

Designing Globally, Working Locally: Using Personas to Develop Online Communication Products for International Users

Guiseppe Getto

East Carolina University
GETTOG@ECU.EDU

Kirk St. Amant

East Carolina University
kirk.stamant@gmail.com

Abstract

Extending digital products and services to global markets requires a communication design approach that considers the needs of international (e.g. non-U.S.) users. The challenge becomes developing an approach that works effectively. The concept of personas, as applied in user experience design (UX), can offer an effective solution to this situation. This article examines how this idea of personas can expand communication design practices to include users from other cultures.

Introduction

Global online access has grown almost exponentially in the last decade. Now, individuals on opposite ends of the earth can exchange ideas, information, and digital materials nearly as easily as colleagues working in the same on-site office. But this ease of access cannot mitigate one key factor: culture. Just because individuals from different nations and regions can interact does not necessarily mean they will interact effectively or efficiently. Rather, cultural differences can slow, sidetrack, or even stop international online activities in unexpected and costly (in terms of time and money) ways. Yet the allure of such approaches remains as more

organizations explore using online media to internationalize operations as diverse as medical transcription, software programming, and educational instruction. Approaches that address cultural communication differences can thus help organizations interact more effectively within such contexts. The trick becomes finding a method that can facilitate communication design practices for global audiences.

One mechanism that can guide such practices is the user experience design (UX) concept of personas. The process of developing personas, however, needs to be modified to include certain information related to using online technologies in different cultural environments. By getting communication designers to consider how individuals use technology, personas can provide important insights related to culture and design expectations. This paper examines how a modified approach to persona development can help organizations create more effective communication products for international audiences. Through such an approach, design practices can become a key factor in making the world a smaller place.

The Attraction of International Online Access

The draw of international online interactions is connected to the relatively rapid proliferation of global Internet access. At the start of the 21st century, roughly 360 million people worldwide had access to the Internet. Today, that number has risen to almost 2.4 billion with important gains being made in the world's emerging economies (World Internet Usage Statistics, 2014). The number of Internet users in China, for example, grew from 210 million to just under 600 million between 2007 and 2013 (with almost 60% of the overall population not yet online), and the current number of Internet subscribers in India is estimated at some 200 million (Calamur, 2013; Sen, 2013). Internet access in Brazil is now at 88 million people (just under half of the country's total population) with the sale of mobile devices growing almost exponentially (Internet Usage Statistics for All of the Americas, 2014; Kligin, 2013). Additionally, 47% of Russians—some 67 million people—are estimated to have Internet access with online market share there poised to grow 15-20% per year for some time (Wauters, 2012;

Razumovskaya, 2013). To many organizations, this growth of online access is important for two reasons: labor arbitrage and market access.

Labor Arbitrage

Labor arbitrage involves how rates of pay for the same work can vary from nation to nation. These differences become particularly important when they involve highly specialized jobs or highly skilled employees. A US-based software programmer, for example, could earn roughly \$7,750 a month while the same programmer might earn just over \$1,600 a month in the Czech Republic and only around \$725 a month in India (Moran, 2013; Quick Facts, 2014; Average Salary for Country, 2014). These financial differences mean US-based companies will pay much less if they employ an India-based programmer remotely vs. working with an on-site programmer in the United States.

Moreover, ease of online access and the nature of modern knowledge work means physical distance need not be an impediment to tapping overseas labor forces. That is, as information and materials can be transmitted quickly and easily via digital media, physical distance need not prevent programmer in India from participating in a US-based project. The results of such international online inclusion? Perceived cost reduction for the project. This prospective savings has prompted numerous organizations to internationally outsource – or offshore – a range of tasks from medical records processing to tax preparation work to basic legal services (Trapani, 2011; Robertson, Stone, Niederwanger, Grocki & Smigh, 2005; Kane, 2014).

Market Access

Increased global connectivity also brings with it another tempting financial prospect: *market access* (i.e., direct access to individuals located in a broad range of international markets). With no physical boundaries to impede movement, organizations can now distribute a range of digital goods and services from streaming music and videos to web-based technical assistance quickly, easily, and directly to a wide range of consumers in the broader global marketplace. This situation is particularly tempting in relation to

emerging economies where interest in online transactions is growing and major earnings can be generated.

Consider the expansion and acceptance of online marketplaces in four of the world's most populace emerging economies:

- Brazil's online sales are expected to reach \$25 billion by 2017, and some 60% of the country's Internet users have made purchases online (Herrera, 2013; Geromel, 2013).
- Russia's online movie site Ivi.ru caters to some 30 million clients who each pay \$8.60 a month for access to the site's content (Nideov, 2014).
- India's \$16 billion online retail market almost doubled in size between 2012 and 2013 and access to online shoppers – particularly via mobile devices – should only continue to grow (India's e-commerce, 2013; Sen, 2013).
- China's online market was estimated at worth some \$190 billion in 2012, and it experienced \$4 billion in online sales in a single day (Dobbs, Chen, Orr, Manyika, Chui & Chang, 2013).

The growing middle classes in these nations and the fact that many citizens are not yet online makes the prospects for generating online earnings in these markets huge (Court & Narasimhan, 2010; Kennedy, 2012; Rohde, 2012). Add to this situation the increased use of economies of scale and micropayments, and the allure of online markets – particularly in emerging economies – becomes all the more tempting (Gotschalken, 2013; Evans, 2014; Infographic, 2014). The question now becomes what does an organization need to do to effectively tap these opportunities? The answer lies in revising approaches to communication design in order to better understand these international users.

Communication Design Considerations

In many ways, effective communication design is central to maximizing the perceived benefits associated with using online media in global contexts. This connection is related to the fact that the design of the interface becomes a central component affecting how successfully (or not) individuals can locate, make use of, and exchange information via online media (Yunker, 20003; Sun, 2012).

Add differences in cultural expectations to this mix, and the situation becomes even more complex (Ulijn & Strother, 1995; St. Amant, 2005; Langmia, 2011). In the case of labor arbitrage situations, individuals working in other nations need to be able to find essential information easily and quickly, be able to interact with overseas counterparts efficiently, and be able to provide (e.g., upload or transmit) core components readily. From a market access perspective, potential consumers/clients need to be able to locate products or information on services easily, to obtain product-related information quickly, and to ask questions/make queries and purchase items effectively. Anything that impedes such activities might mitigate the benefits of having access to individuals overseas.

In sum, it becomes an issue of usability. For both kinds of situations to be successful, the employee or the consumer in the other culture needs to be able to navigate an online interface easily and successfully (St. Amant, 2005; Sun, 2012). Interfaces that fail to facilitate such activities can markedly affect the successes of offshoring (i.e., international labor arbitrage) situations or the ability to attract and keep customer bases in other cultures (Yunker, 2003; St. Amant, 2005). Unfortunately, trying to anticipate the expectations of users from other cultures can be more complicated and involve more (and often, unexpected), variables than a communication designer might anticipate (Ulijn & Strother, 1995; Yunker, 2003; St. Amant, 2005; Sun, 2012).

The problem is that cultural groups can have different expectations of interface design. Such differences can include everything from

- What images should appear on different pages (including external links to advertising)
- Where menu bars – and other design features – should be located on a page (as well as how many entries they should contain and what those entries should be)
- How overall sights should be organized
- What language(s) should be used to convey information (Yunker, 2003; St. Amant, 2005; St. Amant, 2012; Sun, 2012)

Further complicating this situation is the fact that overseas users could be accessing these interfaces in context not anticipated by the individual who designed the interface (e.g., from a small-screen/hand-held device). In such cases, relying on secondary research can be problematic, for the “official” information one finds on given nation (e.g., official languages) might be limited or only somewhat accurate in nature. (See, for example Langmia’s (2011) criticism of the languages used for texting via mobile devices in Cameroon.)

While translation and localization can accommodate some of these factors, such processes can be time consuming and costly, and they can limit the adaptability of the organization. In essence, one can only tap a given labor pool or move into a given market as quickly as one’s translators and localizers can revise materials. Additionally, the configuration of the source (i.e., original) materials provided by the communication designer can affect the efficiency of such practices. If, for example, interfaces are built with translation and localization in mind, they can be revised relatively quickly and easily vs. interfaces developed specifically to meet the needs of users in one specific culture.

To address these issues, communication designers need a mechanism that can help them anticipate how individuals in other cultural contexts use different technologies to engage in a range of online activities. Such a mechanism, however, would need to include more than just demographic information on who these international users are (e.g., ethnicity, language use, gender, etc.). Rather, such an approach would need to anticipate the context in which the technology was being used (see van Reijsoord and de Jager, 2011) and the attitudes individuals have toward using the related technology (see, for example, St. Amant, 2012). One mechanism that accounts for all of these factors – and with a focus on design and development – is the UX concept of *personas*.

An Overview of Personas

Personas are models that represent the typical – or archetypal – individual for whom communication designers create materials (Sauro, 2012; Churrua, 2013). The idea is that the more a

communication designer knows about this archetypal audience, the more effectively the designer can create communication products that meet the needs and wants of this audience (O'Connor, 2011; Putkey, 2011; Sauro, 2012). Thus, personas need to account for both who the members of that audience are (e.g., basic, demographic data) as well as how, why, and where these individuals will use a given communication design product. In this way, persona development looks at the context in which a specific group of individuals uses an item (Bustos, 2011; Smith, 2012; Sauro, 2012). This context-focused approach then allows communication designers to develop items that meet an individual's needs and wants for use in that environment.

The connection of users to context of use (and how context affects or determines use) allows personas to represent a richer understanding of a given audience than a user profile (e.g., who someone is) alone could provide (O'Connor, 2011; Bustos, 2011; Mears, 2013). It also provides key insights on the attitudes individuals may have and the behaviors that might occur at the time of day when the archetypal individual makes use of the related technology (Bustos, 2011; Sauro, 2012). In sum, personas allow one to understand how the daily schedule of certain individuals (i.e., archetypes) affects how those individuals use a given technology. In this way, personas allow communication designer to better determine the user's wants (i.e., What do I want to accomplish when I use this technology at this point in the day?) and needs (i.e., What information or design features do I need to have available to me in order to achieve what I want to do via this technology?) (Putkey, 2011; Smith, 2012; Churruca, 2013).

The kind of data needed to develop personas is complex in nature, for it should include

- Demographic data (who someone is)
- Contextual data (where someone is when they are using the technology)
- Behavioral data (what the person is doing when using the technology)
- Attitudinal data (how does the person feel about/what is her or his attitude toward the technology being used)

To glean such information, communication designers should employ a mixed methods approach designed to include the following approaches to data collection:

- *Surveys*: Used to collect basic demographic information on the audience for which materials are being designed and determine attitudes toward the technology (and the related task individuals wish to accomplish by using it)
- *Ethnographies*: Observations of how members of the intended audience make use of this technology – as well as where and when it is used – during the course of their daily lives
- *Interviews and/or Focus Groups*: Done to determine why the members of an audience engage in certain behaviors and answer questions such as
 - Why did they make use of the technology at that time?
 - Why/for what purpose were they using the technology?
 - What factors affected how they used the technology?
 - What attitudes did they/do they have about using the technology? (Bustos, 2011; O'Connor, 2011; Putkey, 2011; Sauro, 2012)

Through collecting such information, communication designers can build a more complete picture of the specific audience for which they wish to develop materials. In fact, in an attempt to make such a personal/archetypal audience member seem more real, many individuals also create a picture of the persona, so they can better conceptualize who that “archetypal individual” is (Sauro, 2012; Mears, 2013).

The personas that emerge from such research can be used in a number of ways during the design process:

- They can serve as a guide for the initial phase of the design process. That is, communication designers can begin by creating initial materials (e.g., wireframes or prototypes) according to the wants and the needs of the related persona (Bustos, 2011; Smith, 2012; Sauro, 2012; Mears, 2013).

- They can help members of a design team (or an overall project team) stay on task/focus during the design process by serving as a reference point for guiding activities (Bustos, 2011; Putkey, 2011; Sauro, 2012). They can, for example, help address questions such as “Should we do X?” with “Let’s review the persona to see if X is something that the archetypal person would want and need when using this item.”
- They can provide a review mechanism communication designers can use to do regular – and also final – tests of the materials they create (Bustos, 2011; Smith, 2012; Sauro, 2012; Mears, 2013). In such cases, the question guiding the review process would be “Will the members of the group represented by this persona be able to achieve what they wish to do when using the current design in the context where and when they would use it?”

Thus, while time consuming and often expensive to create, personas can contribute greatly to the development and eventual usability of a communication design product. Such factors are acutely important in developing an understanding of the contextual factors that can affect how individuals in other cultures use communication products.

Considering Culture and Persona Development

Gathering the data needed to develop effective personas in one’s own culture can be a difficult task in and of itself. When expanded to try to create a persona of an audience in a different culture, the process can become even more daunting. For example, in terms of collecting survey data, aspects of language and translation can affect how questions are worded (if translated) or interpreted/perceived (if not), which can skew results. Similarly, when using online media to collect such data, different legal regulations can affect what kinds of information a communication designer can collect on individuals (St. Amant & Rife, 2014; Kraglund-Gauthier & Young, 2014). The EU’s Data Protection Directive, for example, greatly affects how information on topics such as race, ethnicity, or gender can be legally collected and transmitted via online media (Directive 95/46/EC, 1995; EU Data Protection Directive, 2014).

In other cases – such as ethnographic research – the question becomes one of access (i.e., can one get access to the group represented by the persona) and interpretation (i.e., does one know what to look for/identify, and recognize when a practice common in one's own culture is enacted within the context of a different culture). For example, the role of who in a group performs a given function and who initiated the function (i.e., who wants and needs the action to be performed vs. who is actually performing the action) can vary from culture to culture – particularly when individuals know they are being observed or are acting in a public setting (Ulijn & St. Amant, 2000). And in the case of interviews or focus groups done as a follow up to ethnographic research, who may or may not respond, how the individual responds, and the intended vs. perceived interpretation of the response can also vary along cultural lines (Ulijn & Strother, 1995; Ulijn & St. Amant, 2000). For these reasons, communication designers can benefit from mechanisms that help them account for factors that can affect the context of use and patterns of use related to different cultures.

Unfortunately, there is no magic solution to this situation. However, a framework that identifies aspects affecting the context of use in other cultures/other national settings can help one develop personas when creating materials for members of other cultures. One mechanism that can address such factors is the map presented in Figure 1.

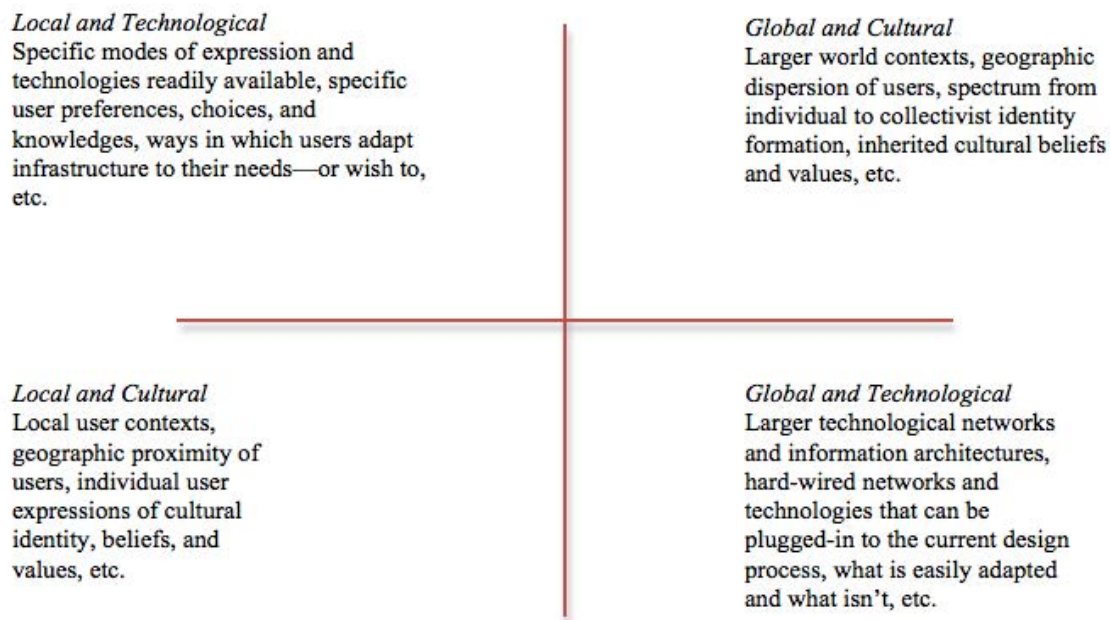


Figure 1: A map of the four contextual areas/factors communication designers need to consider when developing personas of users who are located in other cultures.

The quadrants of this map identify four key contextual aspects/factors that can affect use in different cultural settings. This map can thus allow communication designers to create personas based on contextual aspects associated with using technology products in international settings.

What follows is a guide for using this map when designing communication products for users from other cultures.

- **Local and Technological**—In addressing this quadrant, communication designers would need to ask questions like
 - What technologies are readily available to specific users?
 - How often do individuals use specific technologies?
 - When are these technologies used, and how are they used based on local conditions such as
 - Physical environment?
 - Access conditions?

- o How do specific users navigate certain infrastructures when using technology?
- o How have specific users learned to make use of particular technologies? What limitations does this learning process impose on how those individuals use technologies?
- **Global and Cultural**—In addressing this quadrant, communication designers would need to ask questions like
 - o What large-scale aspects of culture (e.g., economies, institutions, and dominant norms) are most important to communication design?
 - o Where do users lie on a spectrum from collectivist to individualist identities?¹
 - o What values are most important to users, and where do these values come from (e.g., cultural cross-pollination, customs, histories of particular communities, etc.)?
 - o How heterogeneous are users? What factors differentiate them?
 - o How geographically dispersed are users?
- **Local and Cultural**—In addressing this quadrant, communication designers would need to ask questions like
 - o What local customs, belief systems, and values are important to specific users?
 - o How do specific users identify or de-identify with specific cultural norms?
 - o How do specific users learn to value or de-value specific cultural norms?
 - o How homogeneous are users? What is comparable among them?

¹ The more collectivistic a culture is, the more likely it is to value and advocate what is good for the group over that which is good for the individual. The more individualistic, a culture is, the more likely its members are to focus on what is good for the individual over that which is good for the group (Hofstede, 2007).

- o How geographically proximal are users to one another?
- **Global and Technological**—In addressing this quadrant, communication designers would need to ask questions like
 - o What technologies are readily available to users in a given region?
 - o How reliable and how used are such technologies by the intended audience?
 - o When are such technologies used and how are they used based on:
 - Political conditions
 - Economic conditions
 - o How do aspects of infrastructure affect when and how such technologies are used?
 - o How do individuals in this culture learn to make use of the technologies available to them?
 - o What limitations does this learning process impose on uses of technologies?

By using the map in Figure 1 to ask such quadrant-specific questions, communication designers can better address a range of contextual factors affecting how technologies are used by different cultures. In so doing, they can create more effective personas for users in other cultures.

This map-based approach to research combines ideas and methods from UX (e.g., persona development, prototyping, and field studies) with concepts from intercultural communication (e.g., dimensional theories designed to compare cultures across common aspects found in all cultures). In so doing, it expands the persona development process to account for aspects that affect technology use in different cultural contexts. This approach thus provides a method for better understanding local users operating within the context of different regions of the world. And the insights gained from it can help individuals better adapt communication and design practices to such contexts. The challenge becomes using

this map-based approach to develop personas of individuals who use technologies in different cultural contexts.

An Example of Developing a Persona of an International User

This section overviews an example of a persona developed while one of the authors (Guiseppe) was teaching a hybrid class populated mostly by Chinese nationals studying at an American University in the US. As a hybrid class, the course necessarily involved the use of a wide variety of information communication technologies (ICTs), an element that the Chinese students were unaware of when enrolling in the class.

Based on face-to-face interactions with his users, Guiseppe redesigned the ICTs for the course to account for the cultural context from which non-US students came. This work started when Guiseppe began to think of particular members of the class as representatives of user groups (i.e., archetypes), such as Qi, a busy international student enrolled in several accelerated summer courses (Figure 2).



Figure 2: Initial representative personal image created using the map in Figure 1. Qi, the busy international student enrolled in several accelerated summer courses, version1 (Image available via a Creative Commons license: <http://bit.ly/1tFSEOb>)

The map factors that needed to be considered in developing this persona of a user from another culture include

- Cultural issues:
 - o Truly valued and wanted to learn digital technologies
 - o Unafraid of trying them out
 - o From a Chinese province that had successfully blocked access to most social media platforms
- Technological issues:
 - o Very proficient in Standard Edited American English (SEAE)
 - o Also proficient in several digital technologies (e.g. QQ, HTML, etc.)
 - o Preferred to communicate in SEAE in school settings
- Global issues:
 - o Accustomed to dealing with multiple digital platforms at once
 - o Multi-tasker
- Local issues:
 - o Very outspoken student in class
 - o Seemed trusted by other students
 - o Was often the first to present problems others were having
 - o Taking multiple accelerated classes at once

By mapping this persona via cultural, technological, global, and local factors, Guiseppe was better able to consider the learning needs of users as represented by this persona. It wasn't that the persona of Qi, the individual, was the only user being considered. Rather, the initial persona shown here represents patterns in the experiences of certain student-users with which Guiseppe was working. For instance, the actual student named Qi who Guiseppe encountered never said anything about not having access to the Internet. Instead, this pattern arose amongst other users and thus

became a significant factor to consider within the cultural context of the class.

From this perspective, personas are perhaps best thought of as subject positions or as rhetorical frameworks by which to interpret cultural groups of users (Foucault, 1982). In this way, personas can help communication designers better understand international users and their diverse needs. And like users, personas are thus dynamic entities—elements that change over time as the technological systems humans use change. They are representations of cultural aspects that become important during interactions between these cultures and the technological systems that individual users employ.

In the case of Giuseppe's class, he came to understand the persona Qi as very different during the regular ebb and flow of the course. Though the afore-mentioned elements of this persona remained true, new elements also arose. Giuseppe then mapped—per Figure 1—these elements to create a modified persona for this group of international users. This final persona, based on increased data gleaned from interactions with members of the related user group, reflected the following factors:



Figure 3: Example of Final Version of Persona Based on Map in Figure 1 (Image available via a Creative Commons license: <http://bit.ly/1tFSEOb>) Qi, the team leader, version X.

- Cultural issues:
 - o Was an early adopter of all technologies introduced
 - o Very critical of attempts to block citizen access to technology
- Technological issues:
 - o Introduced QQ as a way for student teams in the class to collaborate in a bi-lingual and networked space
- Global issues:
 - o Helpful with improving overall class workflow
- Local issues:
 - o Became a kind of student representative for technological and linguistic issues his peers were having

Again, it is important to develop personas as rhetorical frameworks employed to understand users from other cultures. In this way, the cultural, technological, global, and local elements Qi displayed became a central factor Guiseppe used to understand and to address how students from other cultures perceived and made use of technologies in his hybrid class. It was thus important for Guiseppe to adapt the ICTs central to the course to these elements of user culture in order to facilitate learning with certain students.

Implications: We Need International User Cultures

As organizations attempt to leverage online media within a global marketplace, they will fail if they do not take other cultures, and their attendant users, into account in meaningful ways. Through a modified approach to persona development – as guided by the map presented earlier in this article – communication designers can incorporate international users into the design of digital products and services in new and innovative ways. This move is essential if we wish to build a participatory web that is intelligible and accessible to international users.

One of the key points we, the authors, would like to emphasize in closing is that *the use of technology is always embedded within a cultural context*. As we have noted, the same technology is often perceived in a variety of ways depending on the cultural context in which individuals access and use it. This is why an understanding of cultural, technological, global, and local contexts is essential to persona development and thus to the design of online media products that are useful and usable to international users.

Finally, though we presented persona development as one process for making online communication technologies useful and usable for international users, it is certainly not the only one. Any communication or design methodology can be paired with an attention to cultural, technological, global, and local contexts in order to create culture-sensitive technologies and communication situations. Such a move is imperative if communication designers are to truly serve the needs of an increasingly digitally-mediated and global society.

References

- Average salary for country: Czech Republic. (2014). PayScale. Retrieved April 18, 2014, from http://www.payscale.com/research/CZ/Country=Czech_Republic/Salary.
- Bustos, L. (2011). Personas 101: What are they and why should I care? GetElastic. Retrieved September 18, 2014, from <http://www.getelastic.com/personas-101-what-are-they-and-why-should-i-care/>
- Calamur, K. (2013). China's internet growth in two charts. NPR. Retrieved April 18, 2014, from <http://www.npr.org/blogs/parallels/2013/07/17/203000826/china-as-internet-growth-in-two-charts>.
- Churruca, S. (2013). Introduction to user personas. UX Lady. Retrieved September 18, 2014, from <http://www.ux-lady.com/introduction-to-user-personas/>

- Court, D. & Narasimhan, L. (2010). Capturing the world's emerging middle class. McKinsey Quarterly. Retrieved October 12, 2014, from http://www.mckinsey.com/insights/consumer_and_retail/capturing_the_worlds_emerging_middle_class
- Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data. (1995). Center for Democracy and Technology. Retrieved October 18, 2014, from https://cdt.org/files/privacy/eudirective/EU_Directive_.html
- Dobbs, R., Chen, Y., Orr, G., Manyika, J., Chui, M. & Chang, E. (2013). China's E-tail revolution: Online shopping as a catalyst for growth. San Francisco: McKenzie Global Institute.
- EU Data Protection Directive (Directive 95/46/EC). (2014). SearchSecurity.co.uk. Retrieved October 18, 2014, from <http://searchsecurity.techtarget.co.uk/definition/EU-Data-Protection-Directive>
- Evans, K. (2014). Rocket Internet raises \$445 million to invest in mobile payments in emerging markets. Internet Retailer. Retrieved October 13, 2014, from <http://www.internetretailer.com/2014/08/07/rocket-internet-raises-445-million-invest-mobile-payments>
- Foucault, M. (1982). The subject and power. *Critical Inquiry*, 8; 777-795.
- Geromel, R. (2013). Internet in Brazil: Key hard facts you must know. Forbes. Retrieved April 16, 2014, from <http://www.forbes.com/sites/ricardogeromel/2013/10/28/internet-in-brazil-key-hard-facts-you-must-know/>.
- Gotschalken, T. C. (2013). Connecting the next 5 billion users: Emerging markets and the need for new business models. Vision Mobile. Retrieved October 13, 2014, from <http://www.visionmobile.com/blog/2013/04/connecting-the-next-5b-users-emerging-markets-and-the-need-for-new-business-models/>

- Herrera, C. (2013). Brazil and Latin America preferred markets for online retailers in the U.S. Pulso Social. Retrieved April 18, 2014, from <http://pulsosocial.com/en/2013/08/09/brazil-and-latin-america-preferred-markets-for-online-retailers-in-the-u-s/>.
- Hofstede, G. (2007). Culture and organizations: Software of the mind. New York: McGraw Hill.
- India's e-commerce market rose 88% in 2013: Survey. (2013). *The Economic Times*. Retrieved April 16, 2014, from http://articles.economictimes.indiatimes.com/2013-12-30/news/45711192_1_e-commerce-market-online-shoppers-survey.
- Infographic: Mobile payments in emerging markets. (2014). Devsbuild.it. Retrieved October 13, 2014, from <http://devsbuild.it/content/Infographic-Mobile-Payments-Emerging-Markets>
- Internet usage statistics for all of the Americas. (2014). Internet World Stats. Retrieved April 10, 2014, from <http://www.internetworldstats.com/stats2.htm#americas>.
- Kane, S. (2014). Legal process offshoring. About.com: Legal Careers. Retrieved April 18, 2014, from <http://legalcareers.about.com/od/jobmarket/a/Offshoring.htm>.
- Kennedy, S. (2012). Middle class in emerging markets means growth: Cutting research. Bloomberg. Retrieved October 12, 2014, from <http://www.bloomberg.com/news/2012-10-18/middle-class-in-emerging-markets-means-growth-cutting-research.html>
- Klugin, S. (2013). Why mobile advertising has quadrupled in Brazil. Latin Link. Retrieved April 18, 2014, from <http://latinlink.usmediaconsulting.com/2013/06/why-mobile-advertising-has-quadrupled-in-brazil/>
- Kraglund-Gauthier, W. L. & Young, D. C. (2014). Hiding behind a password: Are online classes as private as we think? In K. St. Amant & M. C. Rife (Eds.), *Legal issues in global contexts: Perspectives on technical communication in an international age* (pp. 7-26). Amityville, NY: Baywood Publishing Company.

- Langmia, K. (2011). Traditional cultures and their effects on globalization: An African Perspective. In K. St. Amant & B. Olaniran (Eds.), *Globalization and the digital divide* (pp. 37-57). Amherst, NY: Cambria Press.
- Mears, C. (2013). Personas – The beginner’s guide. theUXreview. Retrieved September 19, 2014, from <http://theuxreview.co.uk/personas-the-beginners-guide/>
- Moran, L. (2013). Computer programmer quits job because he’s paid too much. Daily News. Retrieved April 17, 2014, from <http://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm>.
- Nideov, E. (2014). Paving the way for Russian online video market. The St.Petersburg Times. Retrieved April 17, 2014, from <http://www.sptimes.ru/story/39024>.
- O’Connor, K. (2011). Personas: The foundation of a great user experience. UXMagazine. Retrieved June 24 2013, from <http://uxmag.com/articles/personas-the-foundation-of-a-great-user-experience>.
- Putkey, T. (2011). Personas in user experience. The Content Wrangler. Retrieved September 18, 2014, from <http://thecontentwrangler.com/2011/08/23/personas-in-user-experience/>
- Quick Facts: Software Developers. (2014). Occupational outlook handbook. Bureau of Labor Statistics. Retrieved April 18, 2014, from <http://www.bls.gov/ooh/computer-and-information-technology/software-developers.htm>.
- Razumovskaya, O. (2013). Russia’s Internet market predicted to post double-digit growth. The Wall Street Journal. Retrieved April 18, 2014, from <http://blogs.wsj.com/emerging europe/2013/10/18/russias-internet-market-predicted-to-post-double-digit-growth/>.
- Robertson, J., Stone, D., Niederwanger, L., Grocki, M., & Smigh, E. (2005). Offshore outsourcing of tax-return preparation: Promising business opportunities and professional standards. The CPA Journal. Retrieved April 17, 2014, from <http://www.nysscpa.org/cpajournal/2005/605/essentials/p54.htm>

- Rohde, D. (2012). The swelling middle. Reuters. Retrieved October 12, 2014, from <http://www.reuters.com/middle-class-infographic>
- St. Amant, K. (2012). What do technical communicators need to know about international environments? In J. Johnson-Eilola & S. A. Selber (Eds.), *Solving Problems in Technical Communication* (pp. 479-496). Chicago: University of Chicago Press.
- St. Amant, K. (2005). A prototype theory approach to international web site analysis and design. *Technical Communication Quarterly*, 14; 73-91.
- St. Amant, K & Rife, M. C. (2014). Legal issues in global contexts: Examining friction points on the flat earth. In K. St. Amant & M. C. Rife (Eds.), *Legal issues in global contexts: Perspectives on technical communication in an international age* (pp. 1-5). Amityville, NY: Baywood Publishing Company.
- Sauro, J. (2012). 7 core ideas about personas and the user experience. *Measuring U*. Retrieved September 19, 2014, from <http://www.measuringu.com/blog/personas-ux.php>
- Sen, S. (2013). India to surpass U.S. in Internet users soon. *Business Today*. Retrieved April 10, 2014, from <http://businesstoday.intoday.in/story/india-to-surpass-us-in-internet-users-soon/1/201229.html>.
- Smith, J. (2012). Defining and applying personas to UX design. *tuts+.* Retrieved September 19, 2014, from <http://webdesign.tutsplus.com/articles/defining-and-applying-personas-to-ux-design--webdesign-7561>
- Sun, H. (2012). *Cross-cultural technology design: Creating culture-sensitive technology for local users*. New York, NY: Oxford University Press.
- Trapani, M. (2011). HIPPA, patient privacy and offshoring medical transcription. *SylentType Incorporated*. Retrieved April 18, 2014, from <http://www.silenttype.com/medical-transcription/articles/hipaa-patient-privacy-and-offshoring-medical-transcription>.

- Ulijn, J. M. & St. Amant, K. (2000). Mutual intercultural perception: How does it affect technical communication—Some data from China, the Netherlands, Germany, France, and Italy. *Technical Communication*, 47; 220-237.
- Ulijn, J. M., & Strother, J. B. (1995). *Communicating in business and technology: From psycholinguistic theory to international practice*. Frankfurt, Germany: Peter Lang.
- van Reijssouw, V. & de Jager, S. (2011). The role of appropriate ICT in bridging the digital divide: Theoretical considerations and illustrating cases. In K. St. Amant & B. Olaniran (Eds.) *Globalization and the digital divide* (pp. 59-87). Amherst, NY: Cambria Press.
- Wauters, R. (2012). Already Europe's largest Internet market and still growing astoundingly fast: Russia by the numbers. *The Next Web*. Retrieved April 17, 2014, from <http://thenextweb.com/eu/2012/04/20/already-europes-largest-internet-market-and-still-growing-astoundingly-fast-russia-by-the-numbers/>.
- World Internet usage statistics: The Internet big picture. (2014). *Internet World Stats*. Retrieved April 10, 2014, from <http://www.internetworldstats.com/stats.htm>
- Yunker, J. (2003). *Beyond borders: Web globalization strategies*. Indianapolis, IN: New Riders Publishing.