Transnational and Transcultural Technical Communication
Of all the possible occasions in life when a lack of knowledge handicaps individuals, not knowing how to communicate across cultures in attempting to transact business is surely among the costliest.

—William V. Ruch, *International Handbook of Corporate Communication*

…all technical communication is international.

—qtd. by Murice Martin, Editor, *Intercom*

International technical communication requires a significant extension of technical communication as we know it today.

—Nancy L. Hoft, *International technical Communication: How to Export Information about High Technology*

**Background**

More than 30 years ago, Xerox established its Multinational Customer and Service Education organization (MC&SE). This division of Xerox was created to translate written documentation for worldwide use. The MS&CE writers and translators developed a system called *Multinational Customized English* to establish a set of standards for how Xerox documents would be translated. These standards were used to assist both machine and manual translations. The objective was consistency and accuracy in document translation. The MC&SE group also developed an Employee Development System that worked to train Xerox employees in two key skills for global communication: “writing for translatability” and “global design.”

The creation of the MC&SE (and similar divisions in other companies nationwide about this time) signified an important three-fold shift in technical and professional communication. First, it acknowledged that commerce had become a global endeavor. No longer were businesses limited by national borders. Second, it recognized the role of technological advancement in opening lines of communication between international organizations and how those technologies expedite international communication. Technology allows trade to happen farther and faster. Third, the MC&SE marked a shift away from relying on International English as the standard language of international communication and a shift toward working in and with local languages, cultures, and customs. *These are all now central issues in contemporary workplaces since we now live and work in a transnational world.*

It is now a common understanding that business and commerce function in a global market economy. Companies not only exchange goods and services with companies in other countries, but many larger firms now have offices in several countries. Companies and organizations with locations in multiple countries, as well as those housed in a single country, are likely to employ linguistically and culturally diverse populations. Branches of international offices and culturally diverse individuals must communicate with each other within a single organization. In fact, according to the United Nation’s Conference on Trade and Development *World Investment Report, 2005: Transnational Corporations and the Internationalization of R&D*, approximately 41 percent of the top twenty corporations who operate transnationally are


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foreign to the home country of their companies.\(^2\) Transnational communication and transcultural communication require the ability to produce internal documents as well as external documents.

For the purposes of this white paper, the *transnational communication* can be thought of as encompassing multi-national, cross-cultural, global, and international audiences, though there are some fine distinctions between these terms. For instance, *multinational* suggests definitive borders between countries, while *transnational* envisions the global community without national borders. Despite these differences, commerce and communication between countries and cultures is now standard in just about every profession. *Transnational* suggests a sense of movement, particularly the flow of economy, ideas, goods, and services, and especially the flow of communication and information. Mostly, though, *transnational* suggests connectivity despite differences.

In the early 1990s, the Society for Technical Communication (STC) began to address the need for more attention to transnational aspects of technical communication. By the mid 1990s calls for closer attention to transnational technical communication within academic technical communication curricula became part of the STC conversation, yet, that call was not widely heeded in curricula or teaching materials. Since that time, STC developed the International Technical Communication Special Interest Group (ITC) in order to galvanize and promote conversation about international technical communication. During this same time, a small number of books were published about international technical communication, including Nancy L. Hoft’s pragmatic and now canonical *International Technical Communication: How to Export Information about High Technology* (John Wiley and Sons, 1995) and William V. Ruch’s *International Handbook of Corporate Communication* (McFarland, 1989), both of which are cited throughout this white paper. While the ITC and its collaborative publication GlobeTalk provide many useful resources for technical and professional communicators in the workforce, very little has been written to develop approaches to incorporating transnational communication into college-level technical communication curricula.

Some textbooks and other instructional resources outside of technical communication that initially ventured into providing consideration of international audiences often provided lists of culture-specific issues to consider when working with specific regional audiences. Information might be offered that would say “when writing for a Japanese audience, you should always. . .” or “Spanish readers tend to. . . .” This kind of “cultural guidebook” approach promotes typecasting and stereotyping by reducing difference to simple formulas. Effective awareness of cultural, linguistic, and national difference cannot be approached using such formulaic and reductive means. Such approaches must be avoided in favor of thorough research and long-term cultural understanding. This is to say, part of the agenda of this white paper is to develop a more nuanced and complex understanding of how a transnational component of technical communication curricula might be developed. *The body of this white paper addresses issues central to transnational and transcultural communication that should become more central to college-level technical communications curricula.*

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Localization

Localization refers to adapting a product and translating a document for a specific local audience. This includes using the specific cultural context to recast the product and/or document. The key to effective localization is always beginning with a high-quality original document. According to Nancy L. Hoft, author of International Technical Communication: How to Export Information about High Technology, there are two degrees of localization:

1. General Localization, which addresses superficial cultural differences like language, currency, and date and time formats. General localization often requires little more than adjustments made in translation.

2. Radical localization, which focuses on more substantive cultural differences that affect how readers and users think, feel, and act, including learning approaches and cultural-specific examples. Radical localization can drastically change the language, design, and approach of the document.³

Localization offers four key benefits:

1. Localized products improve sales. Localization is a form of marketing. Localization makes documents and products more applicable to a transnational audience and thereby makes selling the product or distributing the documents more effective.⁴

2. Localized products overcome cultural differences. By understanding and adapting to a target country’s cultural difference, products can be adapted to local needs in ways that make them more attuned to cultural needs. Hoft offers the interesting example of the wood products industry. In the 1950’s Japan, which has limited wood resources, approached U.S. and Canadian wood manufactures about supplying Japan with wood. One of the restrictions, though, was that Japan would only import wood that had been cut to meet traditional Japanese building customs, including specific sizes and shapes (the 2x4 is not a universal building size). Shortsightedly, the U.S. wood industry did not see Japan as becoming an economic force and rejected Japan’s proposals. Canada, on the other hand, localized wood production for Japan and now dominates the wood suppliers industry.⁵

3. Localization helps overcome inherent resistance. As an example of this benefit, Hoft explains that when American-based McDonald’s decided to expand its world business into India, it met with an inherent cultural resistance to their primary product: the all beef hamburger The Big Mac. India, which has the second largest population of any country in the world and, thus, a massive consumer market, has a significantly large population of vegetarians. Cows hold a culturally different position in some Indian culture than in the

U.S. So, to overcome this inherent resistance, McDonald’s developed the meatless Big Mac. McDonald’s also offers localized variants of the Big Mac in India that originally used lamb instead of beef, but now use chicken. These versions are called “Maharaja Mac.” Likewise, because Jewish dietary laws restrict the mixing of meat and dairy products, McDonald’s in Israel offers a Kosher version of the Big Mac that does not include cheese. McDonald’s has also made efforts to localize the Big Mac to cultural approaches to nutrition. The Big Mac offered in Australia, for instance, contains 20% fewer calories and 24% lower sodium than the Big Mac sold in Mexico.

4. Localization is a good plan for being the first to reach world markets and for entering global niche markets. By ensuring that a company’s product and documentation are localized from early stages of development, companies can more rapidly reach markets not yet tapped by their competitors.

Despite these benefits, localization can also be expensive, time-consuming, and legally complicated. The Boeing Company, for example, has stopped translating and distributing maintenance manuals with the airplanes it exports because of the liability Boeing would assume if the translation of the manuals were incorrect or misleading. Many countries now require documentation to include standardized product documentation be written in the official language of the target country.

Internationalization
Localization often requires adjusting documentation to specific target audiences. This means that the original documents may be embedded with the writer’s cultural markings and that part of the process of localization is shifting these markings to localized approaches. Localizing a document written for a local audience instead of written for a transnational audience from the outset, then, can be difficult as it is a complex process to locate and adapt all cultural markings.

Consider, for instance, the simple act of alphabetizing a list of names. If a U.S. writer is documenting that list, the order would follow the U.S. alphabet, but if the writer were alphabetizing the same names in Spanish, the order would be different because the Spanish alphabet shifts the order through the inclusion of the letter “eñe” (ñ) which appears between the n and o. Similarly, to translate the list into other alphabetic languages like Russian, Greek, Hebrew, Japanese, Mandarin, Arabic, or Tamil would require translating or transliterating the names to fit those alphabetic needs and then reconfiguring the list order based on those languages. Some languages, too, rely on syllabaries instead of alphabets.

Because of countless cultural factors like these, it is often difficult to localize documents written for native English speakers that are already embedded with cultural markings. Internationalization is a process for developing software that allows it to be easily adapted to various transnational audiences without changing the core of the software design. Internationalization (which is often referred to as i18n—the first letter, number of letters between the i and n, and last letter of the word) techniques can also be adapted to technical

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6 Ibid.
7 Ibid.
8 Ibid.
9 Ibid.
communication in general. Internationalization might be thought of as the process of writing, rewriting, designing and redesigning documents so that they can be more easily localized to any transnational audience.  

A document that has been internationalized is comprised of two components:

*Core information* is information that can be reused. Core information might be thought of as the constant between various documents, whether different design versions (on-line and print) or different versions for different transnational target audiences.

*International variables* are the parts of the document that can be localized. International variable, Hoft elaborates, address superficial and deep cultural differences. Internationalization is the process of identifying international variables that come into play in the specific document and determining what parts of the document must be localized.

Internationalization is a necessary process for any company that trades transnationally. Because internationalization anticipates localization, internationalization helps companies save time and money in their localization processes. Likewise, internationalization compounds its efficiency over time by continually adding to a company’s database of localization tactics and standardizes many of those processes.

**Globalization**

The term globalization is, according to David Block, “one of the most commonly used and misused terms in the world today whenever people talk or write about politics, economics, the environment, music, or just their day-to-day lives.” The word carries different meaning for different groups. Yet, within technical communication, the term takes on a specific meaning of linkage and connection.

Internationalization, Hoft points out, requires at least two central steps: internationalization of the document and then localization of the transnational document for each local context. Despite its necessity for companies that conduct transnational business, internationalization and localization increase the amount of time and resources dedicated to each cultural variation of a document beyond the planning, researching, drafting, reviewing, and distributing of the original document. When a company invests in localizing documents for many target countries, it is likely that the cost of localizing will outweigh the return on the investment. When this occurs, companies have a difficult time justifying the cost of internationalization and localization.

For writers working with transnational target audiences, then, the ultimate goal is developing the global document for each document they must produce, a single document that can be read and understood by any audience. The question, of course, is “can there be such a document?” Business professionals talk about global products, items that can be used by anyone

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10 Ibid.
11 Ibid.
anywhere, but even those conversations identify the near impossibility of developing such items. A paperclip might be a global product, but only if all cultures agree to what a paper clip is to be used for and only if all cultures have use for it.14

Global, of course, is a relative term, and from the standpoint of globalization, we must understand that the truly global document is likely not a possibility. Instead, those working to develop global documents work to write documents that can be read and understood by as many transnational audiences as possible. Globalization, then, should be thought of as the process of preparing documents that can be read and understood by as many transnational audiences as possible without modification to the document. One way that many workplace writers try to achieve global documents is by increasing the use of visual representations to account for linguistic difference, but visuals (addressed later) are also culturally influenced, so writers must account for visual rhetorical choices just as they would with their written text. One attempt at designing global visual documents can be seen in airline safety cards, which are generally provided in multiple languages and with visuals designed to provide information even if one can’t read any of the provided languages. However, despite the efforts to this end, most experts agree that airline safety cards are not intuitive for many readers and the card attempt to convey too much information in one document. Likewise, they are as difficult to rid of cultural markers as is written text. For instance, the use of numbers to direct readers—numbers that are not used in all languages—assumes that readers understand those numeric representations. Airline safety cards, too, require a pre-understanding as to what a seatbelt looks like, what a cigarette is, and what the red circle with a slash through it indicates.

Despite the drawbacks that hamper total globalization, it is important for workplace writers who write for transnational audiences to strive toward global documents.

Translation
Translation can be one of the most expensive aspects of transnational communication. The difficulty with translation is that most technical writers aren’t translators, so translators must be hired when needed. Translators must work with documents that others have prepared, and workplace writers must anticipate that their documentation will be translated by someone else. This creates a difficult labor division between writer and translator. Likewise, few translators are able to translate in more than one language direction, for instance English to Japanese. Since documents often require translation into multiple languages, companies often hire translation agencies to translate their documents. Because of cost, few companies or organizations are able to staff dedicated translators, so they will outsource translation work to agencies that either employ or sub-contract translators in many languages.15

14 Ibid.
15 For more information about translation and technical communication, see the articles listed in the ITC SIG Translation Reader: http://www.stcsig.org/itc/resources.html

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Thus, the responsibility of most technical writers isn’t to be able to translate their documents into various languages, but to prepare their documents in ways that accommodate translation. This includes not only adhering to particular guidelines, but also developing awareness of the countries, cultures, and languages of the audiences that will eventually read the translated documents. Such alertness in one’s writing makes the job of the translator more efficient and it aids in assuring that the writer’s document is understood as it was intended.

The first step in becoming more attuned to how technical communication will serve transnational audiences is to become more aware of one’s own language and use of language. Learning how English, for instance, differs from other languages provides a better vision of how language use might be interpreted either by non-native speakers or how it might be translated into other languages. The following four elements should be central to thinking about writing with an eye toward translation and toward developing a better sense of one’s own language use.16

1. **Terminology**: Writers should pay careful attention to uses of specialized terminology, keeping in mind that most specialized terms don’t translate directly. One good method for better accounting for terminology use is to maintain a glossary of specialized terms, jargon, and new words that one uses. Technical writing glossaries serve two purposes within a document. First, they provide the writer a method for keeping track of what specialized words get used and how frequently they are used. By better understanding the contexts in which specialized language is used, a writer learns more about how writing functions. Second, specialized terms glossaries can be given to translators as a resource to better understand how to use specialized terminology. This will help ensure that the translator understands specifically what is meant when by specialized terminology and, thus, be able to prepare more accurately translated documents.

2. **Clarity**: Documents written with translation in mind should be clear and concise. Translators that have to work with poorly written documents or unclear language often have difficulties in producing accurate and/or effective translations. A translator’s job is to translate, not to rewrite.

   Linguistic features such as idioms, acronyms, ambiguous antecedents, use of synonyms and word shifts, adjective phrases, gerunds, shifts in person, and dropping *that* as a conjunction can lend to ambiguities that are difficult for translators to work with.17

3. **Cultural and Rhetorical Differences**: it is, of course, impossible for every workplace writer to know everything about all cultures and languages they may encounter with transnational audiences. However, it is crucial to keep in mind that using idiomatic phrases, popular culture references, and even humor can be problematic for translators. It is generally a good principle to avoid humor in all professional documents, as one can never be certain how an audience will respond to it. It is especially important to avoid humor intended for transnational audiences, since humor does not translate well between cultures. What one writer may think is funny—even a simple joke—might be construed

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17 Ibid.

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as inappropriate or insulting by a transnational reader. Similarly, idiomatic expressions might not make sense to a non-native speaker and might not be translatable into other languages.

4. **Design**: according to translation research, most languages require 30% more space than does English to convey the same message.\(^\text{18}\) Likewise, some languages like Arabic, Hebrew and some forms of Japanese don’t follow English’s left-to-right directional flow. Since translators focus on language translation and not necessarily on design, technical writers need to account for how design space will be allocated to accommodate shifts in space requirements as document languages shift. Design architecture becomes important in organizing information clearly and guiding transnational readers through a document. Documents that are deductively organized and provide clear summaries, headings, and topic sentences are easier to translate.\(^\text{19}\)

Because most technical writers do not have the required background or skills to serve as translators and because most companies cannot afford to purchase machine translation software, most companies when working with translational documents will either outsource the translations or, if they require frequent translation work, may employ in-house translators. In either case, translators, according to Geoffrey Samuelsson-Brown’s *A Practical Guide for Translators* need seven different skills clusters in order to succeed as translators: cultural understanding, information technology, decision making, presentation, communication, linguistic, and project management. The figure below is adapted from Samuelsson-Brown’s visual representation that details the skills clusters to show how they contribute to effective translation.\(^\text{20}\)

\(^{18}\) Ibid.  
\(^{19}\) Ibid.  
Geoffrey Samuelsson-Brown’s Translation Skills Clusters

Difference

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Technical communication is understood as a “reader-centered” form of writing, and audience analysis is a crucial activity for those who produce technical documents. Nancy L. Hoft’s often-employed Iceberg Model provides a useful metaphor for describing an audience’s cultural characteristics. According to Hoft “Only 10 percent of an iceberg is visible above the surface of the water, while the remaining 90 percent is below the surface and thus not visible. Just as only 10 percent of the iceberg can be seen, only 10 percent of the cultural characteristics of a target audience are visible to an observer.” The Iceberg Model identifies three categories of cultural characteristics:

1. **Surface**: these are the visible, obvious characteristics; these are the characteristics that are easy to research and learn about (i.e. currency, use of numbers, language, formatting, etc.).

2. **Unspoken Rules**: These are the characteristics that are obscured from view, but can still be learned about (i.e. business etiquette).

3. **Unconscious Rules**: These are the characteristics that are embedded deep in a culture, characteristics that are not articulated as standards, but are practices as such, nonetheless (i.e. verbal communication traits, rate of speech, etc.).

Hoft identifies seven variables that technical communicators should account for when conducting a transnational audience analysis:

1. **Language**
   Understanding the language requirements of a different country or cultural group is important because it provides direction about how to write documents, and it offers insight about how audiences are likely to read documents. Other than translation, there are five key issues about language technical communicators should consider:

   - **The target language**—language is the key tool for how individuals express themselves and how they come to know and understand the world around them. For technical writers, then, it is important to understand as much about a target language as possible, because understanding that language provides understanding of the target audience. Similarly, understanding other languages helps writers understand more about their own language. Collaborating with a translator is one of the best ways to learn more about a language. Other resources are introductory language textbooks (like a first-year Spanish, French, of Japanese textbook) and audio lessons that teach languages (like Russian or Chinese on cd or mp3).

   - **Official national languages**—many countries identify their official languages. Resources like IMB’s *National Language Support Reference* identify official and non-official

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22 Ibid.
languages. In many countries, numerous languages and dialects are commonly used, officially and unofficially. For instance, Singapore identifies four official languages: Chinese, Malay, Tamil, and English. It is important to be aware of a country’s official language for legal reasons, as many laws require documentation be presented in that official language. Also, knowing a country’s official language can reduce the numbers of languages into which a document must be translated.

*International English*—for many years English speakers could assume—or even require—that the business they conducted internationally would be conducted in English. English was considered the language of international business. International English appears in many dialects, but works toward a standardized approach for the language. International English works to develop a single English to be used in all transnational communicative moments. However, we can no longer anticipate International English as the language that drives world commerce. For instance, less than 5% of the Japanese population speaks English. While English is certainly used with great frequency throughout the global business world, it has become more common—and perhaps more appropriate—for transnational communication to occur in the local language of one of the organizations involved in the exchange of information.

*Text Directionality*—while U.S. writers are used to writing left to right and thinking of a document as beginning in the top left of a document and proceeding across a page and then down, some languages do not follow this directional path. Text directionality is not universal. Arabic and Hebrew, for instance are written and read right to left, so documents like manuals and books are designed to open right to left. Some forms of Japanese used in marketing are read in columns from right to left instead of vertically. Text directionality can alter the original document design when a document is converted from one language to another.

*Writing style*—like any other facet of writing, writing styles vary country to country, culture to culture. American English, for instance, tends to be more repetitive than does French. It is often a good idea to work with the translator to translate documentation into more appropriate target country writing styles while maintaining accuracy in information dissemination.23

2. *Technology*
The first issue to consider regarding technology is whether the target country has access to the same technology you are working in. For instance, software developers need to know if their applications can be used on existing technology platforms in the target country or if they need to adjust the software to meet local needs—or if they need to create a shift in the industry to make the technology that supports their software the standard in that country. To understand the technological culture of a target country, you should first identify commonly used technologies as well as the reliability of the technology.

23 Ibid
Machine Translation: One way technology is employed to help overcome differences is through the use of Machine Translation software, which automatically translates documents into different languages. However, machine translation programs are limited in their capabilities. Because they work using formulaic translation schemes, machine translation programs rely on writers using restrictive grammars. Many technical communicators who work in transnational communication have worked to develop standardized, often restrictive, grammars, called Controlled English. These forms of English grammar are designed to aid in automatic translation programs. It has not been proven yet, however, whether or not restrictive grammars benefit transnational readers or not. Think of controlled English as a rule-bound English that does not allow writers many options in how to convey information. That is, restrictive grammars limits what can be said and how it can be said. One primary objective of using machine translation is to reduce the amount of editing needed for the translated language. This goal has not been reached. Machine translation software is expensive and beyond the budgets of most companies, so few companies use it.24

3. Education
Understanding a target country’s approaches to education greatly influences how technical writers write documents. Education systems and approaches vary greatly country to country. Three facets of education should be considered when learning about a target country:

Literacy: literacy is calculated differently country to country and many countries inflate their announced literacy rates. But, having a sense of a country’s literacy rates can influence how a writer approaches documentation. There are a number of on-line resources that present international literacy rates, including the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and Brigham Young University’s Culturgrams.

Common body of knowledge—knowing what most people in a country know can be useful information. If research into literacy rates reveals that most people in the target country have, say, at least seven years of education, it would be valuable to learn what people with seven years of education in that country are expected to know. Good research sources for locating this information are professors of education and education professional journals. A writer should also check to see what information is available through the target country’s official national-level educational body (in the U.S., this would be the U.S. Department of Education).

Learning style—identifying a target country’s learning style can be difficult to research and identify. But, identifying how people are taught to learn can shed a good deal of insight on how to write technical documentation, especially for documentation that includes instructional material like tutorials, manuals, or technical instructions. Explore the methods of education, the role of teachers and technology, and the role of

24 Ibid
apprenticeships and mentoring, and the role of credentials and degrees in different learning styles.\(^{25}\)

4. **Politics and Law**
All target audiences are influenced by the laws and governments of their countries. When writing for transnational audiences, writers should examine the differences and similarities between the legal and governmental influences on the writer and those on the target audience. This includes considering how one’s company must account for

*trade issues* like import/export practices

*legal issues* like laws regarding copyright, trademark, intellectual property rights, liability, and fraud standards

*political traditions* and symbolism like forms of government, voting rights, politically significant dates (think about the fact that most American companies are closed on July 4), flags (be sure to understand the color significance and symbolism of a country’s flag as well as cultural conduct for respecting that flag), national documents, national symbols

When researching these kinds of differences, it is a good idea to check not only with international legal and political experts, but to see if any professional organizations have developed standards lists that might provide some of the information you already need.\(^{26}\)

5. **Economics**
Accounting for economic differences and similarities are not only an important part of understanding transnational cultures, it is also central to effective transnational business practices. Along with understanding the basics of currency value and exchange rates when dealing with transnational audiences, it is also important to understand how they assign monetary value to products and services. For instance, in February, 2008, a businessman from the United Arab Emirates purchased a vanity license plate for $14 million. In many countries that would be considered excessive; in others it may be taken as a sign of status, conveying important information about the owner of that vehicle. Such differences underscore the ways economic values fluctuate from one culture to the next. One way to document such differences is to create a comparative chart that examines the costs of common items (grocery items, real estate, technology, etc.) and the relative value they have in different cultures, taking into consideration who has access to those items and what owning them says about that consumer’s role in the culture.\(^{27}\)

6. **Society**
In most countries one can distinguish differences in various facets of an individual’s life. For instance, how one functions in the workplace may be very different from how one functions in

\(^{25}\) Ibid.
\(^{26}\) Ibid.
\(^{27}\) Ibid.
family settings. When investigating social factors, it is important to account for business and family components separately, but to understand that they both contribute to a more encompassing cultural atmosphere. Some of the factors you should be attentive to include:

- **Age**—understanding a culture’s attitude toward age can provide a better understanding of some business practices and shed light on other cultural attitudes like those toward education.

- **Business etiquette**—understanding how various cultures approach business etiquette can enhance the ability to interact with transnational audiences as well as members of one’s home organization that have different cultural backgrounds. Business etiquette practices vary not only culture to culture, but industry to industry as well.

- **Family and social interaction**—understanding these influences can be difficult because they account for such a broad and indefinable portion of culture. Many factors contribute to a culture’s perspective on family and social interaction. Considering the roles of marriage, funerals, and birth ceremonies, for instance, can give an insight into how a particular culture envisions family life.²⁸

7. **Religion**
In many countries, religion plays a significant role in all aspects of cultural life, including government and law. When working to better understand a transnational audience, it is important to examine the religions indigenous to the various target countries. Most religions can be studied through books and on-line research. It is a good idea to understand which religions are prevalent in a target country and understand the basic tenets of those religions. Be sure to understand the significance of a religion’s symbols and colors. Reproducing some religious images is offensive. Keep in mind that many religions also influence dietary habits. For instance, in some religions eating pork is forbidden and in others eating lamb or fish on particular days is customary. It is important to respect another culture’s religious practices, though a technical writer should not feel compelled to sacrifice his or her own beliefs in the process.²⁹

**Visual Literacy**
As components of visual rhetoric and design become more central to technical communication, so too must technical communicators account for transnational components of visual literacies. If documents need to reach culturally diverse or multi-national audiences, the meaning conveyed through visuals will be subject to various cultural contexts. Cultures, communities, and nations interpret visuals in different ways, and it is the writer’s responsibility to understand how visuals will be perceived and how visuals effectively communicate information across cultures. Visuals, like words, can mean different things to different national and cultural audiences. For instance, in the United States an image of an owl might symbolize wisdom; however, in parts of Central and South America, an owl might represent the blackness of night, implying death, black magic, or witchcraft.

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²⁸ Ibid.
²⁹ Ibid.

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Familiar Examples: Large numbers of visuals, particularly icons, have been proven successful in international documents. It can be more efficient to locate field-specific icons that have already been established than to try to create new icons. For example, the symbol for accessibility shown here is already understood in many countries and cultures. Many on-line resources and databases provide familiar transnational icons and visuals.

Direction: Not all languages read left to right, and not all individuals read. This visual, for example, was placed in South African mines to explain to miners who could not read that they should remove fallen rocks from the tracks. However, because the miners were not used to reading, they were not familiar with a left-to-right logic. As a result, many miners read the visuals from right to left and understood that they should place rocks on the track. Whenever possible, visuals should be sequenced from top to bottom, and arrows may be used to direct readers through a sequence.30

Moderation: Because different cultures respond to formality and informality differently, it is better to strive for moderation so that documents do not offend those at either end of the spectrum.

Multiple Examples: Often, multiple visuals can clarify information for multiple audiences better than just one visual, as the example to the left depicts.31

Symbols: Writers who use religious symbols risk offending. From 1996 to 2004, the web page askjeeves.com (now simply ask.com) used a cartoon version of a butler as its logo. But when the company began to develop the web site for Asian audiences, it was noted Asian audiences were not likely to be familiar with either what a butler stereotypically looks like or the cultural position of a butler and, thus, not understand the implied

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meaning of the logo. One suggestion was to replace the Jeeves butler with an image of a monk—another figure one might ask for answers. However, research showed that such a depiction would be considered offensive to several cultures.

Because body language and gestures are culturally defined, writers face similar risks when using images of people or gestures; those images may not be interpreted as you intended. For example, in the United States, this hand gesture icon might be used to indicate correctness or that something is OK; however, in France this gesture or icon would likely be interpreted to mean zero or that something is worthless.

**Color:** Color choice in visuals can be a crucial element of design and of information conveyance. However, meanings of colors are applied and interpreted differently in different international and cultural contexts. Color interpretation can occur as surface traits—like the use of the color red in the United States to indicate stop or danger—or can occur unconsciously—like the use of calming colors in U.S. hospitals. Color interpretation can also be influenced by a reader’s

*Age*—In the U.S. children tend to prefer brighter colors, while adults prefer muted colors.

*Class*—Marketing research in the U.S. has shown that working class readers often associate with colors that are easily named, like red, blue, white, etc. Audiences with greater degrees of education prefer more nuanced and obscure colors like azure, mauve, chartreuse, etc. This accounts for why many businesses adopt primary colors in their logo designs (i.e K-mart’s red K, Walmart’s Blue lettering).

*Gender*—Like other cultural markers, gender influences can effect color interpretation. For example, Western cultures often associate pink as a feminine color and blue as a male color. Likewise, in many Western cultures men are more apt to be attracted to cooler colors while women are attracted by warmer colors.

While a guidebook approach cannot provide an accurate account of cultural difference, research has confirmed some common color interpretations:
Red
China: Good luck, celebration, summoning
Cherokees: Success, triumph
India: Purity
South Africa: Color of mourning
Russia: Bolsheviks and Communism
Eastern: Worn by brides
Western: Excitement, danger, love, passion, stop, Christmas (with green)

Orange
Ireland: Religious (Protestants)
Western: Halloween (with black), creativity, autumn

Yellow
China: Nourishing
Egypt: Color of mourning
Japan: Courage
India: Merchants
Western: Hope, hazards, coward

Green
China: Green hats indicate a man's wife is cheating on him, exorcism
India: Islam
Ireland: Symbol of the entire country
Western: Spring, new birth, go, Saint Patrick's Day, Christmas (with red)

Blue
Cherokees: Defeat, trouble
Iran: Color of heaven and spirituality
Western: Depression, sadness, conservative, corporate, "something blue" bridal tradition

Purple
Thailand: Color of mourning (widows)
Western: Royalty

White
Japan: White carnation symbolizes death
Eastern: Funerals
Western: Brides, angels, good guys, hospitals, doctors, peace (white dove)

Black
China: Color for young boys
Western: Funerals, death, Halloween (with orange), bad guys, rebellion

Sound
Like visuals, sounds can mean different things to different people. Because multimedia documents often include sound, writers should account for cultural differences in sound interpretation. For example, in the United States readers are comfortable with a computer beeping to indicate an error; however, in Japan the same sound is considered embarrassing because it calls attention to a mistake.

Internet
In the early to 1990s, as the Internet became more widely used publically, many technology and language scholars prophesized that the Internet would strengthen the use of English as an international language. However, current research shows that while English is the most widely-used language on the Internet, it has not achieved the linguistic dominance once prophesized. David Block, Senior Lecturer at the Institute of Education, London University, explains, “although it is the case that English had a head start in Internet use over other languages, it is also the case that the Internet has made it possible for other languages, both ‘big’ (e.g. German, French, Japanese, and Spanish) and small (e.g. Catalan), not only to survive but to increase their numbers of users.”

Block reports the findings of two independent research efforts to identify Internet use by various ethnic groups within the U.S. This research shows that in the U.S. white Americans account for roughly 90% of Internet users, while recent census information indicates that they represent just over 70% of the total population. Meanwhile, Spanish-speaking Latinos, who now make up about 15% of the total population, account for 7.2% of Internet users and African Americans, now 14% of the total population, are 7.4% of Internet users. However, the ethnic group reporting most Internet use per capita is that composed of English speaking Asians. Research carried out as part of the Pew Internet and American Life Project found that almost 75% of this group have gone online at sometime in their lives compared to 58% of white adults, 50% of Spanish-speaking Latino adults, and 43% of African-American adults. Asian Americans are also leaders as regards intensity of use, with 70% of them normally going online each day.

32 http://webdesign.about.com/od/color/a/bl_colorculture.htm
34 Ibid.
A 2009 study conducted by Internet World States also shows the wide use of languages other than English on the Internet. The study provides data regarding numbers of various language users on the Internet:\(^5\)

**Top 10 Languages in the Internet**  
**millions of users**

<table>
<thead>
<tr>
<th>Language</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>478</td>
</tr>
<tr>
<td>Chinese</td>
<td>384</td>
</tr>
<tr>
<td>Spanish</td>
<td>137</td>
</tr>
<tr>
<td>Japanese</td>
<td>96</td>
</tr>
<tr>
<td>French</td>
<td>76</td>
</tr>
<tr>
<td>Portuguese</td>
<td>73</td>
</tr>
<tr>
<td>German</td>
<td>65</td>
</tr>
<tr>
<td>Arabic</td>
<td>50</td>
</tr>
<tr>
<td>Russia</td>
<td>45</td>
</tr>
<tr>
<td>Korean</td>
<td>37</td>
</tr>
<tr>
<td><strong>All the rest</strong></td>
<td><strong>298</strong></td>
</tr>
</tbody>
</table>

Despite early assumptions regarding the spread of English as an international language via the Internet, research like Block’s and the IWS’s clearly show that transmission and circulation of technical documentation via the Internet requires an acute awareness of transnational communication strategies. It should be noted, too, that the IWS chart conflates language and nationality in this chart, identifying a given language (like English) and then representing it visually with a national flag (like England’s). Such confluations fail to recognize the diversity of language use within and outside of national borders. While linguistic differences must be accounted for accounting for international differences, they are not the same thing. For example, the IWS chart visually identifies France’s flag alongside the French language; however, other forms of French, like those spoken in regions in Canada, also contribute to the numbers of French speakers on the internet.

\(^5\) http://www.internetworldstats.com/stats7.htm
Two factors become central in considering Internet use and technical communication:

**XML**
Extensible Markup Language (XML) is a flexible text format used to create computer-based documents. It is designed to be compatible with both HTML and SGML documents, but unlike both HTML and SGML, XML is not limited to use in web documents. In other words, XML is the next generation markup language used to present digital-based documents. XML is closely aligned with internationalization and transnational communication in that XML assists in providing information for global consumption. XML allows for web documentation to be more efficiently and expressly localized. As Sander van Zoest has explained it,

By the means of XML, one can abstract the design, layout and business logic from the content. This process conveniently provides a layer to dynamically transform or to provide localized versions of the content. Specifying the language of the content provides the ability to distinguish and extract the content to provide automated or systematic translations of the elements in the native tongue when the default language does not match the one of the consumer. Combining the language with the country provides the ability for an even more localized version of the text in the particular countries dialect of the desired language. Without the standardized abstraction provided by XML most software developers would have to develop their own abstraction layers or potentially alter the source code itself to generate the content for each locale.36

Because XML documents separate content from format, XML is proving to be useful for transnational documents because it simplifies translation processes and makes content more readily accessible across on-line platforms. XML, for technical communication purposes, provides a more efficient coding language when on-line documentation is to be distributed transnationally. Thus, technical communications curricula which include web documents or other on-line documents, need to consider a move away from HTML coding in favor of XML.

**Search Engine Optimization**
Search Engine Optimization (SEO) is the process of improving the likelihood of a web page being located by search engines, ranked highly in its findings, and visited by more readers. Given the importance of information distribution via the World Wide Web, SEO techniques must become a predominant genre of technical communication curricula. Inherent within effective SEO is the need to be attentive to how SEO interacts with transnational concerns. In addition to standard SEO strategies, web writers wishing to extend their web site’s presence transnationally, should also consider:

Domains: Web sites that target transnational audiences should have a Top Level Domain (TLD) for each target country. TLDs are the country code tag portion of a URL. For example URLs registered in Japan are indicated by .jp, URLs registered in the United Kingdom are indicated by .uk, and URLs registered in Mexico are identified by the tag .mx. Acquiring country specific TLDs may be difficult in some instances as some countries—Germany, for example—mandate that a company must have a physical office in the country in order to be granted a country code TLD.37

Content: Localization of web content for different audiences can be central to how search engines operate for culturally-diverse users. It is more efficient to localize web content to a variety of target audiences than it is to hope a single content approach will reach all potential readers. Creating multiple versions of web content, each directed at a specific target audience, and directing readers to the appropriate versions is useful for readers, but it also increases the likelihood that search engines operating in languages other than English will locate the web page.

Searchengineland.com, a news and information site that provides content regarding search engines and search engine marketing strategies, provides this “infographic” to illustrate strategies for addressing international SEO approaches:38

37 http://searchenginewatch.com/3632897
38 http://searchengineland.com/search-illustrated-international-seo-tips-13834
International SEO Tips

There are a few things you can do to help users outside your country find your information better.

1. Identify the language with the Meta tag
   
   `<META Name="Language" Content="FR">
   French`

2. Use domain extensions of the country.

   - .fr France
   - .co.uk UK
   - .cn China

3. Provide content using the native language.

4. Include addresses within the country.

5. Increase inbound links from sites of the same country.

6. For similar languages, be sure to spell words accordingly.

7. Host the site in the country if possible.

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Conclusion: Recommendations for Technical Communication Curricula

Transnational and transcultural technical communication needs to become a core part of all college-level technical communication curricula. Failure to acknowledge and emphasize the changing face of technical communication is a disservice to students and fails to acknowledge the realities of the workplace and rhetorical situations in which they will necessarily have to communicate beyond—and in many instances, within—their academic careers. Full recognition of the changes to technical communication from a global perspective requires more than a cursory acknowledgement of transnational and transcultural awareness as a minor subset of audience awareness. Curricula must be developed that forefront the importance of transnational communication alongside other commonplace approaches to technical writing such as ethics, technology, design, visual rhetoric, and usability.