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Don't Get Lost in Translation: A Discussion of Best Practices for Creating Translation-Friendly Text and Related Curriculum for Technical Communication

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Abstract

Within global companies, a single source document, created by a technical communicator, is often translated into more than twenty-six languages. Simple modifications to semantics and style that are incorporated upfront in the source document can save multinational companies who rely on translations vast quantities of time, money, and labor. However, the perception of English as the lingua franca has led technical communication programs to discount the importance of teaching students to write for translation. In order to address this issue, institutions of higher learning should consider revising their technical communication programs to include a writing-for-translation component. Moreover, comprehensive sources need to be made available to those already immersed in the field. This project seeks to address the above gaps by sharing strategies for integrating aspects of translation into technical communication curriculum as well as a comprehensive list of best practices for writing for translation.

Keywords: best practices, cross-functional collaboration, curriculum, globalization, writing for translation, technical communication

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Introduction

Technical communicators continually strive to make information digestible and accessible to target audiences. However, they often overlook their most immediate audience: the translator. Within global companies, a single source document, created by a technical communicator, is often translated into upwards of twenty-six languages. Each translation process is fraught with stumbling blocks—many of which can be eliminated upfront. By making simple modifications to semantics and style in this central source document, technical communicators can accommodate translators, international audiences, and companies at large.

Timothy Weiss (1995) found that translators cited source texts that were not written with translation in mind as their most substantial obstacle. As translation expert Klaus Schubert points out, the source document is "the strongest controlling influence in translation" (2009, p. 27). Yet technical communicators remain largely unaware that their source document steers the entire translation process (Schubert, 2009). Steven Iverson (2002) of the American Translators Association implores technical writers to think of translation as an extension of writing as opposed to a separate endeavor or a mere afterthought.

Uninformed writing and a lack of communication between technical communicators and translators can cause unnecessary delays and rack up unnecessary costs (Eriksson, 2005; Spyridakis, Holmback, & Shubert, 1997). Applying translation-friendly practices also decreases the incidence of errors (Eriksson, 2005). Flawed documentation can pose safety hazards, resulting in a whole host of legal problems, raising costs, and damaging public perception far into the future (Lipus, 2006). Batova (2015) argues that technical texts can directly influence a customer's health and safety; and therefore translators—and by proxy technical communicators—have a "legal duty of care" to create clear translations (p. 225). Compounding this, inadequate product documentation can lead to rejection of the product in the overseas market (Lipus, 2006). As Byrne (2006) reminds us, user expectations remain the same whether a document is a translation or an original.

In addition, documents intended solely for domestic distribution can also benefit from the adoption of translation-friendly practices. This stems from the fact that a significant proportion of the domestic audience does not speak English as a first language. The United States Census Bureau's 2016 American Community Survey revealed that 21%, or more than one-fifth, of Americans do not speak English at home. Although the majority of these individuals are fluent in English, they face the same difficulties translators encounter when it comes to grammar and terminology. These difficulties arise because "second language readers tend to perceive target language text in terms of native language syntactic structure" (Barnett, 1989, p. 61). In summary, practices intended to accommodate the translator and the international audience are also pertinent when it comes to a considerable portion of the domestic audience.

Even if companies aren't already translating their documentation, the transition might be just over the horizon. Currently, 90% of all professionally translated work relates to technical documentation and the translation industry is set to grow 18% through 2026, making it the fourth fastest-growing industry in the US (Depalma, Stewart, Lommel, & Pielmeier, 2017; Kingscott, 2002; USDOL Bureau of Labor Statistics, 2017).

Meanwhile, recent survey results indicate that the fields of technical communication and translation are already converging. Gnecchi's 2011 survey of 88 North American technical writers revealed that 32% work in a combination of the translation and the technical communication fields (Gnecchi, Maylath, Mousten, Scarpa, & Vandepitte, 2011).

Though writing for translation is clearly becoming a vital component in the technical communicator's toolbox, the technical communication field does not devote a sufficient amount of

space to the study of such knowledge. Even highly respected sources largely ignore the issue or merely mention it in passing (Thrush, 1993).

Flammia (2005) conducted a brief review of leading textbooks in intercultural communication (*Intercultural Competence*, *Experiencing Intercultural Communication*, *Intercultural Communication*, and *Communication Between Cultures*) and discovered that none include chapters on written communication. A corresponding review of technical communication textbooks, also conducted by Flammia (2005), reveals that the majority of texts rarely mention or incorporate aspects of intercultural communication—let alone specifically discuss writing for translation. Notable exceptions include Hoft's *International Technical Communication*, Bosley's *Global Contexts*, Andrew's *Technical Communication in the Global Community*, and Varner and Beamer's *Intercultural Communication in the Global Workplace* (Flammia, 2005).

Moreover, few academic programs feature writing for translation courses or curriculum. In their 2013 study, Lisa Meloncon and Sandy Henschel found that only nine percent of 65 undergraduate technical communication and professional writing programs in the United States required a course in intercultural or global communication. Perhaps more significantly, only 18% of those programs offered electives that fell into this category (Meloncon & Henschel, 2013).

In addition, a 2011 survey indicates that 47% of North American technical writers' formal education did not include courses or instruction in translation or preparing technical documents for translation (Gnecchi et al.). As Gnecchi notes, "One can see that academic programs in North America have not fully provided the interdisciplinary instruction or cross-training that current professionals find necessary or desirable" (2011, p. 174).

Recent studies (Batova, 2015; Flammia, 2005; Gnecchi et al., 2011; Maylath, 1997; Maylath & Thrush, 2000; Starke-Meyerring, Duin & Palvetzian, 2007; and Thrush, 1993) have argued that technical communication programs should revise their curriculum to include a writing-for-translation component. However, these studies fail to provide the guidance necessary to make this shift.

This article seeks to address these gaps by sharing strategies for integrating aspects of translation into technical communication curriculum through courses, assignment sequences, and partnerships as well as a comprehensive list of best practices for writing for translation, spanning five categories: grammar, sentence structure, terminology management, controlled language systems, and collaboration.

Best Practices for Writing for Translation

If your company is global, chances are your documents will be translated down the line. However, the translation process is often hindered by the fact that the translators are rarely considered part of the audience. The resources included in this section provide an overview of different approaches that can help technical communicators help translators. In short, they answer the question: What are the best practices for creating translation-friendly text?

Grammar

The translation process is full of stumbling blocks as many grammatical structures in English can be misleading. Prior research (e.g., Barnett, 1989; Crum, 1991; Eriksson, 2005; Flint, Van Slyke, Starke-Meyerring & Thompson, 1999; Haara, 1998; Hoft, 1995; Kaynak & Herbig, 2013; Maaks, 2003; Maylath, 1997; and Spyridakis, Holmback, & Shubert, 1997) synthesizes information from multiple sources to provide a host of practical solutions to common grammar issues that professional communicators may encounter when writing for translation.

A very broad net has been cast to obtain these recommendations. Furthermore, the following guidelines have been pieced together from reliable sources, whose credibility is reinforced by numerous concurrent articles. Many of the authors of these articles are technical communication experts and a substantial number also have extensive translation experience. Please refer to the

appendix for a complete catalogue of the writing-for-translation guidelines that follow.

Include function words.

Translators are typically non-native speakers and readers of English. As such, translators rely more heavily on function words such as articles (a, an, the), prepositions (to, in, after, on), conjunctions (but, that, when, than), and pronouns (he, she, them, it) than native speakers (Barnett, 1989). Function words provide important grammatical cues to non-native speakers and help clarify the intent of the sentence (Flint et al., 1999; Maylath, 1997). Meanwhile, native-speaking technical writers tend to omit these function words (Crum, 1991). As a result, technical writers should make a concerted effort to include the types of words that appear in Table 1 below.

Replace: Go to main menu.
*With: Go to **the** main menu.*

Table 1
Include Function Words

Parts of Speech	Such as	Example	Referenced in
Articles	*a, an, the*	Go to [**the**] main menu.	(Flint et al., 1999)
Prepositions	*to, in, after, on*	It will be available [**on**] Friday.	(Flint et al., 1999)
Conjunctions	*but, that, when, than*	The class [**that**] he took.	(Maylath, 1997)
Pronouns	*he, she, them, it*	[Do **you**] want to contact us?	(Flint et al., 1999)

Avoid the following words and phrases.

Technical communicators writing for translation should try to avoid invisible plurals, gerunds, phrasal verbs, helping verbs, and shifts in number. Please see Table 2 for a condensed list of related examples.

***Invisible plurals**.*

In English, adjectives that describe a noun are always written in the singular form even if there is more than one of them (Hoft, 1995). Consequently, it is often not clear whether the first word is singular or plural (Globalme, 2011). For example, “program settings” can be interpreted in two distinct ways: 1) the separate settings for a single program or 2) the settings for multiple programs. It is particularly important that individuals working on Spanish documents are able to reach the correct conclusion as these translators must ultimately reconstruct the phrase as a preposition (The Translation Company, 2011). For clarification purposes, identify the exact number of programs early on in the document (Hoft, 1995).

Replace: program settings
*With: the **six** separate settings for **the** program OR **the** individual settings for **each** program*

Gerunds.

Also, avoid the use of gerunds as they don’t exist in many languages (Maaks, 2003). Gerunds are verbs with –ing added to make a noun phrase such as starting, setting, or running (Haara, 1998). For example, “running” can be quite confusing because it can function as either a verb as in “The program is running,” or a noun as in “Running burns lots of calories,” or even “She is afraid of running out of time.” The translator may have trouble determining which part of speech the –ing term is functioning as, and they can easily miss the fact that in many instances –ing words actually act as a noun and should therefore be translated as such. Sentences containing gerunds can be reconstructed by substituting an infinitive (to + base form of a verb) construction as seen below (Maylath, 2007).

Replace: ***Setting*** *the timer is important.*
With: It is important ***to set*** *the timer.*

Phrasal verbs.

Writers should also avoid phrasal verbs as they can obscure the meaning of the document for translators (Crum, 1991). Phrasal verbs combine a verb with either an adverb or a preposition to form a new meaning. Examples of phrasal verbs include shut off, hook up, and hold on. Phrasal verbs are difficult for non-native speakers to comprehend because of their idiomatic nature (Thrush, 2001). That is, their meaning rarely has any correlation with the meaning of the individual words. Essentially, phrasal verbs are difficult to decipher and often aggravating to translate.

Replace: hook up
With: connect

Helping verbs.

Haara (1998) and Maaks (2003) acknowledge that helping verbs also create a conundrum for translators. Helping verbs include words such as might, can, could, should, may, and would, which among other things are used to convey a wide variety of moods and states related to permission, possibility, and politeness. Although they are primarily used in technical writing to soften requests, helping verbs often remain ambiguous, and it is perhaps best to use more straightforward language in order to express requirements (Maaks, 2003).

Replace: might want to, may want to consider, should
With: must, need to, we recommend, or the company suggests

Shifts in number.

An illogical shift in number occurs when a writer fluctuates between a singular and a plural pronoun in separate references to the same subject (Maylath, 1997). For example: If **someone** (singular) wants to open the file, **they** (plural) must . . . While the translator may be able to determine which one to use from context, keeping the pronouns consistent ensures the text is coherent and that subjects and verbs agree throughout the document.

Replace: ***Croatia*** *is the newest member of the European Union. In order to join* ***they*** *had . . .*
With: ***Croatia*** *is the newest member of the European Union. In order to join* ***it*** *had . . .*

Table 2
Avoid the Following Types of Words and Phrases

Words/Phrases	Example	Referenced in
Invisible Plurals	⃠ *program setting**s*** ☑ *the **six** separate settings for **the** program*	(Haara, 1998)
Gerunds	⃠ ***Setting** the timer is important.* ☑ *It is important **to set** the timer.*	(Haara, 1998; Maylath, 1997)
Phrasal Verbs	⃠ ***shut off*** ☑ ***stop***	(Thrush, 2001)
Helping Verbs	⃠ *You **may** want to consider . . .* ☑ *We **recommend** . . .*	(Haara, 1998; Maaks,2003)
Shifts in Number	⃠ ***Croatia** is the new member. **They** had…* ☑ ***Croatia** is the new member. **It** had…*	(Maylath, 1997)

Avoid these figures of speech and forms of expression.

Practitioners overwhelmingly agree that metaphors, idioms, comparatives, and superlatives should be avoided (Flint et al., 1999; Haara, 1998; Maylath, 1997). Please see Table 3 for specific examples.

Metaphors.

Metaphors are replacement terms used in order to suggest a likeness or analogy. Metaphors include terms like "table leg" or "foot of the stairs," but they also extend to expressions such as "websites are vehicles" and "time is money." Typically, metaphors are used to clarify complex ideas. However, they can have an adverse effect on translation. Flint et al. (1999) and Haara (1998) agree that metaphors should be kept to a minimum due to the fact that they often take extra time to translate. Translating metaphors requires additional time because translators may need to confirm what is being referred to and then reformulate it in a new way that makes sense to their target audience (MTM Linguasoft, 2015).

*Replace: Attach the **table leg**.*
*With: Attach **Part A**.*

Idioms.

Maylath (1997) stresses that idioms such as spill the beans/reveal a secret; drop in the bucket/an insignificant amount; blow a fuse/erupt in anger; and piece of cake/easy can also be time-consuming if not impossible to translate. Since idioms are learned through contact and context, their message is often unclear to translators and their audiences (MTM Linguasoft, 2015).

Although an idiom's equivalent may exist in the target language, chances are that the language used to convey the idea isn't exactly the same. For example, the English idiom "kick the bucket" appears in French as "to break one's pipe" and in Spanish as "to stretch your leg" (BMJ Opinion, 2012). The association between these phrases is not evident as they each incorporate vastly different terminology. Additionally, translating these phrases into English does not make it any easier to infer the idioms' meaning. If someone told you that their neighbor had recently "broken his pipe" you might take it literally and be left with little, if any, insight into the actual meaning. Try and curtail the use of idioms by replacing them with more straightforward approximations.

*Replace: In order to complete the project, you must **stay on the ball**.*
*With: In order to complete the project, you must **be efficient**.*

Comparatives and superlatives.

Writers should also be wary of using comparatives and superlatives due to the fact that in certain countries it is illegal to claim something is the best without proof (Haara, 1998). Comparative advertising is outlawed everywhere from Germany to Italy (Kaynak & Herbig, 2013). In China, using superlatives in ads or documents can result in significant fines ranging from $30,000 to $160,000 (Jie, 2015). Instead of relying on comparatives and superlatives, try emphasizing the longevity or popularity of the brand instead.

*Replace: ABC Product is the **best**! It is **better than** XYZ product.*
*With: **For # years**, ABC Product has been the product of choice for over **20,000 users**.*

Table 3
Avoid the Following Figures of Speech and Forms of Expression

Expressions	Example	Referenced in
Metaphor	⃠ *Attach the **table leg**.* ☑ *Attach **part A**.*	(Flint et al., 1999; Haara, 1998)
Idiom	⃠ ***Stay on the ball**.*	(Maylath, 1997)

	☑ ***Be efficient***.	
Comparative	⃠ ***better than*** ☑ ***Since 1950****, XYZ has served* ***1 million users***.	(Haara, 1998)
Superlative	⃠ ***the best*** ☑ *(Same as above. Stress longevity/popularity.)*	(Haara, 1998)

Sentence Structure

Sentence structure entails everything from clauses to conditionals. Paying close attention to these elements will improve the clarity and coherence of the source document as well as the any successive translations generated from that document.

Avoid ambiguous sentence structures.

Adams, Austin, and Taylor (1999) recommend that writers avoid ambiguous sentence structures. Other authors provide more explicit examples of what ambiguous sentence structures might entail. Refer to Table 4 for a summary of which sentence structures to avoid.

If . . . statements & when . . . statements.

Hoft (1995) suggests using "if . . . statements" and "when . . . statements" with precision. These two structures are not interchangeable and should each be used in very distinct circumstances. Only use "if" whenever the event depends on another event, and only use "when" in cases where the event is inevitable (Hoft, 1995).

Replace: ***If*** *you see the popup window, select yes.*
With: ***When*** *you see the popup window, select yes.*

Dependent clauses.

Maylath (1997) suggests avoiding dependent clauses or sentences that cannot stand alone. Dependent clauses can be identified by the fact that the two sentences begin with or are joined by subordinating conjunctions (after, although, as, because, if, once, since, that, though, till, unless, until, when, whenever, where, while) or relative pronouns (that, what, which, who, whoever, whom, whose). Although a dependent clause (such as this one) contains a subject and a verb, it cannot stand on its own as a complete thought. This can be easily remedied by removing the subordinating conjunction or relative pronoun and reformulating the sentence as two separate sentences.

Replace: Pull the lever, ***which*** *is located on the upper left-hand side.*
With: Pull the lever. ***The lever*** *is located on the upper left-hand side.*

Passive voice.

The use of passive voice is generally discouraged in technical writing. However, it is especially important to avoid it when writing for translation. Both Flint et al. (1999) and Spyridakis et al., (1997) note that passive voice can make the subject of the sentence unclear. However, the problems with passive voice go much deeper, and its use presents the translator with a number of unique challenges.

Passive voice is structurally difficult to translate in languages such as Mandarin Chinese and is reserved for rare occasions in languages such as Spanish (One Hour Translation, 2014; The Translation Company, 2011). In cases such as these, translators must painstakingly recast the entire document in active voice before attempting the translation (One Hour Translation, 2014). Translators who skip this step risk producing a document that is unnatural sounding in their target language or—worse yet—has objects and verbs out of place (One Hour Translation, 2014). If you must use passive voice, make sure to identify the actor (MTM Linguasoft, 2015). For translations into certain languages,

such as Spanish, the addition of a reflexive verb (yourself, herself, himself, itself, myself) can also be valuable to those trying to convert it into the target language (MTM Linguasoft, 2015).

*Replace: The letter **was written by the CEO**.*
*With: **The CEO wrote** the letter [himself].*

Table 4
Avoid Ambiguous Sentence Structures

Structures	Example	Referenced in
If... vs. When… Statements	***If** you see the popup, (depends on other event)* ***When** you see the popup, (inevitable)*	(Hoft, 1995)
Dependent Clauses	⃠ *Pull the lever, **which** is located . . .* ☑ *Pull the lever. **The lever** is located . . .*	(Maylath, 1997)
Passive Voice	⃠ *The letter **was written by the CEO**.* ☑ ***The CEO wrote** the letter [himself].*	(Flint et al., 1999; Spyridakis et al., 1997)

Terminology Management

Many practitioners, including Eriksson (2005), Haara (1998), Maylath (1997), and Spyridakis et al. (1997) stress the importance of terminology management. Terminology management involves collecting, describing, updating, and distributing databases of terms (Perälä, 2014).

When it comes to terminology management, consistency is key. As Batova (2015) reminds us, translation tends to be outsourced and different translators may work on various documents belonging to the same project. Teams of translators may also work on a document over a period of years, using a single database. Therefore, the wording chosen by one member will be immediately available to all members, spreading both good and bad translations (Schubert, 2012).

Perälä (2014) suggests that inconsistencies can even negatively impact domestic branding efforts. Creating guidelines for the words and phrases your company uses allows you to maintain continuity across both individual documents and the organization as a whole.

Glossaries.

Different practitioners seem to have different ways of sharing their terminology management documents. Haara (1998) subscribes to the idea that glossaries should be included in the footnote area of the page for easy access. Eriksson (2005) takes this idea a step further, saying that technical writers should define all terminology in an online database that can be updated based on feedback from translators. Eriksson's more recent advice is perhaps more relevant as a growing number of companies move their terminology databases online.

Eriksson's assessment brings attention to the fact that the translation and writing process are often ongoing and that terminology management should be maintained throughout the product cycle (2005). Ideally, terminology updates should be put into effect at the beginning and end of a product cycle (Perälä, 2014). Thereafter, additional terms can be added at predetermined intervals of every three months or so rather than every single time a new term is approved (Perälä, 2014). In any case, Perälä (2014) cautions that terms should be clearly defined from the outset of a project. In addition, updates to glossaries should be orchestrated by a single designated party (Perälä, 2014).

Avoid or define the following terms.

In order to accommodate translators, technical communicators should remove acronyms, synonyms, homographs, and homophones from their writing. In cases where this is not possible, these terms should be defined in a glossary, shared with the translator. Please see Table 5 for additional examples of terms that should be used with care.

Acronyms.

Acronyms can pose problems for translators, namely because different versions of the same acronym often exist (Haara, 1998). Acronym Finder, an online repository of such terms, has 135 possible definitions listed under PDA alone ("PDA," 2018). UCLA stands for University Center for Learning Assistance as well as University of California at Los Angeles (“UCLA,” 2018). FIFA is short for Fédération Internationale de Football Association, but can also refer to Fertilizer Industry Federation of Australia (“FIFA,” 2018). Acronyms may also vary between countries (Hoft, 1995). In the English-speaking sphere the World Health Organization is known as WHO. Meanwhile, in French it is referred to as Organisation Mondiale de la Santé or OMS (Hoft, 1995). Accordingly, Maylath (1997) suggests avoiding acronyms altogether. However, Hoft (1995) states that writers should instead invest their time in defining acronyms throughout the text as well as compiling a list or glossary of acronyms to be shared with the translator.

Replace: NATO
*With: **N**orth **A**tlantic **T**reaty **O**rganization (NATO)*

Synonyms.

Eriksson (2005) emphasizes the importance of sticking to a single term and cautions against the use of synonyms. That is, different terms, such as “adolescents” and “youth,” referring to the same thing (Hoft, 1995). Although it may seem restrictive or repetitive to favor a single term, this practice helps ensure that both clarity and consistency are maintained throughout the translation (Minacori & Veisblat, 2010). Make sure all things discussed throughout the document go by one—and only one—name (Hoft, 1995).

*Replace: Translators need many **skills**. These **competencies** include . . .*
*With: Translators need many **skills**. These **skills** include . . .*

Homographs.

Spyridakis et al. (1997) remind us to avoid using the same term to mean two or more different things. Likewise, Adams, Austin, and Taylor (1999) warn us to avoid words with multiple meanings. For instance, “ring” can mean a piece of jewelry worn on the finger, a circle, or a bell-like sound. All of these terms are spelled and pronounced exactly the same. Yet they have their own distinct meanings. For translators, context is not always enough to determine which meaning is intended (Hoft, 1995). As a result, encountering words of this nature can be a frustrating and confusing ordeal for translators. It is prudent to completely avoid homographs whenever possible (Adams et al., 1999)

*Replace: The red **suit** did not **suit** him.*
*With: The red **tuxedo** did not **flatter** him.*

Homophones.

Maylath (1997) and Hoft (1995) take this sentiment a step further and suggest the avoidance of all homophones or words that are pronounced the same but are spelled differently (i.e. hear vs. here, knew vs. new, or serial vs. cereal). At the very least, replace one set of terms. However, it is best to replace all offending terms with non-homophone equivalents (Hoft, 1995).

*Replace: He could not **see** the **sea**.*
*With: He could not **view** the **ocean**.*

Table 5
Avoid or Define the Following Terms

Terms	Example	Referenced in

Acronyms	⃠ ***NATO*** ☑ *Spell out: **N**orth **A**tlantic **T**reaty **O**rganization*	(Haara, 1998; Mayath, 1997)
Synonyms	⃠ ***skills/competencies*** ☑ *Choose one and change other instances: **skills***	(Eriksson, 2005; Hoft, 1995)
Homographs	⃠ ***suit/suit*** ☑ *Eliminate and replace: **tuxedo/flatter***	(Spyridakis et al., 1997)
Homophones	⃠ ***sea/see*** ☑ *Eliminate and replace: **view/ocean***	(Hoft, 1995; Maylath, 1997)

Controlled Language Systems

It seems that different practitioners have conflicting opinions on the appropriateness of controlled language systems. Controlled language systems such as Plain English, Simplified English, and controlled language employ shorter sentences and use a limited vocabulary that advocates claim makes translation easier (Lipus, 2006). Though each of these three doctrines has its own set of rules, these terms are regularly used interchangeably and the intent of controlled language systems is the same: to increase the accuracy and speed of both human and machine translation while simultaneously producing documentation that is accessible and user-friendly (Thrush, 2001).

At the very least, translators seem to prefer when Plain English is used. Thirty-nine percent of translators surveyed indicated that translation is more burdensome when documents do not use Plain English (Gnecchi et al., 2011). However, Simplified English—a form of Controlled English that was developed by the European Association of Aerospace Industries—is much more restrictive than Plain English (Thrush, 2001).

Simplified English omits –ing verbs, restricts words to only one meaning, and limits the use of passive voice. Simplified English also limits the length of sentences. Furthermore, Simplified English guidelines specify the introduction of only one topic per paragraph and one instruction per sentence (Spyridakis, Holmback, & Scubert, 1997).

Some practitioners believe that Simplified English's short, succinct sentences can actually have adverse effects on the translation process. Lipus (2006) raises the point that shortening sentences often strips away vital context. Consequently, the author suggests including syntactic clues despite the fact that they may add to sentence length (Lipus, 2006). Meanwhile, Weiss (1998) points out that international audiences may associate a short, direct sentence style with a lack of effort on the writer's part. Limitations may also make it impossible to convey complicated ideas. Flint, Van Slyke, Starke-Meyerring & Thompson (1999) criticize the use of Controlled English, saying its reduced structures are not suitable for documentation that concerns high-tech products.

Detractors also point out that while Controlled English is easy to understand, it may be difficult to adopt. Kohl (2008) notes that "the amount of effort and knowledge that is required for developing and implementing Controlled English is considerable" (p. 243). In addition, restrictions on vocabulary and syntax can complicate the writing process. Weiss (1998) reiterates this idea saying, "At the extreme of Simplified English, the task of the writer resembles doing a word puzzle" (p. 258).

Kohl (2008) suggests that implementing Controlled English can lead to an increase in costs as well. Kodak, who developed one of the earliest versions of Controlled English, found that it was cheaper to teach their service technicians enough English to decipher the English versions of their manuals than to translate service manuals into more than 40 languages (Kohl, 2008). However, this was in 1989—well before the advent of the Internet as we know it. Nowadays, customers rely less on technicians and more on online help. Obviously, training every single customer to decipher the English versions of online help is not an option.

Moreover, post-editing costs may not have been taken into consideration in the Kodak analysis. According to Nyberg, Mitamura, and Huijsen (2003), in cases where the document is translated into multiple languages the decrease in post-editing costs can outweigh the increase in

training and implementation costs:

> [I]ncreased post-editing is avoided when authors help to disambiguate the texts. This is desirable in domains where the source language is translated into several target languages and increased cost of post-editing is prohibitive. In domains where there are fewer target languages, the other side of this trade-off might be explored, if the number of ambiguous terms and types of post-editing operations required allow cost-effective post editing. (Nyberg, Mitamura, & Huijsen, 2003, p. 243)

What's more, Spyridakis et al. (1997) provide compelling evidence that Simplified English documents are easier to read and translate than their counterparts. In their 1997 study, translated versions of Simplified English documents were rated higher than translated versions of regular documents. Eighteen Chinese speakers and 15 Spanish speakers translated one of four aircraft industry documents into their native language. Two of the documents were written in Simplified English; and the other two were original non-simplified versions of the same document. The completed translations were given to raters whose native language was the same as that used in the translation. These raters graded the translation's accuracy, nearness in style to the English version, ease of comprehension, number of mistranslations, and number of omissions. An ANOVA was then used to analyze the results. In both cases the Simplified English versions of the documents performed better overall. Unsurprisingly, the Spanish translations benefited significantly more from the use of Simplified English than the Chinese translations (Spyridakis et al., 1997).

It seems that as machine translation becomes more and more widespread, a basic understanding of controlled language systems is beneficial. However, adhering to every aspect of controlled language, especially when procedures contradict the foundational rules of writing-for-translation or company protocol, can impede and overcomplicate the development of documentation. While controlled language is a valuable tool, technical communicators should use their own discretion when deciding which aspects of it to adopt and which to ignore. Perhaps the best approach is to embrace those practices that best align with your company's objectives and that at the same time support seamless interdepartmental communication.

Collaboration

Both translators and technical communicators must navigate a whole host of potential pitfalls in order to make the end product acceptable for a new audience. However, these pitfalls extend beyond the syntax and grammar guidelines outlined above. The translator and technical communicator's ability to collaborate in a cross-functional group is also central to a successful translation. Technical communicators and translators must learn to continually communicate and share resources with one another in order to avoid unnecessary delays, costs, and complications.

Communication.

Haara (1998) urges technical communicators to open up the lines of communication while Adams et al. (1999) emphasize how effective communication between translators and technical writers is absolutely vital to produce successful documentation. Ideally, technical communicators must not only establish but maintain contact with translators throughout the writing and translation process (Haara, 1998). Batova (2015) echoes this sentiment adding that technical communicators can improve their processes on both ends by developing a shared understanding of the "limits and possibilities inherent in each of their positions" (p. 230). She goes on to note that:

> In many ways, translators and technical communicators are natural allies and a better mutual understanding could help both groups develop richer arguments for best practices in global communication." (Batova, 2015, p. 231)

Although outcomes are enhanced in instances where translators and technical communicators work in close proximity, communication can be accomplished through face-to-face or online means (Adams et al., 1999). In either circumstance, it is vital that the technical communicator

identify responsible parties for each language into which the source document is to be translated and ensure that each of these individuals is familiar with the preferred terminology management practices and has access to any additional resources needed to enhance the quality of the translation (Batova, 2015).

Sharing resources.

Translators must make certain that they comprehend a document from top to bottom before attempting a translation. External resources, such as dictionaries and glossaries, help them efficiently clarify words and concepts needed to move forward (Spalink, 2000). Among other things, translators rely on external resources "to confirm a hypothesis on meaning, check or monitor the adequacy of an interim translation solution, and find or inspire new solutions" (Raido, 2014, p. 24). Due to linguistic or rhetorical differences, translators may need to educate themselves on the subject matter or even express information that is not included in the source text (Flint et al., 1999).

Authors such as Eriksson (2005), Flint et al. (1999), Haara (1998), and Maylath (1997) underscore the importance of sharing resources with translators. Eriksson (2005), who has worked as both a technical communicator and a translator, even goes so far as to claim that the quality of translations directly correlates with the translators' access to such resources.

What's more, Eriksson's observations are backed up by evidence. In her book *Translation and Web Searching*, Vanessa Enriquez Raido (2014) examines over a dozen studies on the efficacy of reference materials on translation quality. Although most of these studies were conducted on paper reference materials rather than the online reference materials that dominate the industry today, a significant proportion of them "established a positive correlation between the frequency of dictionary use and the quality of translations" (Raido, 2014, p. 25).

Types of resources to share with translators.

Reference manuals such as dictionaries and glossaries are just the beginning. According to Flint et al. (1999), beneficial resources may include illustrations, spec sheets, and even promotional brochures. It may also be advantageous to share quality examples of preexisting foreign language documents (Eriksson, 2005; Flint et al., 1999).

Haara (1998) notes that technical writers should also provide translators with a list of proper names. Armed with this list, translators can easily pinpoint terminology that can remain intact, such as product names (Globalme, 2011). This extra step may seem unnecessary to those of us who are unacquainted with the translation process. But Vermes (2003) points out that proper names are often modified by means of translation or substitution:

> The translation of proper names has often been considered as a simple automatic process of transference from one language into another, due to the view that proper names are mere labels used to identify a person or a thing . . . the translation of proper names is not a trivial issue but, on the contrary, may involve a rather delicate decision-making process, requiring on the part of the translator careful consideration of the meanings the name has before deciding how best to render it in the target language. (Vermes, 2003, pp. 89-90)

Byrne (2006) calls attention to the fact that technical writers and translators both obtain information from various outside sources, such as dictionaries and glossaries, in order to produce a text. Sharing resources often takes little effort as they are already at one's disposal. However, the rewards are numerous. A list of recommended resources is presented in Table 6 below.

Table 6
Types of Resources to Share with Translators

Resources	Referenced in
Dictionaries and glossaries	(Flint et al., 1999)

List of proper names and words that should not be modified	(Haara, 1998)
Pre-existing translations or foreign language-use documents	(Eriksson, 2005)
Spec sheets	(Flint et al., 1999)
Illustrations	(Flint et al., 1999)
Brochures or other promotional documents	(Flint et al., 1999)

Writing-for-Translation in Technical Communication Curriculum

Globalization is profoundly influencing technical communication in the workplace and, in the process, higher education (Starke-Meyerring, Duin, & Palvetzian, 2007). According to Maylath and Thrush (2000), the need to accommodate translators is so significant that "Many technical communication and translation company officials plea to have universities and colleges teach technical communication students to prepare documents for translation" (p. 233). Maylath goes on to explain:

> In addition to raising sensitivity to the cultures in which one's writing will be read, technical writing courses are now obligated to raise awareness of language, particularly one's own language, and the ways in which it can cause confusion—not only for a nonnative reader of the language but even for a well-practiced and knowledgeable translator. (1997, pp. 342-343)

The major issue that stands in the way of producing learning environments that foster global literacies such as writing-for-translation is that technical communication is situated among a wide variety of disciplines such as English, mass communication, information design, engineering, and computing. What works in one instance does not necessarily work in another. In other words, a one-size-fits all model curriculum simply does not apply (Flammia, 2005).

Moreover, because technical communication is an interdisciplinary study, many faculty interested in integrating aspects of writing for translation find that they are unable to gain the administration's support as established conventions for course content do not necessarily include a focus on global literacy. For instance, many English departments concentrate on interpreting literature rather than writing for external—let alone international—audiences. Such circumstances make it difficult to gain the approval needed to nurture global competencies (Starke-Meyerring et al., 2007).

Still other practitioners caution against integrating translation competencies into programming, claiming that too close an association with other fields can be detrimental to the autonomy of technical communication. Rude (2009) points out that being seen as a service to a more dominant field can make technical communication and its contributions marginalized, diminishing the industry's agency and value.

However, technical writers do not work in isolation and others such as Blakeslee (2004) argue that practitioners need to seek yet more opportunities for academics to interact and collaborate on joint projects. In response to this, there have been a growing number of institutions incorporating successful global literacy strategies in recent years.

Given the lack of academic preparation coupled with an intense need for relevant training, I argue that technical communication programs should strive to incorporate similar strategies into their curricula. The best practices outlined above may seem simple enough—yet are challenging to implement. Fortunately, technical communication scholars and professors have developed courses, assignment sequences, and even partnerships that offer students essential writing-for-translation opportunities.

Courses

Madelyn Flammia (2005) has perhaps addressed this issue most directly by sharing a wealth of resources and assignments she uses in her own undergraduate International Technical Communication course at the University of Central Florida, which introduces students to writing for translation. Flammia incorporates international technical communication within a framework that reinforces core technical communication skills while providing a wide array of assignments that can be integrated either individually or as part of a sequence.

According to Flammia (2005), students must understand the broader implications of international technical communication before they delve into the specifics of writing for translation. As a result, her course is specifically designed so that students narrow their focus as the semester progresses, building upon previous projects as they go. As Brady and José (2009) note:

> If students come together to negotiate their disciplinary understandings of what it means to write and design documents for complex audience needs, they will enter their own professional communities with a greater appreciation for a variety of perspectives and approaches to solving problems as well as a deeper respect for what it means for others to function in their own communities of practice. (p. 49)

The semester begins with an interview assignment that develops into a country-specific report and culminates in a documentation project targeted towards an international audience. Students are assigned a country at the start of the semester and dedicate the entirety of their projects to this region. In this way, students become increasingly familiar with the intricacies of the language and culture for which they ultimately create a source document (Flammia, 2005).

Interview with a technical communicator working abroad.

At the beginning of the semester, each student creates a brief five to ten-question interview aimed at a technical communicator who is working abroad. In order to ensure that questions are pertinent to intercultural issues, all material is preapproved by the instructor prior to the interview date. Actual interviews are conducted through e-mail and students share findings with their peers through short oral presentations.

Flammia (2005) had great success recruiting interviewees through international professional organizations such as the IEEE Professional Communication or the Society for Technical Communication. In one instance, Flammia reached out to chapter presidents in target countries, who helped enlist participants from their member base. Besides introducing students to intercultural issues in technical communication, the assignment hones interview skills, which technical communicators routinely use to gather information from subject matter experts.

Country-specific report.

After completing the interview, students collaborate with others in order to research the country where their interviewee is based. This involves examining seven international variables: political, economic, social, religious, educational, linguistic, and technological. Students are encouraged to select other significant factors based on the unique characteristics of the country they have been assigned.

Over the course of the research, students may utilize sources beyond the scope of routine means such as the Library of Congress Country Studies, United Nations Website, U.S. Department of State Background Notes, and even local Chambers of Commerce. During this time, students work in groups of two or three, integrating fundamental teamwork skills into the experience.

Documentation project.

Lastly, each team is tasked with partnering with a local agency or company to complete a documentation project, which will ideally be translated for actual use. The project can be a print document or a website and should accommodate a real-life need in the country where their audience

resides. In addition to following writing-for-translation guidelines, the distribution method, document design, and content choices should all be informed by the students' newfound awareness of their target culture.

Some examples of projects include a resource for Mexican business executives wishing to trade with Americans and Canadians since the passing of the NAFTA agreement; a website for environmentally conscious individuals in Norway; and a planting guide to be distributed by a nonprofit seeking to eliminate hunger in developing nations by supplying seeds (Flammia, 2005). Depending on the topic of choice, the project has great potential to engage students in service learning while simultaneously preparing them to write documents that better accommodate the translation process.

Additional offerings employed by Flammia (2005) include 1) introducing students to cultural models, including the Iceberg Model, Theory of Contexting, and Cultural Value Dimensions 2) having students read news articles that have been translated into a target language and then translated back into English; 3) inviting translator speakers to highlight the challenges inadequate source documents can create and the costs ineffective translation can incur; 4) discussing case studies, such as Maylath's "Translating User Manuals: A Surgical Equipment Company's 'Quick Cut'" in order to showcase further translation challenges; 5) creating a student activity where teams use writing-for-translation guidelines to rewrite a set of instructions or other relevant documents; 6) letting students compile their own guidelines based on sources they've encountered over the course of the semester; and 7) having students use those guidelines as the standard on which to evaluate the work of their peers.

Assignment Sequences

Maylath (2007) maintains that unless a technical writer is preparing for a dual profession as a translator, a complete course on translation is excessive. Source documents are often translated into so many languages it is almost impossible to become familiar with the intricacies of each. Moreover, such practices can skew the division of labor between technical writer and translator (Maylath, 2007).

For this reason, Maylath (2007) suggests that translation components should simply be added to existing introductory technical writing courses and goes on to explain what exactly these components should entail. According to Maylath (2007), the additions should focus on four elements: clarity, terminology management, space and signposts, and cultural and rhetorical differences. The author goes on to provide actual examples of activities meant to help students master these areas.

Rework a previous assignment.

Students are given two weeks to revise a document that they composed earlier in the course so that it accommodates translators. This process drives home the fact that typically texts prepared with an English-speaking audience in mind are not suitable for translation without first undergoing some alterations. In the interim period, instructors should expose students to a variety of activities that acquaint learners with the finer points of writing-for-translation.

Introduction to issues through a letter or other document translated into English.

In order to illustrate issues that may cause confusion or misunderstanding among translators, the instructor can elect to present the class with an inaccurate rendering of a document into English. Maylath (2007) uses a letter, which has been translated from Swedish into English. However, any awkward translation of a text from another language into English should sufficiently showcase the various issues that can arise as a result of translation and help students envision what an international audience might encounter as a result of a poor outcome of translation. Ideally, the instructor is fluent in the source language or has studied specific elements of said document, so they can provide insights into how or why specific issues arise.

Follow-up with examples to avoid from student documents.

As a follow-up, the instructor may choose to share actual excerpts from the documents students are set to work on. These excerpts should contain key mistakes to avoid. Since these documents were not prepared with translation in mind, students do not tend to be embarrassed by these errors. However, the instructor may elect to use examples from a previous course to avoid this scenario.

Articles with further advice.

Maylath (2007) also recommends that instructors assign texts that acquaint students with additional writing-for-translation issues. Although there are plenty of relevant materials to choose from, the suggested texts include *Global Talk*, *Intercom*, and, *International Technical Communication*.

Line-by-line examination of own paper.

As part of this, students scour their own texts for idioms, acronyms, and other issues that they can eliminate. In order to aid their efforts, the instructor may choose to share a checklist of writing-for-translation tips that students can use as a guideline.

Writing-for-translation common errors scavenger hunt.

For emphasis, the class may also take part in an activity where students try and find examples of what not to do on the web or in print advertisements. Students can complete this activity on their own or in small groups. Either way, this activity culminates in sharing findings with the class.

Identify areas lacking essential information.

Lastly, students scour their text for information gaps that native speakers may take for granted but that could impede the translator. Examples of this include not specifying that a button needs to be released after it is pressed or the use of a phrasal verb such as “pull up.” This direct approach helps call attention to key concepts students might otherwise overlook.

Partnerships

Although many institutions are following Maylath and Flammia’s lead by integrating global literacies into their courses, other programs have concentrated on developing partnerships as the crux of these learning experiences. As Starke-Meyerring, Duin, and Palvetzian aptly remark “creating globally networked learning environments for their students is nearly an impossible task for programs to accomplish on their own. In fact, the nature of communication in global digital networks requires extensive global partnership work” (2007, p. 146).

Global partnerships are an emerging trend in technical communication programs that can be a welcome addition to both full courses and individual course components. In a survey of 81 faculty and program administrators 24% currently had one or more global partnership and 12% were in the stages of planning one (Starke-Meyerring et al., 2007). Although global partnerships do not necessarily relate directly to writing for translation, they play on related competencies such as distance communications, collaboration for quality, and large-scale audience analysis (Starke-Meyerring et al., 2007).

Research partnerships.

Some practitioners choose to form partnerships that are research focused. The Technical Communication Department at the University of Washington and the Department of Communication Studies at the Universities of Twente in the Netherlands have developed collaborative research initiatives, which have produced a number of publications, including a joint special issue of Technical

Communication and IEEE Transactions on Professional Communication (Starke-Meyerring et al., 2007).

In addition to facilitating scholarly input these collaborations offer opportunities for team teaching, student exchanges, faculty sabbaticals, and joint course development. (Starke-Meyerring et al., 2007).

Classroom partnerships.

One of the most successful international partnerships, which focuses on writing for translation, has been the Transatlantic Project initiated by Bruce Maylath in 1999 (Starke-Meyerring et al., 2007). Over the course of the project, students develop terminology glossaries and documentation which is ultimately translated. Perhaps more importantly, students engage in electronic cross-cultural collaboration and learn to negotiate appropriate rhetorical choices for international audiences along the way.

The project initially had a single class of University of Wisconsin-Stout students write instructions, which were translated by Hogeschool Gent students. Since then it has expanded to include all sections of the Technical Communication Course at Wisconsin Stout and various European universities, encompassing 13 instructors and 200–300 students.

Michigan Technological University conducts a similar exercise where students work in teams to compose instructional pamphlets for international students, who they later collaborate with (Brady and José, 2009). Topics include practical applications such as “How to open a bank account in the US” or “Safety tips for driving during the winter in the Upper Peninsula” (Brady and José, 2009). Technical communication students receive feedback from international students and see firsthand what stumbling blocks their writing creates for non-native speakers and learn how to overcome these pitfalls (Brady and José, 2009).

As Brady and José (2009) point out, instructions are “the perfect genre for incorporating more intercultural issues and workplace writing in the classroom” as they are the most common document type to be translated into multiple languages (p. 51). Although the project has merit in itself, this exercise could also very easily be adapted to contain a translation component (Brady and José, 2009).

Partnership pitfalls and potential.

Unfortunately, not all programs have the means and backing to conduct classroom or research partnerships. Over half (51%) of survey respondents who are not currently engaged in partnerships cited lack of resources as their biggest challenge.

In order for such efforts to flourish, practitioners should consider the following recommendations: share best pedagogical practices, assignments, and instructional strategies; build a repertoire of instructional material designed solely for such classes; and collaborate on teaching materials, textbooks, and other learning resources (Starke-Meyerring et al., 2007). Programs in higher education that wish to form international partnerships must actively seek out various methods to connect with like-minded individuals, whether overseas or across the United States.

The more connections that can be made, the easier it will be to build leadership capacity and to stoke the internal interest needed to ultimately achieve related aims (Starke-Meyerring et al., 2007). Starke-Meyerring et al. (2007) set out to give explicit examples of how to foster such growth. The trio urges stakeholders to create networking opportunities with other institutions via technical communication conferences. Interested faculty can also develop a committee or shared space where they can exchange ideas within their institution. Through these venues, faculty may foster collaborative research contributions, develop a collection of sources or forums pertinent to their interests and research aims, and share information concerning funding opportunities related to intercultural communication (Starke-Meyerring et al., 2007).

Perhaps these partnership-enriching activities are the most promising starting point for those interested in overcoming the conventional institutional division between local and global learning. More than ever before, technical communication programs need to encourage a culture of support by exploring as many options as possible and sharing their victories and vision with those of a similar mindset.

Conclusion

The perception of English as the lingua franca has led technical communication programs to discount the importance of teaching students to write for translation. In order to address this issue, universities should consider revising their technical communication programs to include a writing-for-translation component. However, comprehensive sources also need to be made available to those already immersed in the field.

The offering above is a small sample of a body of work that is only just beginning to be realized. Research on documents produced for translation is still scarce, and numerous scholars have advocated further examination of this and related areas.

As the global marketplace continues to grow, evidence that writing-for-translation guidelines and teachings are effective becomes increasingly important to meet the needs of this ever-expanding international audience. The future of technical communication depends upon fostering writing-for-translation foundational skills whether in the classroom, on the job, or through self-study.

Subsequently, the development of specific evidence-based educational models is increasingly important. Such contributions help justify the inclusion of coursework derived from or analogous to them and advance this emerging and much overdue dialogue.

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Appendix*

Grammar Recommendations

Table 1
Include Function Words

Parts of Speech	Such as	Example	Referenced in
Articles	*a, an, the*	Go to [**the**] main menu.	(Flint et al., 1999)
Prepositions	*to, in, after, on*	It will be available [**on**] Friday.	(Flint et al., 1999)
Conjunctions	*but, that, when, than*	The class [**that**] he took.	(Maylath, 1997)
Pronouns	*he, she, them, it*	[Do **you**] want to contact us?	(Flint et al., 1999)

Table 2
Avoid the Following Types of Words and Phrases

Words/Phrases	Example	Referenced in
Invisible Plurals	⃠ *program setting**s*** ☑ *the **six** separate settings for **the** program*	(Haara, 1998)
Gerunds	⃠ ***Setting** the timer is important.* ☑ *It is important **to set** the timer.*	(Haara, 1998; Maylath, 1997)
Phrasal Verbs	⃠ ***shut off*** ☑ ***stop***	(Thrush, 2001)
Helping Verbs	⃠ *You **may** want to consider . . .* ☑ *We **recommend** . . .*	(Haara, 1998; Maaks,2003)
Shifts in Number	⃠ ***Croatia** is the new member. **They** had…* ☑ ***Croatia** is the new member. **It** had…*	(Maylath, 1997)

Table 3
Avoid the Following Figures of Speech and Forms of Expression

Expressions	Example	Referenced in
Metaphor	⃠ *Attach the **table leg**.* ☑ *Attach **part A**.*	(Flint et al., 1999; Haara, 1998)
Idiom	⃠ ***Stay on the ball**.* ☑ ***Be efficient**.*	(Maylath, 1997)
Comparative	⃠ ***better than*** ☑ ***Since 1950**, XYZ has served **1 million users**.*	(Haara, 1998)
Superlative	⃠ ***the best*** ☑ *(Same as above. Stress longevity/popularity.)*	(Haara, 1998)

Sentence Structure

Table 4
Avoid Ambiguous Sentence Structures

Structures	Example	Referenced in
If... vs. When… Statements	***If*** *you see the popup, (depends on other event)* ***When*** *you see the popup, (inevitable)*	(Hoft, 1995)
Dependent Clauses	⃠ *Pull the lever,* ***which*** *is located . . .* ☑ *Pull the lever.* ***The lever*** *is located . . .*	(Maylath, 1997)
Passive Voice	⃠ *The letter* ***was written by the CEO****.* ☑ ***The CEO wrote*** *the letter [himself].*	(Flint et al., 1999; Spyridakis et al., 1997)

Terminology Management

Table 5
Avoid or Define the Following Terms

Terms	Example	Referenced in
Acronyms	⃠ ***NATO*** ☑ *Spell out:* ***N****orth* ***A****tlantic* ***T****reaty* ***O****rganization*	(Haara, 1998; Mayath, 1997)
Synonyms	⃠ ***skills/competencies*** ☑ *Choose one and change other instances:* ***skills***	(Eriksson, 2005; Hoft, 1995)
Homographs	⃠ ***suit/suit*** ☑ *Eliminate and replace:* ***tuxedo/flatter***	(Spyridakis et al., 1997)
Homophones	⃠ ***sea/see*** ☑ *Eliminate and replace:* ***view/ocean***	(Hoft, 1995; Maylath, 1997)

Collaboration

Table 6
Types of Resources to Share with Translators

Resources	Referenced in
Dictionaries and glossaries	(Flint et al., 1999)
List of proper names and words that should not be modified	(Haara, 1998)
Pre-existing translations or foreign language-use documents	(Eriksson, 2005)
Spec sheets	(Flint et al., 1999)
Illustrations	(Flint et al., 1999)
Brochures or other promotional documents	(Flint et al., 1999)

***Examples are my own.**