intends to highlight the added value of an efficient collaboration for the technical writer, the SME, and beyond, for the companies they work for as well as for the end-user of the documentation.

First, we will analyze the respective education, skills, competences and work goals of SMEs and technical writers.

Secondly, we will show how technical writers and SMEs work together on a daily basis and can become partners to create high quality documentation by mutualizing SMEs' technical knowledge and technical writers' content design skills.

Finally, we will identify the benefits of a win-win relationship between SMEs and technical writers for the end-user of the documentation.

Keywords: documentation quality, relationship between SMEs and technical writers, subject matter expert (SME) skills and objectives, technical communication, technical documentation, technical knowledge, technical writers' skills and objectives, user experience (UX).

Introduction

As apprentice technical writers in different companies over the last year we were able to observe relationships between technical writers and subject matter experts (SMEs). Our goal is to describe this relationship in different contexts and to show that an effective collaboration between both parties can improve the user experience.

Aurélie works in the Integrated Logistics Support part of the Design department of T. A., optical devices manufacturer. Caroline is part of the Research and Development department for Q., a software editor and Manon works in the Quality Assurance department for P. that develops software to provide solutions for project and product portfolio management.

To gather information for our paper, we first did research on the internet where there was little information. Then, we started to look for information through our experiences and in our workplaces that provided us the most accurate answers. To define the parties of the relationship properly, we interviewed the SMEs and technical writers of the companies, as well as each other.

Who are the subject matter expert (SME) and the technical writer?

The subject matter expert

Manon and Caroline collaborate mostly with programmers but also consultants when Aurélie gets help from engineers specialized in optics but also in mechanics and electronics. The situation gives us the advantage to have three points of view in different kind of companies.

All the SMEs have a high level of education with at least a master's degree or the equivalent of 5 years of studies after high-school. The programmers graduated either from different engineering schools (Centrale, Les Mines, Polytechnique and so on) or from university where they studied their current specialty.

Many of them started their work experience in the domain they're still working in. However, they worked in different industry sectors (civil, Defense, oil sector, metallurgy sector, automotive industry, optronics...).

As engineers, one of their main tasks is to design the product using several tools. Paul, optical designer, analyzes, designs and tests the optical system of the zoom with software. On occasions, he also programs to improve the software. The mechanical drafter draws the zoom with CAD (Computer Aided Design) software. Ludovic, electronic engineer, programs and designs printed circuit boards. All the SMEs gather their knowledge to conceive the final product. The programmers' goal is to develop software, code it and make sure there is no bug. To do that, they master different markup languages and software to write the program. The programmer can also suggest ideas to improve the software.

Definition

The subject matter expert is someone who is specialized in a domain or an area. He acquired knowledge through his studies, work experiences and sometimes research. He provides technical information to the technical writers and acts as proofreader once the documentation is finished. He makes sure the vocabulary, the technical details and the procedures are accurate.

Their backgrounds show that they acquired a primary knowledge at school and have good basis in their domain. The fact that they experienced different sectors shows their ability to adapt their knowledge to different products and how they became specialists after several years working in the same field.

The technical writer

Manon produces internal documentation for the consultants who use the software developed by the company. Her tools are PowerPoint and Captivate that she got recently. Caroline's job is to restructure documentation using markup languages tools as she works in XML (DITA) and Visio. Aurélie uses Microsoft Word and CAD software to create user manuals for cinema zooms.

We all have a literary background with bachelor's degree in languages and a first year master's degree in translation. Currently in the second year of our master's degree in technical writing, we are learning to design documents, including manuals.

Manon also attended a scientific preparatory class in Physics and Chemistry. Anaïs, one of the technical writers who work at T.A. has a bachelor's degree in Industrial products conception.

During the classes of our master's degree we were taught how to write different types of documentation in at least two languages, structure the information, and use several technical writing tools and software applications. We also learned the importance of the user and how the documentation must serve him.

Through our apprenticeship, we acquired technical knowledge from the field we are working in. We learned how to communicate with SMEs to get the information we need. It was also the occasion to implement our software skills. During the apprenticeship, we also got better at writing and quicker at organizing information. We acquired technical knowledge through our work with the SMEs and on the documentation.

Anaïs knows how to use CAD as well as design software like Illustrator and worked as a technician in a design department. Like the SMEs, she worked in several sectors as technical writer.

Definition

The technical writer creates the documentation. He takes into account the user experience to structure and present the information in order for the user to act quickly and find what he needs. He put himself at the knowledge level of the user. The technical writer can usually write the documentation in several languages.

We distinguish two profiles in the technical writers: technical writers with a technical formation and technical writers who come from a technical writing formation. The first category's strong feature lies in its technical background, its ability to understand quickly how the product works. But this profile struggles with structuring the content. The weak point of the first category, managing and writing the information, is the strongest point of the second category. The same way, trained technical writers sometimes lacks technical knowledge.

The next part will describe how these two actors work together to build a working relationship.

The relationship between the SMEs and the technical writers

The working relationship between the SMEs and the technical writers are bound to numerous factors, the biggest being the work context and the personality of the individuals.

The workplace partly defines the relationship because of its geographic configuration: for instance, an open space is likely to facilitate informal exchanges, while closed offices will probably require specific appointments. We could observe these facts in our companies: in P and Q., technical writers and SMEs can talk easily thanks to an open space area, and discuss small matters for few minutes. On the other hand, in T.A., technical writers have to make precise appointments and thus have to prepare the meetings in order to take advantage of their time with the SMEs.

The daily relationship depends on the technical writer tasks. When documenting a new functionality or element of the product, technical writers and SMEs work closely together for a certain amount of time, i.e. a few days or a few weeks. In P. and Q., the SME would

explain to the technical writer how the functionality works, and the technical writer tests it to see it for herself and document it. In T.A., the technical writer has to see the different SMEs who worked on the product to document elements and functionalities. Even if they can see and manipulate the product, they cannot try it for themselves.

Essentially, regardless of the company, the daily relationship generally follows the same pattern. First, the SME and the technical writer meet so that the SME can explain the functionalities and the technical writer ask questions. If they can and if necessary, the technical writer tests the functionality in order to document it properly, along with the information they gathered. If they realize they lack information, they can meet again with the SME, or exchange over e-mails for further details. Finally, the SME reviews the documentation and validates it or ask the technical writer to correct it.

Moreover, the relationship relies on the personality of both SMEs and technical writers. There are clearly different types of SMEs: the ones who take the initiative to come see the technical writer, the ones who prefer e-mail exchanges, the ones who do not like to spend time on documentation and the ones who think of it when it will need an update, the ones who write it themselves and send it to the technical writer, and so on. Thus, the technical writers have to adapt themselves to all personalities and learn how to work with each SME to get the best of the relationship.

The benefits of a win-win relationship

When SMEs and technical writers work well together, they both take advantage from their relationship and bring out the best in each other. Indeed, the technical writer improves their technical knowledge and skills, and gradually learns to best deliver the technical information while using their writing skills to have a great documentation. As for the SME, they learn to explain technical information to someone without a technical background, and realize the importance of a good documentation.

The relationship with the SME ensures the technical writer that they have good, accurate information, which participates to the quality of the documentation they write. As for the SME, providing all information and detailing the product to the technical writer assure them that what they worked on will be correctly used, and even used to its maximum capacity, thanks to a precise documentation. This relationship is truly a win-win when the technical writer is able to test the product: they can make sure their documentation is compliant with the product, and they can report bug to the SME or ask details on an element they did not discuss.

A good relationship between SMEs and technical writers benefits not only both individuals, as they learn and improve their skills, but also the company, as a good documentation shows their reliability and competence. It also has benefits for the end-user, since the documentation is intended for them and helps them if it contains accurate information.

In summary, for a win-win relationship, the technical writer should not settle for being the receiver of information, but shows the SME what could be improved, and most importantly, become the information provider for the end-user.

The benefits for the end-user

The previous part showed that the relationship between SMEs and technical writers defines, in part, the documentation quality and impacts therefore the end-user. In this third part, based on what we could witness in our companies, we will describe the benefits of a successful collaboration between SMEs and technical writers for the end-user.

When using a product, the user will only remember if the product was useful and if it was easy to use. That is why the user experience is a key factor in the success of a product. The documentation aim is to help the end-users to apprehend a new product and to exploit its potential. Therefore, the documentation quality impacts the user experience and high quality documentation will benefit the product, but especially the end-user.

In our study, we were able to observe two different types of users: the end-users who are external to the company and the ones who work for the company that produces the documentation.

In both cases, high quality documentation improves the user experience, reduces costs and time learning how to use the product. Benefits are also specific to each type of end-users as their point of view is different.

In the case of external end-users, it is more difficult to evaluate the quality and the impact on the documentation in the short term because users do not usually give feedbacks. However, we were able to highlight benefits.

For example, Aurélie writes documentation for cinema lenses. Customers rent lenses for a short time, the filming has to observe deadlines and missing these deadlines has costly consequences. The documentation helps them to make lens adjustments. They do not waste time and money because of delays due to adjustments difficulties. Moreover, these lenses are used all over the world and if customers cannot adjust the lenses themselves, they have to send them back to the after-sale service that will adjust the lenses and send them back to the customer. This cost is very high in term of money and time and can often be avoided thanks to the documentation. The user experience is therefore improved thanks to a detailed documentation.

In software companies, customers do not need to send the product back but they will have to call or send emails to the support department to ask for help. The cost and delays are not as high as for lenses but it will still give a poor impression to the customer. Moreover, Caroline could notice that the documentation design at Q. is very important. Customers tend to trust documentation with a good design: if the design is outdated, they doubt that information is up-to date.

At P., Manon has been writing documentation for internal use. The end-users are consultants who implement the software for customers and provide consulting services, methodological support, and training. They are not all located in France where the developers work. In this case, the documentation allows consultants to learn how to use the software and especially its new functionalities as fast as possible. The documentation is a way to communicate between the different departments and branches of the company.

One of the advantages of writing documentation for an internal use is that it is much easier to get reviews of the documentation from the end-users. It is also easier to see the impact of

the documentation and its benefits for the end-user. Without documentation, consultants located in the United States of America, for example, would call developers in France, but with the jet lag, the time window is short. If they send emails, there is often at least one day of delay before the programmer answers. With the documentation, they are more autonomous with the product and contact developers only for specific questions. Documentation avoids waste of time due to localization and eases the information handover.

As the aim of the documentation is to reduce the time needed to apprehend the product, writing documentation adapted to the user allows enhancing the benefits of documentation. P. has edited a new version of its software and the documentation needed to be rewritten but always kept in mind that the end-user already knew a part of the information and did not want to waste time reading information he was already familiar with.

Conclusion

After analyzing the context of the relationship between SMEs and technical writers and describing their relationship, we have shown that this can be a win-win relationship, for technical writers, for subject matter experts and especially for end-users. Moreover, a satisfying user experience has positive impacts on the company and therefore, an efficient collaboration between SMEs and technical writers benefits also the company they work for. The customers will indeed trust the company and its products. Fewer resources are needed for the support or the after-sale service. In the case of T.A., as they are the only ones to give a detailed documentation that allows the customers to be more independent, the documentation provides a marketing edge over their competitors. If the end-user is also an employee of the company, as in the case of internal documentation, it improves the communication between departments, saves time and money and boosts trust between coworkers.

Further research may focus on how to implement a procedure in companies to improve the relationship between SMEs and technical writers.

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