

Translation for Social Justice and Inclusivity in Technical and Professional Communication: An Integrative Literature Review

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Abstract: Despite growing interests in translating for global reach within technical and professional communication (TPC), no cohesive literature review accounts for this new growth. This article provides an integrative literature review of translation scholarship that emphasizes collaboration with multilingual, multicultural communities when designing global technical communication. Drawing on grounded theory and content analysis, the authors reviewed translation scholarship published in five major TPC journals between 1990 and May 2022. We argue that TPC researchers and practitioners need to adopt more justice-driven research frameworks to better understand the complexities of translation for culturally localized usability, especially in multilingual, multicultural global contexts.

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Introduction

Technical and professional communication (TPC) and translation have an inherent relationship because both professions have the same primary goal—communication for a specific purpose. Both technical communicators and translators share many of the same competencies, including intercultural awareness (Ping, 2012), knowledge of cultural and professional contexts (Melton, 2008), and the ability to incorporate logical and creative perspectives in text production (Dam-Jensen & Heine, 2013). While designing and translating a text, the two professions can greatly benefit from one another if they share basic knowledge about their needs, expectations, and procedures (Cleary et al., 2015). Though both fields are mutually interrelated, they approach text production in different ways.

While translation begins with a document in one language and ends with a document bearing the same meaning in another, technical communication entails creating a document from scratch in a single language (Minacori & Veisblat, 2010). Some early translation research assumed that simply replacing one word in one language with another equivalent in meaning would adapt content to meet the needs of international audiences (Boiarsky, 1993; Doumont, 2002; Minacori & Veisblat, 2010; Thatcher, 1999; Thrush, 1993; & Weiss, 1997). Similarly, early technical communication research assumed that technical communicators could neutrally communicate complex information for general audiences without having any impact on the result (Jones, 2016). Technical communication is neither neutral nor objective; it is political and imbued with values (Haas, 2012; Jones & Williams, 2018; Miller, 1979). Likewise, translating today is a multifaceted process, involving a variety of innovative procedures, collaborative networks, and highly technological environments (Maylath et al., 2015). Thus, translation should not be limited to a traditional and functionalist approach to producing a communicative message in another language; rather, it should be understood as a socially and historically situated act—hence it is political (Yajima & Toyosaki, 2015).

The concept of translation can be viewed from different perspectives since the same word is used for the act and the final product. As a model, translation serves to better understand “multilingual realities of societies, individuals, and texts” (Israel, 2021, p. 125). As a process, translation occurs in a variety of settings, including industry, academia, and community environments (Köksal & Yürük, 2020). As a collaborative activity (Moustén et al., 2010), translation involves the translator acting as a negotiator, mediator, and even an advocate for shifting power toward those who have traditionally been excluded from decision making. This is similar to how the role of technical communicator was originally defined, and how it is now focused toward addressing concerns of social justice and equity through research, pedagogy, and practice (Jones, 2016).

Translating, when oriented toward this vision of social justice and equity, is not only iterative and creative, but also culturally and locally situated (Gambier, 2016). In this sense, translation is a cross-cultural activity that involves encouraging and supporting social justice, equity, and diversity. To achieve this goal, translators need to recognize that the traditional conceptualization of translation does not fully capture its complexity and contextuality when working with multicultural, multilingual communities in global contexts.

Recent TPC scholarship has also highlighted the importance and necessity of making information more meaningful and accessible to those who do not speak English, particularly in the contemporary multicultural, multilingual context (Batova, 2013, 2018; Gonzales & Turner, 2017; Walton et al., 2015). While TPC as a field recognizes the value of globalization and the importance of translation in strengthening global outreach (Gonzales, 2022), translators' roles, expertise, and experiences should be emphasized further in TPC scholarship to support underserved and underrepresented communities. For these reasons, TPC scholars have increasingly viewed translation in connection with localization and user empowerment, rather than simply replacing a text in a source language with a text in a target language with equivalent meaning. For instance, Gonzales and Zantjer (2015) observed translation as a user-localization process, arguing that “culturally-sensitive, global-ready translated content needs to be iterative, sequenced, and responsive to effectively localize meaning across languages” (p. 281). Batova and Clark (2015) viewed translation in relation to the practice of localizing content for a specific culture. We see translation as a moment or an opportunity to acknowledge the varied realities of our communicative environments (Pihlaja & Durá, 2020). Broadly speaking, translation is not only word-for-word replacement process (Batova & Clark, 2015; Gonzales, 2022; Walton et al., 2015), but also an intellectual activity or practice to localize materials to empower users in different cultural contexts, including those in underdeveloped, underserved countries. Considering translation in connection with localization practices for user empowerment, TPC practitioners/translation researchers observe translation as a “culturally-situated, rhetorical activity” (Gonzales, 2018, p. 81), an activity that can be “performed in a justice-oriented manner” (Yajima & Toyosaki, 2015, p. 99).

Despite ongoing discussions about translation and diversity in TPC, our field needs an integrative literature review to better understand the goals and approaches employed in translation research. Surprisingly, no such research has been carried out to examine how social justice approaches to translation benefit technical communication research, practice, and pedagogy. An integrative literature review seeks to bring together representative literature on a topic in order to generate new frameworks and perspectives on the topic (Torraco, 2016). Due to a lack of synthesis in research, reviewing emerging topics that generate new information and a volume of literature on the topic under consideration becomes a challenging enterprise (Torraco, 2016). Because such a review is performed to “make a significant, value-added contribution to new thinking in the field” (Torraco, 2005, p. 358), our study aims to achieve this by holistically understanding:

- a) translation practices that empower multilingual users rather than subject them to existing practices;
- b) social justice approaches to localized translation; and
- c) the extent to which translation research has been conducted for social activism aimed at promoting an inclusive, just future.

Understanding the localized practices of multilingual users can strengthen our commitment to social justice and equity. With the field's current cultural and social justice shifts, we believe it is time to examine how TPC scholars and practitioners approach translation, so that we can

critically reflect on how translation contributes to culturally localized user practices. To this end, our integrative literature review of translation was guided by the following research questions:

- What can multilingual, multicultural communities' translation practices teach technical communicators about the connections between language, power, and positionality?
- What does it mean to translate with multilingual, multicultural communities in the design of global technical communication projects?

To answer these questions, we performed an integrative literature review of translation research in five major TPC journals. As discussed in detail later, our data set consists of 68 (N=68) peer-reviewed journal articles published over the last 30 years (1990-2022). Using grounded theory (Corbin & Strauss, 2015; Urquhart, 2013) and content analysis (Huckin, 2004; Krippendorff, 2019) as research techniques, we analyzed the representative data set to identify emergent and recurring themes by unitizing (segmenting the text for analysis), sampling (selecting an appropriate collection of texts to analyze), and validating (using the consistent coding scheme) the data corpus (Boettger & Palmer, 2010). To provide some background, we begin with a brief overview of translation within TPC and translation studies.

Brief Overview of Translation

Despite efforts to recognize that technical communication involves translation-related skills or practices (Melton, 2008; Weiss, 1997), translation is still largely ignored both in the literature and training of technical communicators (Maylath et al., 2015). While it is beyond the scope of this article to document factors that influenced the evolution of translation and translation research in TPC, this section highlights key aspects to demonstrate how translation has historically developed in parallel and overlapping ways with TPC.

Throughout technical communication history, various theories have surrounded translation, providing insight into how, when, and where translation has been used. Though both fields existed as far back as we know, they especially emerged following World War II. Technical communication emerged much earlier in the United States whereas translation existed in France prior to technical communication (Minacori & Veisblat, 2010). Because translation takes place only after a document is written, determining which came first is a chicken-and-egg situation. Based on our observations of the technical translation and technical communication professions, we can say that translation as a workplace practice in the United States arose from early 1900s' efficiency management structures and efforts to respond to cultural differences for documentation markets.

In the 1990s, international trade expanded dramatically due to the ratification of trade agreements such as the North American Free Trade Agreement (NAFTA) in 1994, the establishment of the World Trade Organization (WTO) in 1995 following the renegotiation of the General Agreement on Tariffs and Trade (GATT) Treaty, and the EU's subsequent enlargement (Gnecchi et al., 2008). Consequently, the volume of technical documentation associated with traded products sharply increased, as did the demand for translation and technical communication in the 90s. In North America, the translator's role evolved to include activities

previously performed by technical writers, whereas many European translators entered the TPC field at the turn of the century (Gnecchi et al., 2008). Just as in technical communication, translating in North America and Europe involved several agents with different roles, responsibilities, skills, and abilities. It is worth noting that while this is the history of Western translation, translators have been present for a long time in other cultures, such as Indigenous communities.

Recent research also reveals that the fields of translation and technical communication are converging as practitioners initially trained in one field are trained in the other to serve both ends of the documentation market (Gnecchi et al. 2011; Minacori & Veisblat, 2010). The growing convergence of the two professions, particularly in the domain of TPC, necessitates the ability of a translator to integrate cultural factors such as socio-economic circumstances, belief systems, norms, and values into the translated for localized usability, which is associated with meeting users' needs and expectations in the context of use (Acharya, 2022). In short, the relationship and overlap between translation and technical communication has received increasing attention, aiming to serve as many diverse settings and audiences as possible in today's globalized communities.

Because TPC as a field recognized the value of globalization and the role translation plays in fostering global reach (Gonzales, 2022), expanding global access to product information necessitated making that information available in languages other than the original language—in most cases, English (Minacori & Veisblat, 2010), leading to a better understanding of the challenges of information transfer across cultural boundaries. Translators and (international) technical communicators served as mediators by employing a variety of communication channels to meet users' needs across those boundaries. Also, transforming information from the source language into the target language entailed adopting effective approaches. To address these concerns, scholars who adopted a functionalist or communicative approach attempted to avoid the problems of previous approaches such as formal equivalence (i.e., word-for-word or literal translation) and dynamic equivalence (i.e., sense-for-sense translation) (Nida & Taber, 2003). In adopting the communicative approach, the elements of text type, purpose, and communicative situation, also known as rhetorical situation, were highlighted. In fact, translation was viewed as a recreation of the document for a culturally localized new context (Doumont, 2002; Melton, 2008).

Discussions about translation in TPC as a field have also emphasized the need for designing technical products or tools—such as application interfaces, websites, software, online help systems, and print or online documentation—through the lens of localization (Moustien et al., 2010; St. Germaine-McDaniel, 2010); thus, the relevance of translation and technical communication has inherent support. Though translation has long been viewed as an operation that starts with a document in one language and ends with a document with the same meaning in another language (Minacori & Veisblat, 2010), recent translation scholarship in TPC moves toward approaching translation practices in ways that promote social justice and inclusion (Gonzales et al., 2022; Yajima & Toyosaki, 2015). We initiated this integrative literature review acknowledging this new direction in reframing translation work for fostering social justice and diversity.

Methodology

As demonstrated by our introduction and brief overview, translation has been discussed as an important skill, especially as TPC expands globally. Therefore, in this research we ask two central questions: What can multilingual, multicultural communities' translation practices teach technical communicators about the connections between language, power, and positionality? What does it mean to translate with multilingual, multicultural communities in the design of global technical communication projects? In designing this research, we acknowledged that these types of questions need to be addressed in order to enrich our field by engaging in multicultural, multilingual research through "decolonial perspectives that foster reciprocity and push toward social justice" in underrepresented, marginalized communities (Gonzales, 2022, p. 2). To address our central questions, we used Toracco's (2005, 2016) work to shape our analysis. In organizing and locating emerging themes in our representative samples, we used grounded theory (Corbin & Strauss, 2015; Urquhart, 2013) and content analysis as a research technique (Huckin, 2004; Krippendorff, 2019). We collected articles using a broad set of keywords followed by in-depth readings to see which articles dealt with translation.

Sample

To gather a representative data set, we identified the date range 1990 to 2022 (May) and examined sample publications in five major TPC journals.

- *IEEE Transactions on Professional Communication (IEEE)*
- *Journal of Business and Technical Communication (JBTC)*
- *Journal of Technical Writing and Communication (JTWc)*
- *Technical Communication (TC)*
- *Technical Communication Quarterly (TCQ)*

We selected these journals based on previous research practices demonstrated by TPC researchers and practitioners (refer, for example, to Boettger & Lam, 2013; Melonçon & St. Amant, 2018). As we know, academic journals are "the markers of disciplines' knowledge creation and perpetuation" (Boettger & Palmer, 2010) as well as a core source for scholarship in the TPC field (Melonçon & St. Amant, 2018).

We searched the titles, abstracts, keyword lists (including metadata—if the database contained such information) of articles in each publication. In order to broadly capture translation scholarship in TPC, each publication issue was carefully examined, focusing on keyword categories to gain the best possible results. We used the keywords "translation and/in technical communication," "translation and usability," "translation in the international context," "translation and social justice," and "localization and translation." We also included slight variations of these terms, such as "technical writers and translators," "translation for user empowerment," and "translation across borders." Since this study focused specifically on translation scholarship in TPC, we only selected articles that were related directly to translation in a substantive way. In other words, only full-length articles reporting original research papers

(i.e., no commentaries, book reviews, etc.) in the five identified journals during the stipulated time frame were included in our compiled data set. While we acknowledge that TPC-related translation scholarship is published outside of the journals selected, we believe that the identified journals collectively provide a broad and substantive view of translation in TPC. Also, we needed “logical parameters to set boundaries for the study” (Melonçon & St.Amant, 2018, p. 132); otherwise, data sets would still be searched, coded, and analyzed.

From our initial search, we assembled 82 articles as potential sources. We collected data in a cloud-based spreadsheet which we could both access. The spreadsheet had 11 broad headings: year of publication, article author's name, title of the article, journal volume and issue, purpose of the article, research question(s), research method/methodology, argument, open coding, selective coding, and axial coding. In refining the larger set of articles to determine their relevance to translation scholarship in TPC, we evaluated each article as a data source iteratively evaluated to further narrow the sample. This resulted in a study size of 68 (N=68) articles for discussion and analysis.

Data Coding Process

Informed by content analysis (Huckin, 2004; Krippendorff, 2019), we evaluated the representative data corpus for emergent and recurring themes by unitizing (segmenting the text for analysis), sampling (selecting an appropriate collection of texts to analyze), and validating (using the consistent coding scheme) the data set (Boettger & Palmer, 2010). We read the abstracts of the larger data set (N=82) to determine the most salient category of the research in each article. Following the coding of each article, we discussed whether an article would be retained in this data based on the study's topic and the approach used to investigate that topic. After we agreed on the data set (N=68) and our focused research questions, a more in-depth analysis was performed using our coding schema. To standardize our coding process, we created starter codes and tested them on a small portion of the work.

Based on grounded theory (Corbin & Strauss, 2015; Urquhart, 2013), we refined our codes and analyzed our sample, emphasizing patterns and connections over linear inferences. For example, in testing our original codes, we discovered that document translation and localization were frequently used interchangeably, and that to better understand the importance of and need for translation-focused research in TPC, we needed to code more broadly to capture the purpose of conducting such research in the global context.

Adopting Urquhart's (2013) coding procedure, we implemented the stages of open, axial, and selective coding. While open coding allowed us to identify concepts and themes for categorization, axial coding enabled us to engage in continuation analysis, cross referencing, and refining theme categorization generated during the first cycle of coding. We kept our research questions in mind at this point of our analysis. Since both authors represent multilingual, multicultural minorities and had limited background in translation research and scholarship, we also asked questions about our data during open coding: What is the purpose of the article? What data do we have? What does the data suggest? What are the authors telling us? What arguments did they make about translation? How did authors approach their translation process? What were

the concerns of the authors? This process of open coding provided us a moment to think critically on our data.

While reflecting on the data, we selected ideas we thought represented the notions and constructs about translation. We started to tag, define, and describe ideas in the purpose and argument sections of the articles we gathered. After the open code process of tagging, labeling, and making sense of the data, we moved quickly to the second stage of analysis to reduce our data further. Here, we “refined, developed, and related or interconnected” (Gibbs, 2018, p. 72) ideas about translation. Using selective coding, we integrated categories derived from axial coding into cohesive and meaningful expressions. Table 1 demonstrates how we coded the data corpus and Table 2 shows theme categories we generated, including examples of how we defined them and how they showed up in the data.

Purpose of article	Argument	Open coding	Axial coding	Selective coding
In this article, we document how our team of translators, interpreters, technical communicators, and health justice workers is collaborating to (re)design COVID-19-related technical documentation for and with Indigenous language speakers in Gainesville, FL, USA; Oaxaca de Juarez, Mexico; and Quetzaltenango, Guatemala. (Gonzales et al., 2022)	Through collaborations with Indigenous language speakers, translators, and interpreters, social/health justice projects in technical communication can be combined, localized, and adapted to better serve and represent the diversity of people, languages, and cultures that continue to increase in our world. illustrates how Western approaches to creating technical documentation, particularly in health-related contexts such as the COVID-19 pandemic, put communities at risk by failing to localize health messaging for Indigenous audiences.	team of translators collaborate with . . . to produce documents indigenous language speakers localized approaches to better serve and represent communities	collaborative practices working with and/or for indigenous languages localizing technical materials	collaboration language-centric indigenous localization

Table 1: Examples of coding process.

Collaboration	Multilingual/immigrant concerns	Language-centric	Nature of translation
working with/for	indigenous	language transformation	translation as localization
collaborative research	multilingual TPC		
collaboration between	immigrants	bridging language barriers	translation as process
community strategy work	multilingual documents	assessing written documents for clarity	translation as framework
mutual understanding	diversity	document accessibility	translation as politic act
cross-training and engagement	inclusion and exclusion		
	language and land	good translation vs bad translation	translation as rhetorical framework
	cultural differences		translation as skill
holistic process of building relationships	social justice	transferring meaning	translation as democratic practice
participatory translation	empowerment	translation into other languages	
democratic translation	cultural values	transferring meaning	translation as recreating information
relationship building	power, privilege, and positionality	communication failure	translation as process of inclusion and exclusion
negotiation		rhetorical and stylistic preferences	

Table 2: Examples of theme categories derived from the coding procedure.

We did not employ secondary raters because our goal was not to quantify the data, but rather to draw connections between thematic categories focusing on our research questions as broad organizational categories for the themes. While we recognize that this might be a flaw, adding more raters does not guarantee reliability or validity (Armstrong et al., 1997).

Results and Discussion

In this section, we provide an overview of five major results that we gathered from the review of literature. Before we dive deeper into the overview of our findings, we make these general claims about the nature, scope, and definition of translation as it relates to social justice:

1. Translation is a rhetorical process which aims to magnify the agency of marginalized or vulnerable populations. For us, issues faced by multilinguals are rhetorical in nature and we can use our skill in rhetoric and language to understand the needs of users and help them solve the problems they encounter.
2. Translation is a complex process which thrives on collaboration between experts and non-experts working together in a mutual environment in hopes to make documents or communication moments meaningful to those who do not speak or understand documents designed by experts or people in authority.

Translation Is A Collaborative Process

What makes translation attractive to technical and professional communication in our quest to fight injustice? The literature on translation sums up the answer in these words: collaboration and community building. In the articles we analyzed, the authors hinted at the fact that translation is either a collaborative process or a community strategy. Others also expressed how translation provided opportunities for collaborative research. In “Redesigning technical documentation about Covid 19,” Gonzales et al. (2022) ask: “how can technical communicators work toward social justice in health through collaborative design with Indigenous language speakers? How can technical documentation about COVID-19 be (re)designed alongside members of vulnerable communities to redress oppressive representations while increasing access and usability?” (p. 34). The literature consistently captures translation as having these values: “working with or for,” “working together,” “working alongside,” and “preparing documents for” indigenous people or vulnerable populations.

This scholarship puts forth that translation is not an isolated practice but a mutual collaboration between experts and non-experts. In most cases, experts use their skill to help non-experts to understand a complex process or a communicative moment which non-English speakers struggled to understand or vice-versa. For example, Gonzales et al. (2022) reported their collaboration with a group of interpreters, translators, technical communicators, and health experts to redesign COVID-19 information for multilinguals across three countries: the United States, Mexico, and Guatemala. Similarly, Rose et al. (2017) detailed how they collaborated with a non-profit agency to design health materials intended to educate immigrant patients on how to sign up for health insurance. For technical communicators, and social justice advocates, “translation moments” (Gonzales, 2018, p. 2)—situations that invite us to use our expertise to help those who need us—provide an exigence to recognize the relevance of collaboration or community building for our practice. Of course, collaboration is not new to technical communication scholarship or practice. Agboka’s (2013) notion of “participatory localization,” Spinuzzi et al.’s (2019) idea of “coworking,” or Johnson’s (1998) concept of user-centered design communicate the need to collaborate with users or non-experts.

In “Coworking Is about Community,” Spinuzzi et al. (2019) openly express community building and collaboration as a central component of technical communication practice (p. 113). Agboka (2013) indicates that design of communication problems should be a process where community members are involved “not as isolated user participation but as user-in-community involvement and participation in the design phase of products” (p. 42). This form of participatory design

values and respects the lived experience and expertise of every community member with the hope of understanding a community's local logics, history, culture, and philosophy. In the articles we analyzed, the authors seem to emphasize the relevance of collaboration or community building, but rarely defined what it meant to collaborate or to form a community for the work of translation or technical communication. This lack of definition for such terms as collaboration or community in our practices is consistent with claims by Spinuzzi et al. (2019) that although collaboration and community are central tenets of co-working, scholars and practitioners fail to define the terms. In more recent years, collaboration and community building in technical communication has been expressed in terms of coalition building, that is, our ability to take collective action to serve people who are marginalized (Walton et al., 2019, p. 21). Translation scholars in our field often work with people who need specific information to negotiate their lived experiences. And in most cases, those who needed help were multilinguals/immigrants or community partners who need to explain technical information to immigrants.

Translation Exists to Protect The Rights Of Multilinguals/Immigrants

Translation for immigrants or with multilinguals is one response to the global flow of people, bodies, concepts, and ideas. Multilinguals or immigrants are mostly at the receiving end of translation. But it does not mean that these multilinguals are merely passive receivers of technical communication and translation expertise. Indeed, they are active co-creators of technical communication translation. Sometimes, they are the translators providing the expertise to technical communicators. We noted, however, that most of the scholarship amplifying the agency of multilinguals targeted Hispanic populations. This is not surprising as the Hispanic population in the United States has seen a significant growth (Passel et al., 2022). Gonzales et al. (2022) used their expertise to design health communication materials for immigrants in the U.S., Guatemala, and Mexico. In another study, Gonzales and Turner (2017) reported their collaboration with the Hispanic center within the Language Services Department in lower Michigan to translate technical documentation. Evia and Patriarca (2012) discussed how they collaborated with Latino construction workers to design safety and risk communication materials for these workers. In the scholarship we have cited, technical communication was used to protect multilinguals' rights to language access (Gonzales, 2022) or safety of construction workers (Evia & Patriarca, 2012).

This notion of working with vulnerable populations to protect their safety or language resonates well with calls made by social justice advocates in TPC (Acharya, 2019; Agboka & Dorpenyo, 2022; Alexander & Walton, 2022; Jones, 2016; Sims, 2022). Specifically, social justice scholars in TPC encourage us to center the needs of marginalized and vulnerable populations (Eble & Haas, 2018; Jones, 2016; Walton et al., 2019) because in a lot of cases, the marginalized and vulnerable people are those who come against oppressive and unjust systems (Rose, 2016; Sims, 2022; Walwema & Carmichael, 2021) or they need information to survive in an oppressive system (Evia & Patriarca, 2012; Rose et al., 2017). Multilinguals are mostly vulnerable because they come from contexts that are both linguistically and culturally different or that they have low levels of literacy (Evia & Patriarca, 2012). Therefore, as technical communicators who profess user advocacy to be the central component of our practice, we must understand that working with

multilinguals to protect their civil rights, language, or safety at the workplace is quintessential. This is how we live our discipline-in-practice.

Translation Is Language-Centered

Traditionally, translation has been narrowly defined as centered on language. In most cases, what we know is that translation aims to change words from one context to another context (Gonzales & Zantjer, 2015). This functionalist definition of translation pervades conversations about translation in the Western hemisphere. Esselink (2000), for instance, defines translation as “the process of converting written text or spoken words to another language. It requires that the full meaning of the source material be accurately rendered into the target language, with special attention paid to cultural nuance and style” (p. 4). In the field of TPC, translation has been used in the same manner. As indicated by Batova and Clark (2015), “Translation is the attempt to duplicate meaning interlingually to produce the same meaning in a different language simply by replacing the words from one language with those of another” (p. 223). The articles we analyzed discussed translation as “a form of written composition” (Eubanks, 1998), a medium for “clarity, careful edit, avoid jargons, and ambiguity” (Datta, 1991), a process of “moving back and forth among languages” (Tuleja, 2011), an attention on “words as referents and as signifying” beyond the translator (Weiss, 1997), or changing the meaning of words from a source discourse community to a target discourse community. Some of the authors also referred to translators as “abstractors” (Koltay, 1997, p. 280) or “meaning makers” (Hovde, 2010, p. 165).

Although language use has been central in the definition of translation, recent technical and professional communicators have called for an expansion of the meaning of translation beyond linguistic differences. This recent shift from a purely linguistic definition stems from the fact that a narrow focus on grammar or linguistic features may pose problems (Batova & Clark, 2015, p. 229) because language is not easily translatable. For instance, while Gonzales and Zantjer (2015) maintained that translation is an “attempt to replicate the meaning of a word from one language to another language” (p. 273), they also encouraged us to see translation as an approach that recognizes individuals’ lived experiences. This means there is the need to focus on attempts made by users to contextualize “words from their heritage languages into English” (p. 273). That is, we need to also pay attention to the rhetorical strategies or non-verbal cues multilinguals use when they attempt to move from one linguistic context to another. Such rhetorical strategies include storytelling, gesturing, scaffolding, acting, deconstructing, negotiating, sketching, and intonation (p. 276). In this regard, Gonzales and Zantjer (2015) conceived of translation as “experience-centric” (281) rather than the functionalist approach that only pays attention to the interplay or exchange of words from one locale to another.

Cultural Forces Shape Translation Efforts

The role culture plays in shaping intercultural communication and localization has been central to conversations in our field (Agboka, 2012; Dorpenyo, 2019; Hunsinger, 2006; Sun, 2006, 2012). Specifically, scholars have argued that culture has been narrowly defined and this affects localization and translation processes (Agboka, 2013; Sun, 2012). The narrow definition exists

because methods used to collect data about culture only capture dominant or large cultural characteristics to the neglect of use activities in a locale (Agboka, 2012; Dorpenyo, 2019).

The consequence of this monolithic approach to capturing culture is “poor user experience” (Sun, 2012, p. 5) because the framework captures culture in abstract terms while also separating culture from use situations in a localization process (Sun, 2012, p. 13). More concerning, the action of users is missing because little effort is put in to study users. In essence, users have not been cast as agents of change. Rather, users have been “constructed as passive consumers . . . with little or no agency to create and re-create . . .” (Agboka, 2013, p. 30). Therefore, previous scholars unanimously call for a definition of localization which emphasizes and centers on the user. Agboka (2013), for example, proposed that we reconfigure localization “as a user-driven approach, in which a user (an individual or the local community) identifies a need and works with the designer or developer to develop a mutually beneficial product that mirrors the sociocultural, economic, linguistic, and legal needs of the user” (p. 44); and the core of Sun’s (2006 & 2012) scholarly works contend that localization should lead to an understanding of use activities in context.

The articles we analyzed reinforce the power of culture in translation and localization processes. The authors do not fail to remind us of the need for translation to meet both linguistic and cultural expectations (Batova & Clark, 2015), or that cultural difference influences translation (Gonzales, 2022). Culture is relevant to writing and orality (Thatcher, 1999); “cultural conventions influence language” (Boiarsky, 1995); “translators are cultural interpreters” (Artemeva, 1998); “cultural values can shape translation” (Weiss, 1997); “cultural factors affect document design” (Thrush, 1993); and the need to “consider effects of local, cultural, educational, political, and economic context” (Ding, 2010). Therefore, we do not dispute the relevance of culture to translation, but we welcome an extended definition that recognizes the interplay between local and global cultures during translation processes.

Translation Helps To Think About Relationships

Translation is relationship-building and not just the interpretation of words. We believe that the conceptualization of translation as relationship-building helps to reconfigure the definition of translation from a narrow focus on language to an articulation of the connections between humans and non-humans and the role each plays in translation moments. The articles we examined encourage us to think beyond words or language to focus on the role the environment, land, weather, and climate plays during translation processes. For instance, Gonzales et al. (2022) stressed the need to focus on the relationship between language, land, and positionality and Shivers-McNair & Diego (2017) emphasized the relationship between translation, technical communication, and design. These forms of relationships are necessary because they attune us to reflect on our positionality, power, and privilege (Walton et al., 2019) in translation moments. More so, scholarship in globalization studies creates a dichotomy between translation and localization. In some instances, localization is placed above translation in the process of globalizing or internationalizing products (Dorpenyo, 2019; Esselink, 2000; Batovia & Clark, 2015). Here are two excerpts from scholarly sources about localization and translation:

To be clear, localization, as I use it here is about the adoption, adaptation, and incorporation of technology to meet local exigence, and not about translation (Gonzales, 2018), because translation has the proclivity to focus on attempts made by users to “replicate the meaning of a word from one language to another” (Gonzales & Zantjer, 2015, p. 273). The implication is that translation, as a form of localization, only pays attention to language use, but localization should be beyond the focus on language. (Dorpenyo, 2019, p. 369)

Translation is the attempt to duplicate meaning interlingually to produce the same meaning in a different language simply by replacing the words from one language with those of another. *Localization*, in contrast, is the attempt to meet both linguistic and cultural expectations by transferring the meaning of technical texts interlingually and intralingually, . . . adapting texts to meet the rhetorical expectations of different cultures. Arguably, no translation can be done without at least some localization (e.g., changing metric measurements to U.S. customary units), but in the translation approach, the goal is to compose a text only once in a way that will serve as many audiences as possible and then to translate that one piece of writing into multiple languages. (Batova & Clark, 2014, p. 3, emphasis in original)

These forms of definitions, we maintain, create needless hierarchy and tension among experts and processes that aim to help users use information to accomplish their goals. Instead of creating hierarchy or tension, we need to see the relationship between translation and localization.

Implications For Research and Practice

Considering the need expressed in the translation literature, one direction the TPC field can take is research focused on the role humans and non-humans play during the translation process. While some scholars have acknowledged the connections between languages, intercultural abilities, collaborations, and technological and thematic awareness needed for effective translation (refer, for example, to Pihlaja & Durá, 2020; Rose, et al.; 2017), others recognize a paradigm shift toward building relationships between language, land, cultural values, and positionality (refer, for example, to Gonzales, 2022). Translation research on these types of relationship building is necessary because they prompt us to consider our power, privilege, and positionality (Walton et al., 2019). We acknowledge that translation is a complex process that thrives on collaboration between experts and non-experts working together in a mutual environment. In building relations with other agents in the process of conducting research on translation, researchers need to pay attention to how multilinguals employ rhetorical strategies, including storytelling, gesturing, negotiating, sketching, and scaffolding, to contextualize meanings (Gonzales, 2018). In this regard, researchers need to focus on how translation as a collaboration process increases access and usability of the translated and thus redress inequities and oppression.

Another direction the TPC field needs to pursue is that of localized translation for redressing injustice and inequality. In reviewing the translation literature over the last 30 years, we noted

that the question of inclusivity and social justice—that is, translation as a process to deconstruct “structural or disciplinary domains of linguistic power” (Walton et al., 2019, p. 123)—in relation to promoting diversity and cultural difference in contemporary global contexts is not well addressed in TPC. Scholars have reported the need for engaging in translation research to better understand translation not only as the process of transforming words from source language to target language, but also as an approach to amplifying the agency of multilinguals or vulnerable populations (Batovia & Clark, 2015; Dorpenyo, 2019; Gonzales, 2022). However, translation research on how cultural differences influence language, how misunderstanding cultural values affects translation, and how, in some instances, localization takes precedence over translation in the process of globalizing technical products is very limited in our field. TPC research on translation as a collaborative process for redressing injustice and systemic oppression in resource-constrained contexts is also scarce in the field.

As TPC goes global, understanding another culture’s localized translation expectations requires practitioners to gather data by considering translation relationships or community building for addressing multilinguals’ concerns associated with injustice and inequity. As argued by Pihlaja & Durá, (2020), knowledge of both source and target languages, intercultural abilities, information-mining skills, and technological and thematic awareness are needed for effective translation. In this sense, understanding the diverse realities of communication spaces is integral to translation practice. Also, translation, as a form of localization, entails the use of language that is governed by different norms and conventions in various situations (Dorpenyo, 2019). For these reasons, approaching translation as a justice-oriented design framework can allow practitioners to recognize the value and importance of language diversity and “culturally localized experiences” (what an individual observes, encounters, and experiences in their local communities) (Acharya, 2019, p. 22). We openly acknowledge that approaching translation from a social justice perspective opens up new avenues for centering marginalized, unheard voices. To build a just future, practitioners therefore need to recognize that translating is not a solitary endeavor but rather a collaborative effort geared toward building relationships between experts and non-experts, between humans and non-humans, and between, in Gonzales’s (2022) words, “language, land, and positionality” (p. 7). Along with TPC’s recent shift toward cultural and social justice turns, practitioners need to consider translation as a user localization practice that amplifies the agency of marginalized and vulnerable populations, rather than simply as a language conversion process.

With the international spread of business and global migrations in recent years, use of translated technical materials has increased worldwide. As these migrations continue to rise, communication and design needs of multilingual, multicultural people remain in high demand for them to integrate successfully into the world economy of today and tomorrow. These trends mean that the demand of the global economy involves creating more effective, usable information from a localization perspective. For instance, in the United States, the number of native Spanish speakers has surpassed that of Spain, and many of these speakers prefer materials in Spanish to those written in English (Romero, 2017). Often, translating today requires multiple agents with distinct roles, responsibilities, and skills, as well as multidisciplinary techniques and collaborative networks in highly technological distributed environments (Maylath et al., 2015). Since translation is concerned with social justice (Yajima & Toyosaki, 2015), localization

(Gonzales & Zantjer, 2015), and collaboration or what Walton et al. (2019) call “coalition building” (p. 8), practitioners should recognize how translation as a process or moment can operate as a justice-oriented framework to facilitate understanding communication needs of underserved, underprivileged populations across global and local contexts. Essentially, practitioners have weighty responsibilities for meeting such needs of multicultural, multilingual groups through connections to other factors (such as language, culture, land, and positionality) contributing to building a just future.

Limitations

As with any study, this integrative literature review has strengths and limitations. One such limitation is the scope of the project. In our review, we did not include translation-related publications from sources such as professional blog postings, magazines, podcasts, and other journal venues. Although we believe that an expanded version of our literature review would consider such outlets, that was not the stated goal of our study. So, we chose to focus on texts about or with inferred relationships to translation that were published by five major venues in the TPC field. Certainly, an expanded version of the review might synthesize knowledge on the topic by offering different perspectives, doing so carefully and thoughtfully would be enormously labor intensive and time consuming. We also chose not to pursue questions related to translator’s roles in workplace communication and their relationship with audiences across cultures. It would have been possible to generalize a relationship between social justice, localization, and translation if we had included publications on translation from other fields, but these publications were beyond the scope of this project. Furthermore, other researchers who examine the same corpus data may arrive at different conclusions and implications.

Finally, while we strove to be thorough in this research, our scope resulted in several other research design limitations. For example, we were at times forced to find workarounds for the methods to determine publications for inclusion by limiting the scope of the project (for example, differences in how one outlet uses keywords and metadata versus another). We discussed these issues together and responded to them as they arose, always with the goal of assembling the most complete sample possible within the constraints of our study. As a result, we had to make decisions about published work we knew existed but could not include because it was not published in the five identified journals. For instance, Minacori and Veisblat’s (2010) article “Translation and Technical Communication: Chicken or Egg?” was published in *Meta: Translator’s Journal*. To make our review more meaningful and comprehensive, we included such sources in the introduction and other sections.

Conclusion

Our integrative literature review demonstrates that literature from TPC’s five major journals discusses translation not only as a word-for-word replacement process, but also as relationship-building between humans and non-humans, including language, land, and positionality. The review also shows that the field of translation and technical communication are converging and merging, as both translators and TPC practitioners initially trained in one field seek cross-training in the other, in part to develop successful documentation in the global context (Minacori

& Veisblat, 2010; Gneccchi et al., 2011). At the same time, the literature demonstrated the need for adapting technical materials or products, including print and online documentation, for localized usability, which is associated with addressing the needs and expectations of multicultural underserved users in the target culture. Thinking of translation not as simply relating to the process of transforming words in one language to another equivalent in meaning but actually situating the process for promoting social justice and equity is important moving forward for TPC to develop user-centered, localized content, especially for those who are overlooked, underserved, and/or oppressed in the margins. Although theoretical conversations between technical communication and translation have been emerging within TPC scholarship for some time, TPC researchers and practitioners need to better understand how the connection between these fields' activities are being enacted by professionals developing multilingual content to empower users in resource-constrained international contexts.

As demonstrated in our study, translation as a topic has recently begun to shift TPC's disciplinary practices and research from solely transforming information across languages and cultures to addressing linguistic and cultural expectations of a target culture for fostering social justice and equity through the implementation of rhetorically nuanced justice-oriented frameworks. This shift in how we approach translation has clear implications for how we need to approach TPC research and practice for promoting social justice in globally changing environments. A translation, seen from a social justice perspective, becomes the afterlife of a text that becomes more inclusive and empowering in nature. Essentially, we as a field need to reconceptualize translation and continue working with historically marginalized communities in global contexts to shape and change the future of TPC with what Gonzales (2022) calls “user-localized translation” that focuses on localizing content to “best address the expectations and use patterns of individuals from another culture” (p. 273).

To address the recent calls for localized translation research in building an inclusive form of TPC (Batova & Clark, 2015; Dorpenyo, 2019; Gonzales, 2022), our integrative literature review of translation in the field suggests the need for adopting more viable and justice-driven approaches and orientations for engaging with translation research by leveraging the presence of language diversity and cultural differences. The attention to localized translation for social justice and equity is still at the emerging stage concerning multilingual content development and designs from user-localization perspectives in the resource-constrained, international context.

Looking at translation in terms of simple one-to-one word replacement from one language to another may fail to account for language diversity, equity, and inclusion negotiated as ideas shift and move between lands and bodies, particularly in multilingual global contexts. As Gonzales says (2022), “Language diversity should constantly account for the interlocking relationships between language, land, and bodies that are always at play in multilingual communication” (p. 14). In essence, as translation for localized usability gains momentum, TPC practitioners should reflect on how they can contribute to a just and equitable future without impacting the lands, languages, and people across cultures and contexts, as well as how they can meet the needs and expectations of target users adapting contents for a specific culture, including those who have been overlooked, underserved, or marginalized, as well as those from non-Western cultures.

Suggestions For Future Research

This study suggests that translation is more than just replacing words from one language to another; it also considers cultural factors to convey meanings of content and design in specific contexts of use. The implication is that the translator's responsibilities extend beyond word replacement to include content and design adaptation across cultures and languages. The study also reveals the need for further research on translation to address TPC's longstanding commitment to social justice and equity through empirical studies that can validate current understanding of the intersection of translation, technical communication, and design in diverse organizational or workplace settings at local and international levels. Our integrative literature review of translation in TPC scholarship also indicates the importance and value of localized translation as well as the need to train the next generation of TPC practitioners more extensively to address the needs and skills of multilingual, multicultural audiences in diverse contexts. Given the consistent calls for strengthening our commitments to social justice and inclusivity, significant further studies on translation are needed to navigate linguistic and cultural differences to accomplish these commitments. As such, we strongly believe now is the time to act to fulfill TPC's commitment to such agendas through our research and practices that focus on reframing translation.

While working on this review and reading dozens and dozens of articles and other materials on translation, especially in TPC scholarship, we now have more questions than answers, including:

- a) What is (or should be) the role or place of technical communicators as translators in integrated content environments, where they collaborate with diverse teams from various linguistic and cultural backgrounds to produce a variety of technical-related materials for multilinguals who are primarily at the receiving end of translation?
- b) To what extent have content and design been studied and produced in contemporary organizational or workplace settings to address multilingualism and immigrant concerns in the global context?
- c) What strategies are adopted by translators in a contemporary organizational setting to transform content for multicultural, multilingual audiences, especially for those who are underserved and underprivileged user groups, in today's globalized age?
- d) What are the differences and/or similarities in how technical communicators approach translation in the West versus resource-constrained or resource-mismanaged non-Western contexts?

Content, from a localized translation perspective, should be transformed to meet user needs and expectations across cultures and languages. To address such needs and expectations, technical communicators can work collaboratively with translators and interpreters, as well as multilingual communities in the target culture to produce culturally sensitive, globally ready content. TPC scholars also advocate collaboration with multilingual communities in the development of technical materials or tools available in languages other than English, both within and outside the United States (Gonzales, 2022; Walton & Hopton, 2018; Walwema, 2020). As we move forward to build a globally-oriented just future, TPC scholars and practitioners must commit to investigating and addressing the oppressive effects of specific translation for specific users,

particularly those in underserved and underprivileged communities, both within and across languages and cultures. We as a field must comprehend how such translations can serve as exclusionary sites of injustice and function as an oppressive activity in those cultures.

References

- Acharya, K. R. (2019). Usability for social justice: Exploring the implementation of localization usability in Global North technology in the context of a Global South's country. *Journal of Technical Writing and Communication*, 49(1), 6-32. <https://doi.org/10.1177/0047281617735842>
- Acharya, K. R. (2022). Promoting social justice through usability in technical communication: An integrative literature review. *Technical Communication*, 69(1), 6-26.
- Agboka, G. (2012). Liberating intercultural technical communication from "large culture" ideologies: Constructing culture discursively. *Journal of Technical Writing and Communication*, 42(2), 159-181. <https://doi.org/10.2190/TW.42.2.e>
- Agboka, G. Y. (2013). Participatory localization: A social justice approach to navigating unenfranchised/disenfranchised cultural sites. *Technical Communication Quarterly*, 22(1), 28-49. <https://doi.org/10.1080/10572252.2013.730966>
- Agboka, G. Y., & Dorpenyo, I. K. (2022). The role of technical communicators in confronting injustice—everywhere. *IEEE Transactions on Professional Communication*, 65(1), 5-10. <https://doi.org/10.1109/TPC.2021.3133151>
- Alexander, J. J., & Walton, R. (2022). Relational recruiting: Using Black feminist theory to inform graduate recruiting strategies. *IEEE Transactions on Professional Communication*, 65(1), 164-178. <https://doi.org/10.1109/TPC.2021.3137571>
- Armstrong, D., Gosling, A., Weinman, J., & Marteau, T. (1997). The place of inter-rater reliability in qualitative research: An empirical study. *Sociology*, 31(3), 597-606. <https://doi.org/10.1177/0038038597031003015>
- Artemeva, N. (1998). The writing consultant as cultural interpreter: Bridging cultural perspectives on the genre of the periodic engineering report. *Technical communication quarterly*, 7(3), 285-299.
- Batova, T. (2013). Legal literacy for multilingual technical communication projects. In St.Amant, K., & M. Rife, (Eds.), *Legal issues in global contexts* (pp. 83-101). Baywood.
- Batova, T. (2018). Negotiating multilingual quality in component content-management environments. *IEEE Transactions on Professional Communication*, 61(1), 77-100. <https://doi.org/10.1109/TPC.2017.2747278>
- Batova, T., & Clark, D. (2015). The complexities of globalized content management. *Journal of Business and Technical Communication*, 29(2), 221-235. <https://doi.org/10.1177/1050651914562472>
- Boettger, R. K., & Lam, C. (2013). An overview of experimental and quasi-experimental research in technical communication journals (1992-2011). *IEEE Transactions on Professional Communication*, 56(4), 272-93. <https://doi.org/10.1109/TPC.2013.2287570>
- Boettger, R. K., & Palmer, L. A. (2010). Quantitative content analysis: Its use in technical communication. *IEEE Transactions on Professional Communication*, 53(4), 346-357. <https://doi.org/10.1109/TPC.2010.2077450>

- Boiarsky, C. (1995). The relationship between cultural and rhetorical conventions: Engaging in international communication. *Technical communication quarterly*, 4(3), 245-259.
- Cleary, Y., Flammia, M., Minacori, P., & Slattery, D. M. (2015, July). Global virtual teams create and translate technical documentation: Communication strategies, challenges and recommendations. *Proceedings of the 2015 IEEE International Professional Communication Conference (IPCC)*, 1–10. IEEE.
<https://doi.org/10.1109/IPCC.2015.7235802>
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Sage.
- Dam-Jensen, H., & Heine, C. (2013). Writing and translation process research: Bridging the gap. *Journal of Writing Research*, 5(1), 89-101.
- Datta, J. (1991). Addressing a worldwide readership through the filter of translation. *IEEE transactions on professional communication*, 34(3), 147-150.
- Ding, H. (2010). Technical communication instruction in China: Localized programs and alternative models. *Technical Communication Quarterly*, 19(3), 300-317.
- Dorpenyo, I. K. (2019). Risky election, vulnerable technology: Localizing biometric use in elections for the sake of justice. *Technical Communication Quarterly*, 28(4), 361-375.
<https://doi.org/10.1080/10572252.2019.1610502>
- Doumont, J. L. (2002, September). Translation 101: Myths and realities. *Proceedings of IEEE International Professional Communication Conference* (pp. 46-50). IEEE.
<https://doi.org/10.1109/IPCC.2002.1049086>
- Esselink, B. (2000). *A practical guide to localization*. John Benjamins Publishing.
- Eubanks, P. (1998). Genre and technical translation: Social, textual, and educational exigence. *Journal of business and Technical Communication*, 12(1), 50-70.
- Evia, C., & Patriarca, A. (2012). Beyond compliance: Participatory translation of safety communication for Latino construction workers. *Journal of Business and Technical Communication*, 26(3), 340–367. <https://doi.org/10.1177/1050651912439697>
- Gambier, Y. (2016). Rapid and radical changes in translation and translation studies. *International Journal of Communication*, 10, 887-906.
- Gibbs, G. R. (2018). *Analyzing qualitative data* (2nd ed.). Sage.
- Gnecchi, M., Maylath, B., Moustén, B., Scarpa, F., & Vandepitte, S. (2008, July). Professional communication and translation in convergence. *Proceedings of 2008 IEEE International Professional Communication Conference*, 1-15. IEEE.
<https://doi.org/10.1109/IPCC.2008.4610220>
- Gnecchi, M., Maylath, B., Moustén, B., Scarpa, F., & Vandepitte, S. (2011). Field convergence between technical writers and technical translators: Consequences for training institutions. *IEEE Transactions on Professional Communication*, 54(2), 168-184.
<https://doi.org/10.1109/TPC.2011.2121750>
- Gonzales, L. (2017). But is that relevant here? A pedagogical model for embedding translation training within technical communication courses in the US. *Connexions: International Professional Communication Journal*, 5(1), 75-108.
- Gonzales, L. (2018). *Sites of translation: What multilinguals can teach us about digital writing and rhetoric*. University of Michigan Press.

- Gonzales, L. (2022). (Re) Framing multilingual technical communication with indigenous language interpreters and translators. *Technical Communication Quarterly*, 31(1), 1-16. <https://doi.org/10.1080/10572252.2021.1906453>
- Gonzales, L., & Turner, H. N. (2017). Converging fields, expanding outcomes: Technical communication, translation, and design at a non-profit organization. *Technical Communication*, 64(2), 126-140.
- Gonzales, L., & Zantjer, R. (2015). Translation as a user-localization practice. *Technical Communication*, 62(4), 271-284.
- Gonzales, L., Lewy, R., Cuevas, E. H., & Ajiataz, V. L. G. (2022). (Re)designing technical documentation about COVID-19 with and for Indigenous communities in Gainesville, Florida, Oaxaca de Juárez, Mexico, and Quetzaltenango, Guatemala. *IEEE Transactions on Professional Communication*, 65(1), 34-49. <https://doi.org/10.1109/TPC.2022.3140568>
- Haas, A. M. (2012). Race, rhetoric, and technology: A case study of decolonial technical communication theory, methodology, and pedagogy. *Journal of Business and Technical Communication*, 26(3), 277-310. <https://doi.org/10.1177/1050651912439539>
- Haas, A. M., & Eble, M. F. (Eds.). (2018). *Key theoretical frameworks: Teaching technical communication in the twenty-first century*. University Press of Colorado.
- Hovde, M. R. (2010). Creating procedural discourse and knowledge for software users: Beyond translation and transmission. *Journal of Business and Technical Communication*, 24(2), 164-205. <https://doi.org/10.1177/1050651909353306>
<https://doi.org/10.17239/jowr-2013.05.01.4>
- Huckin, T. (2004). Content analysis: What texts talk about. In C. Bazerman & P. Prior (Eds.), *What writing does and how it does it: An introduction to analyzing texts and textual practices* (pp. 13-32). Lawrence Erlbaum.
- Hunsinger, R. P. (2006). Culture and cultural identity in intercultural technical communication. *Technical communication quarterly*, 15(1), 31-48.
- Israel, H. (2021). Translation in India: Multilingual practices and cultural histories of texts. *Translation Studies*, 14(2), 125-132. <https://doi.org/10.1080/14781700.2021.1936149>
- Johnson, R. R. (1998). *User-centered technology: A rhetorical theory for computers and other mundane artifacts*. SUNY press.
- Jones, N. N. (2016). The technical communicator as advocate: Integrating a social justice approach in technical communication. *Journal of Technical Writing and Communication*, 46(3), 342-361. <https://doi.org/10.1177/0047281616639472>
- Jones, N. N., & Williams, M. F. (2018). Technologies of disenfranchisement: Literacy tests and black voters in the US from 1890 to 1965. *Technical Communication*, 65(4), 371-386.
- Köksal, O., & Yürük, N. (2020). The role of translator in intercultural communication. *International Journal of Curriculum and Instruction*, 12(1), 327-338.
- Koltay, T. (1997). The Role of Abstracting in "Professional Documentation," a Technical Writing Class for Hungarian Students of English Translation. *Journal of technical writing and communication*, 27(3), 277-289. <https://doi.org/10.2190/V6UQ-H6HN-7AYC-9VP8>
- Krippendorff, K. (2019). *Content analysis: An introduction to its methodology* (4th ed.). Sage.

- Maylath, B., Martín, R. M., & Pinto, M. P. (2015). Translation and international professional communication: Building bridges and strengthening skills. *Connexions: International Professional Communication Journal*, 3(2), 3-9.
- Melonçon, L., & St. Amant, K. (2018). Empirical research in technical and professional communication: A 5-year examination of research methods and a call for research sustainability. *Journal of Technical Writing and Communication*, 49(2), 128-155. <https://doi.org/10.1177/0047281618764611>
- Melton, J. H. (2008). Lost in translation: Professional communication competencies in global training contexts. *IEEE Transactions on Professional Communication*, 51(2), 198-214. <https://doi.org/10.1109/TPC.2008.2000346>
- Miller, C. (1979). A humanistic rationale for technical writing. *College English*, 40(6), 610-617.
- Minacori, P., & Veisblat, L. (2010). Translation and technical communication: Chicken or egg? *Meta: Journal des Traducteurs*, 55(4), 752-768. <https://doi.org/10.7202/045689ar>
- Moustén, B., Maylath, B., Vandepitte, S., & Humbley, J. (2010). Learning localization through trans-Atlantic collaboration: Bridging the gap. *IEEE Transactions on Professional Communication*, 53(4), 401-411. <https://doi.org/10.1109/TPC.2010.2077481>
- Nida, E. A., & Taber, C. R. (2003). *The theory and practice of translation*. Brill.
- Passel, J. S., Lopez, M. H., & Cohn, D. V. (2022). US Hispanic population continued its geographic spread in the 2010s. *Pew Research Center*. Retrieved from <https://pewrsr.ch/3J28O2s>
- Pihlaja, B., & Durá, L. (2020). Navigating messy research methods and mentoring practices at a bilingual research site on the Mexico-US border. *Technical Communication Quarterly*, 29(4), 358-375. <https://doi.org/10.1080/10572252.2020.1790665>
- Ping, H. (2012). Intercultural awareness in professional translators: Examples from technical and non-technical documents. *Translation Quarterly*, 64, 20-31.
- Romero, S. (2017, August). Spanish thrives in the US despite an English-only drive. *The New York Times Online Edition*. Retrieved from <https://www.nytimes.com/2017/08/23/us/spanish-language-united-states.html>
- Rose, E. J. (2016). Design as advocacy: Using a human-centered approach to investigate the needs of vulnerable populations. *Journal of Technical Writing and Communication*, 46(4), 427-445.
- Rose, E. J., Racadio, R., Wong, K., Nguyen, S., Kim, J., & Zahler, A. (2017). Community-based user experience: Evaluating the usability of health insurance information with immigrant patients. *IEEE Transactions on Professional Communication*, 60(2), 214-231. <https://doi.org/10.1109/TPC.2017.2656698>
- Shivers-McNair, A. (2017). Localizing communities, goals, communication, and inclusion: A collaborative approach. *Technical Communication*, 64(2), 97-112.
- Sims, M. (2022). Tools for overcoming oppression: Plain language and human-centered design for social justice. *IEEE Transactions on Professional Communication*, 65(1), 11-33. <https://doi.org/10.1109/TPC.2022.3150236>
- Spinuzzi, C., Bodrožić, Z., Scaratti, G., & Ivaldi, S. (2019). “Coworking is about community”: but what is “community” in coworking? *Journal of Business and Technical Communication*, 33(2), 112-140. <https://doi.org/10.1177/1050651918816357>

- St. Germaine-McDaniel, N. (2010). Technical communication in the health fields: Executive Order 13166 and its impact on translation and localization. *Technical Communication*, 57(3), 251-265.
- Sun, H. (2006). The triumph of users: Achieving cultural usability goals with user localization. *Technical Communication Quarterly*, 15(4), 457-481.
- Sun, H. (2012). *Cross-cultural technology design: Creating culture-sensitive technology for local users*. Oxford University Press.
- Thatcher, B. L. (1999). Cultural and rhetorical adaptations for South American audiences. *Technical communication*, 46(2), 177-195.
- Thrush, E. A. (1993). Bridging the gaps: Technical communication in an international and multicultural society. *Technical communication quarterly*, 2(3), 271-283.
- Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review*, 4(3), 356-367. <https://doi.org/10.1177/1534484305278283>
- Torraco, R. J. (2016). Writing integrative literature reviews: Using the past and present to explore the future. *Human Resource Development Review*, 15(4), 404-428. <https://doi.org/10.1177/1534484316671606>
- Tuleja, E. A., Beamer, L., Shum, C., & Chan, E. K. (2011). Designing and developing questionnaires for translation tutorial. *IEEE transactions on professional communication*, 54(4), 392-405.
- Urquhart, C. (2013). *Grounded theory for qualitative research: A practical guide*. Sage.
- Walton, R., & Hopton, S. B. (2018). "All Vietnamese men are brothers": Rhetorical strategies and community engagement practices used to support victims of Agent Orange. *Technical Communication*, 65(3), 309-325.
- Walton, R., Moore, K., & Jones, N. (2019). *Technical communication after the social justice turn: Building coalitions for action*. Routledge.
- Walton, R., Zrally, M., & Mugengana, J. P. (2015). Values and validity: Navigating messiness in community-based research project in Rwanda. *Technical Communication Quarterly*, 24(1), 45-69. <https://doi.org/10.1080/10572252.2015.975962>
- Walwema, J. (2020). Rhetoric and Cape Town's campaign to defeat day zero. *Journal of Technical Writing and Communication*, 51(2), 103-136. <https://doi.org/10.1177/0047281620906128>
- Walwema, J., & Arzu Carmichael, F. (2021). "Are you authorized to work in the US?" Investigating "inclusive" practices in rhetoric and technical communication job descriptions. *Technical Communication Quarterly*, 30(2), 107-122. <https://doi.org/10.1080/10572252.2020.1829072>
- Weiss, T. (1997). Reading culture: Professional communication as translation. *Journal of Business and Technical Communication*, 11(3), 321-338. <https://doi.org/10.1177/1050651997011003005>
- Yajima, Y., & Toyosaki, S. (2015). Bridging for a critical turn in translation studies: Power, hegemony, and empowerment. *Connexions: International Professional Communication Journal*, 3(2), 91-125.