Understanding Intercultural Communication on Global Virtual Teams:

Exploring Challenges of Language, Culture, Technology, and Collaboration

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Abstract

This study investigates differences in communication that exist among native English speakers (NSs) and non-native English speakers (NNSs) on global virtual teams (GVTs) where English is the *lingua franca*, or common working language. Four communication influences – language, culture, technology, and collaboration – are at the center of this inquiry. A hybrid theoretical framework is proposed, comprised of a dichotomy of virtual Communities of Practice (VCoPs) and intercultural communication (emphasizing national cultures), aligning with the shifting nature of GVTs that increasingly resemble CoPs.

Three key findings emerged from interviews with 21 NS and 29 NNS professionals about their memorable experiences on GVTs. First, while NSs and NNSs had many similar and different experiences on GVTs, NNSs had more challenges overall than NSs in the four categories of language, culture, technology and collaboration. Second, language was a critical factor overwhelmingly noted by NNSs, as compared to NSs, that deserves additional attention beyond its link to cultural differences in general. Third, belongingness was a critical factor noted by both NSs and NNSs that should be leveraged for greater collaboration in GVTs.

Three key implications relating to these findings are discussed. First, encouraging and creating wider awareness of the nature and dynamics of GVTs will promote better team collaboration through understanding communication challenges for NSs and NNSs. Second, designing a foundational blueprint for professional learning and development opportunities will help workplace practitioners increase knowledge and build competencies for successful participation on GVTs. Third, building on this study's findings will spur future contributions in GVT scholarship for technical and professional communication and business communication. In particular, integrating a hybrid framework of VCoPs and intercultural communication will serve as a valuable mechanism through which to view communication differences on GVTs. Given that the nature of GVTs continues to evolve based on the shifting global work environment, future collaborative partnerships between researchers and practitioners will benefit communication-related academic disciplines and industries.

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Chapter 1: Introduction to Global Virtual Teams

It is evident in today's increasingly diverse and global workforce that effective virtual communication is growing in importance within many organizations and is likewise becoming a valued professional competency across many levels of employees. It is projected that within a few years, more than 1.3 billion people worldwide will work virtually (Johns & Gratton, 2013, p. 68). In many companies, this virtual communication includes teams in which members representing multiple cultures need to collaborate from a distance. In addition to its increased degree of importance, virtual team communication's prevalence is accelerating and its conceptualization is morphing as quickly as the trajectory of global business. This shift in the frequency and speed of change in team dynamics is becoming an issue of critical importance for organizations as it impacts successful communication outcomes.

To illustrate this change, imagine the following scenario, taking place in a large multinational organization:

> *A manufacturing company headquartered in the U.S. with global offices in three other regions (Europe, Asia-Pacific, Latin America) is preparing to launch a new product in Brazil in the next six months. A new cross-functional global team of eight (representing one each for Brazil and the U.S. in marketing, sales, finance, and legal) is charged with designing and rolling out a global marketing program for the new product. This team has not worked together before this project. In fact, the finance*

representative is new to the organization as well as the team, and now needs to get up to speed very quickly after the former finance lead resigned last month.

After their first two calls, the team is encountering some communication issues. To stay on schedule and move the project forward, the U.S. team leader has jumped in to quickly assign responsibilities and get all participants involved, yet is frustrated with the initial lack of responses or feedback. There is an important deadline fast approaching, and the team uncertainty is threatening the deliverable that is due to be presented soon to the senior leadership.

The sales and marketing representatives have had some challenging discussions with their legal and finance counterparts, whom they view as overly conservative. While both sides have their customers top of mind, one side is focused on getting products to the customers who need them while meeting aggressive revenue targets, and the other is charged with protecting the company's interests.

There are also challenging dynamics between the two countries. The degree of conflict may differ slightly depending on the issue at hand and the values of the particular geographical region (e.g., preferred forms of advertising). The two regions' approaches to managing this project and their communication plan vary in both subtle and significant ways.

Although English is presumed to be the common language of business across the organization and used in these weekly mixed teleconferences, there have been some misunderstandings around terminology, requests, and consensus on decisions to move forward. When conversations become slightly tense and marked by occasional periods of silence, there is uncertainty on both sides as to whether the two regions are indeed on the same page.

Additionally, to continue the communication between conference calls, some team members clearly prefer emailing or actively sharing documents on the intranet site. However, others do not, including one key team member who sounds engaged on the phone but does not follow-up through other avenues.

What are some of the potential roadblocks illustrated above for this new group? First, it appears that this team is struggling to find connections with each other, identify as a team, and establish common team goals and responsibilities. As a result, the essential building of rapport and trust will be negatively impacted, possibly preventing open and transparent communication exchanges. Next, there is some need to acknowledge and align cultural values and behaviors from a larger perspective; that is, job function, organizational, and national cultures. These differences may include preferences in orientation to time, tasks, relationships, individualism, and hierarchy, among many other possibilities. In addition to culture differences, there may be some language disconnects as well.

Even if these are native or highly-proficient English speakers, the team risks making false assumptions as to comprehension or fluency, especially when the majority of team communication is limited to teleconferences lacking helpful non-verbal cues. From the inconsistent level of engagement demonstrated, it appears that some participants prefer different forms of media over others (conference calls, email, shared files). As a result, some or even all of these factors may be impacting the degree of collaboration that this team will achieve.

In support of the need to further understand the complex and changing dynamics experienced by many teams, such as the one depicted in the above scenario, my research explores the ongoing and accelerating shift in communication on global virtual teams (GVTs) in the workplace. While this structure needs to be defined in closer detail, GVTs are those teams connected via technology and comprised of people in various locations around the globe (Dekker, 2008, p. 2). GVTs are also language-diverse teams "composed of individuals who speak different mother tongues" (Kassis Henderson, 2005, p. 69). Within GVTs where English is designated as the *lingua franca,* or common language of the organization, my specific focus is identifying differences between native English speaker (NS) and non-native English speaker (NNS) professionals as influenced by language, culture, technology, and collaboration. In the discussion that follows regarding the rationale and significance of the topic, I aim to further clarify the connection between these dynamics, which are fundamental to my research questions:

- *What differences in communication exist among native and non-native English speakers (NSs and NNSs) on global virtual teams (GVTs) where English is the lingua franca, or common working language?*
    - *What differences relate to language?*
    - *What differences relate to culture?*
    - *What differences relate to technology?*
    - *What differences relate to collaboration?*

I chose to focus on these research questions based on their ability to describe GVT experiences from a holistic perspective while then exploring more specific factors at a deeper level for comparison between both groups of participants.

In fact, my interest in the general topic of GVT communication and these specific questions has its roots in my professional background. I have significant workplace experience within several different functions in several global companies across a variety of industry sectors. My current position involves frequent involvement in GVTs, often with NNSs. Supplementing my practitioner role, I have many years of facilitation and consulting in the area of intercultural communication, business communication, and professional English communication skills for NNSs. Therefore, I became interested in exploring the foundations of this phenomenon after personal experience observing and participating on global virtual teams myself. Chapter 3 will discuss the advantages and precautions of conducting insider research. Suffice it to say, my background provides me with a strong interest and ease of access that will

continue to sustain my efforts along the way as this area of research gains momentum.

Beyond my own interest, my colleagues have also started to experience similar changes in their involvement on GVTs, suggesting to me in my early planning stages that there was a pattern that could benefit from research. Furthermore, in addition to this local experience, there has been increasingly more attention in the literature as well over the past few years as discussed next after the relevance of this topic to the field of communication.

Relevance to Communication Disciplines

As this study will show, workplace communication and GVTs is a growing interdisciplinary area of significance for several fields, including communication, business management, human resource development, second languages, project management, and many others. While some threads of this interconnectedness will be woven throughout, I will position my study to address the relevance to two fields in particular: technical and professional communication as well as business communication. These related disciplines, with their own fuzzy boundaries and definitions, can be distinguished simply for purposes of this study as follows: technical communicators create products or processes for specific business purposes using a variety of media, business communicators interact internally and externally in broader contexts, and professional communicators may serve as a bridge between the two. Regardless of their similarities or distinctions – and they are often grouped together in

different combinations in journals, professional associations, academic program content and location (especially technical and professional communication as linked below) – all seek to maximize effective communication in the workplace and are equally impacted by the move to virtual environments.

Technical and professional communication. Technical and professional communicators should recognize the need to develop an awareness of and sensitivity to cultural and other differences in communication styles and strategies across boundaries on GVTs. They have a vested interest in preventing miscommunication on GVTs, since their objective is to make sure that messages are being conveyed with the right purpose, audience mindset, rhetorical framing, format and media delivery selection (which can all vary according to preferences and different influences). St. Amant (2013) stresses the importance of the rhetorical link: “By understanding how ideas from the theory of rhetoric can be applied to intercultural communication, technical communicators can interact more effectively in global business situations…[and] better understand and design more effective materials for audiences from cultures other than their own” (p. 33). Spinuzzi (2007) agrees with the need for adjusting to multiplying stakeholders in global virtual environments, stating, “Currently we face work structures that were hardly conceivable a few decades ago, and these work structure gain require different rhetorical skills and communication practices” (p. 266). Starke-Meyerring (2005) addresses the practical implications for professional communicators who increasingly “work for or provide services to

transnational corporations, work in global virtual teams, and communication in global networks…Moreover, the globalization of professional communication as a service changes the circumstances (i.e., where, how, under what conditions, by whom, with whom, and for whom) under which the service will be produced" (p. 469).

Technical and professional communicators, regardless of which job function they might be embedded in, play a dual role in this GVT environment. They already know the critical nature of good communication. Sharpening those skills to incorporate knowledge and application of the complexities of intercultural communication is a strategic endeavor benefitting all parties. In addition to themselves benefitting from some of the knowledge-sharing and skill-building for their own professional development purposes regarding GVTs on which they work, technical and professional communicators may find themselves serving an active role behind the scenes with other functions in designing, testing and publishing some of these documents, training materials, web sites and other materials while keeping in mind the needs and preferences of the diverse team members.

Therefore, practitioners in technical and professional communication need to concern themselves not only with the technical aspects of their job, but also become savvy about the principles around intercultural communication and collaboration and technology trends that increasingly define our global workplaces and especially GVTs. The nature of their skill set in technical and

professional communication aligns well with the various challenges that will be highlighted here for GVTs. This is a professional competency that will be increasingly valued and set employees apart. In fact, given the rapidly changing workplace environments and impact on team life and structure, technical and professional communicators who have agility, resiliency and familiarity with the many facets of GVTs will be sought out as valued partners to help onboard new members, model best practices, and maximize team collaboration and efficiency.

At present, there is a dearth of empirical data regarding virtual communicators to support these goals. Rice-Bailey (2014) states, “We have limited knowledge about how remote [technical communicators] function, either theoretically or practically, as audience advocates” (p. 96). In support of research citing collaboration, communication, and complexity of the work as noteworthy issues, the social and contextual positioning becomes more important. Rice-Bailey further claims, “We cannot take for granted that [technical communicators] will always be part of an onsite, established corporate environment. What they *will* be part of are virtual communities of practice…their learning will be based on actual work practices rather than on knowledge acquired outside the context of actual work” (p. 105). Such calls for additional research validate this study and acknowledge the importance of awareness of GVT communication dynamics for technical and professional communicators.

Business communication. Similar to their technical and professional colleagues, business communicators are juggling new organizational and team

dynamics and the resulting impact for their respective discipline. It is said that nothing is certain but change, and therefore so are shifting global and business environments. Communication, of course, is an essential ingredient in all its forms but particularly in the complex intercultural virtual space. Not surprisingly then, business communication is increasingly “intercultural, horizontal, strategic and change focused” (Berry, 2011, p. 201).

In making the case for GVTs, the economic and business justifications as well as technical communication advances are clear. (Berry, 2011, p. 201). Tannenbaum, Mathieu, Salas, & Cohen (2012) agree with other organizational researchers that

> We have entered a new era. Today, most teams operate in a more fluid, dynamic and complex environment than in the past. They change and adapt more frequently, operate with looser boundaries and more likely to be geographically dispersed. They experience more competing demands, are likely to be more heterogeneous in composition, and rely more on technology than did teams in prior generations. Teams have become so ubiquitous that many employees, and managers, take them for granted and assume that they will be effective. (p. 3)

Conversations about changing business communication today for many companies must consider global ramifications, particularly culture and language. “Dealing with the full complexity of human diversity has become a daily task for a substantial part of the business community” (Lauring, 2011, p. 231). Citing

Edward T. Hall, Lauring (2011) notes that “culture is communication and communication is culture” (p. 233). In other words, intercultural communication does not take place in a vacuum but is tied to the business context and that means the organizational culture as much as national culture (p. 235).

Notably, the effects of language in intercultural team interactions have been long neglected by international business communication researchers. Business communication scholars are now encouraging others to refine theories on different team processes under a language lens (Tenzer, Pudelko, & Harzing, 2014, p. 508, 528). As Charles (2007) states, from her position at an International Business Communication unit of a European economics university:

> We see language and communication dynamics as the driving force in global business. We therefore examine language specifically as an enabler, but also increasingly as a troublemaker in communication and globalization. In all our work, we have an applied focus: We want to do research that can be used for the teaching of future global managers in a business school environment. We also want to help existing companies to globalize and to operate successfully. (p. 261)

Progressive and visionary companies see language as being at the very core of international business, and therefore they have a realistic perspective of the role of language in their operations, including team collaboration. Business communicators, whether native or non-native English speakers, need to learn to “listen, make situational adjustments, and use sociopragmatic, situational

potential to jointly create meanings and operational cultures" (Charles, 2007, p. 278).

With the evolution of teams, and business in general, guaranteed, business communicators need to find ways to define, adapt, and manage how collaboration will work. Wageman, Gardner, & Mortensen (2012) astutely observe that with the changing ecology of teams, the old questions of what defines a team and what defines and measures team effectiveness become new again: "Collaboration and teamwork are inherent features of human life and evolving continuously. As human society keeps changing, the reasons and ways people find to work together will keep changing" (p. 312).

To conclude this section, both my personal experience and interest in changing communication on GVTs as well as the attention it has received in the technical and professional communication and business communication fields motivated me to design this study to further pursue an understanding of communication influences on GVTs. The next step is to first define the concept of GVTs, as it is more complex than apparent at first glance.

Defining Global Virtual Teams (GVTs)

The term "virtual teams" is often applied to a wide range of social and organizational phenomena (Zakaria, Amelinckx, & Wilemon, 2004, p. 16), suggesting it is best to define by working backwards, starting with the foundational building block, that of a team. In the next section, I will discuss three components (global, virtual and teams). See Figure 1 below for a composite

definition that will be referred to throughout this section and that also lays the foundation for the remainder of this study.

Global Virtual Teams (GVTs): Technology-mediated, globally-dispersed work groups, usually representing different languages and cultures

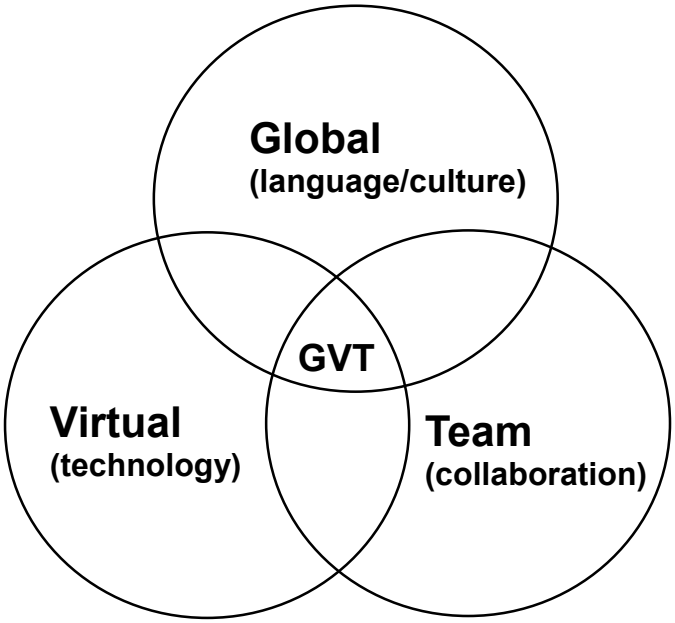


Figure 1: Communication Influences on a Global Virtual Team

As noted, I will begin building the definition of GVTs with the base component of teams.

Teams. Traditionally, work teams have been characterized as groups of any size, in an organizational setting, that may include internal members (employees) and external parties (for example, consultants or customers).

Teams can be further defined as “a group of individuals who interact interdependently and who are brought together or come together voluntarily to achieve certain outcomes or accomplish particular tasks” (Berry, 2011, p. 187). While there are many types of teams, typically, there are four shared attributes: a definable and limited membership, interdependent functionality with a shared sense of purpose, a joint responsibility for outcomes, and collectively-managed team relationships across organizational boundaries (Berry, 2011, p. 187).

Team may also be unifunctional or multifunctional (i.e., heterogeneous or homogenous) and focused on interdependent tasks towards a common goal or purpose (Gillam & Oppenheim, 2006, p. 161). Working together engages members in many communication behaviors which positively or negatively impact the success of their mission. Coordination, cooperation, and information exchange are three commonly cited behaviors; others include team adaptability, assistance, providing feedback, team maintenance, and psychological support. These behaviors are often either constructive, aggressive, or passive (Dekker, 2008, pp.13-14). Other benefits to both team members and their organizations include improvements in productivity, service delivery, quality, creativity and innovation, motivation and engagement, and professional development and organization capability-building (Hays, 2010, p. 103).

Teams have long been described by Tuckman (1977) and many others as developing over various stages referred to as forming, storming, norming, performing and adjourning (as cited in Berry, 2011, p. 191). It is during these

iterative, sometimes contentious, stages that team members become familiar each other and their roles, build trust, challenge each other, align with team goals, accept accountability, and produce results. All of these stages are, understandably, influenced by the nature and quality of communication and resulting behaviors of the team.

A relatively recent key development in team dynamics is the increased fluidity impacting member composition as reflected by organizational change and focus. Such movement and ambiguity is impacting all areas of organizations, but its effects on communication can be intensified. In fact, some describe the aforementioned traditional understanding of teams as “archetypal” and “increasing outmoded” (Wageman et al., 2012, p. 301). Teams now have components of “something(s) old” and “something(s) new” (Maynard, Mathieu, Rapp & Gilson, 2012, p. 342). This continuing shift in team composition and identity is key in this study and is discussed further in Chapter 2 as an important rationale for a hybrid framework.

Virtual + Teams. Adding the next layer of complexity, virtual teams are dispersed and connected, reliant on technology for most or all of their communicative interactions. Starting with the meaning of “virtual” provides some insight into the nature of this increasingly sophisticated genre of team. Virtual can be traced back to a Latin meaning, “effective because of certain inherent virtues or powers” but has taken on several contemporary meanings such as “not real, but appears to exist,” “not the same in actual fact” and “virtual reality” (Gillam &

Oppenheim, 2006, p. 161). Smith & Blanck (2002) suggest the term “virtual” is vague and faddish, meaning “almost but not quite,” implying that virtual teams are not actual teams and diminishing their performance expectations (p. 295). Yet, it is clear that, a decade out from their statement, the term “virtual teams” has become ensconced in today’s workplace vernacular.

Linking to the definition of team, a virtual team then is a “group of people who work across time, space and often organizational boundaries using interactive technology to facilitate communication and collaboration,” managing issues that traditional teams face in addition to new communication challenges (Gillam & Oppenheim, 2006, p. 162). Definitions of virtual teams usually encapsulate three key attributes: a functioning team, geographically dispersed, that relies on technology-mediated communications to accomplish “interdependent performance goals” (Ardichvili, 2008, p. 542). Clear goals are particularly essential on virtual teams, requiring more structure for understanding than can be accomplished in a face-to-face team that has frequent opportunities for informal connections (Berry, 2011, p. 191). While many teams, even those that are partially or fully co-located, use technology to different extents, virtual teams depend entirely on technology as virtuality (Zakaria et al., 2004, p. 16). In terms of degrees of virtuality, the highest is “when all members work apart from each other in distant locations and *only* communicate and interact through computer-mediated communication or other distance communication technologies” (Berry, 2011, p. 188).

In many cases, members of virtual teams are from different functional areas of an organization and may also include customers, vendors and other third-party members (Robey, Koo, & Powers, 2004, pp. 541-543). Virtual teams can differ not only by member composition but by other dimensions as well. They can be grouped by task orientation, such as networked, parallel, project or product-development, work or production, service, management, and action teams; or linked by coordinates of time, place and organization (Gillam & Oppenheim, 2006, p. 161). Other characteristics of virtual teams include the co-creation of knowledge by the group, experiential (or situated) learning opportunities that incorporate practice, special demands that require flexibility to adjust practices across teams, a give-and-take approach to accommodating others' needs, adapting to a lack of visual communication cues, and different organizational cultures "melded into a cohesive whole" (Robey et al., 2004, p. 545).

Beyond the specifics of the distinguishing characteristics of virtual teams, their presence is becoming more common across organizations and perhaps most or all teams are on their way to becoming virtual to some degree. Because communication technologies are becoming so prevalent, many now suggest that all teams should be categorized as virtual (Dekker, 2008, p. 2). Indeed, pure face-to-face teams are becoming rarer and it is increasingly difficult to distinguish between face-to-face teams and virtual teams (Dekker, 2008, p. 5, 12). Others do suggest virtual teams do not threaten the viability or signal the end of traditional

co-located face-to-face teams and it is probable that the two will co-exist for the near future (Gillam & Oppenheim, 2006, p. 173). Regardless of their structure, work groups have always relied on effective communication, and in virtual teams, “the lack of prior history, and thus an absence of shared understanding, and temporal/geographic dispersions makes communication critical” (Sarker, et al., 2011, p. 283).

Not surprisingly, virtual teams are now increasingly global, as discussed next.

Global + Virtual + Teams. Adding yet another layer of complexity, GVTs are, as the name implies, a subset of virtual teams and are not only geographically-dispersed but also represent diverse cultures and languages while relying on the same technologies and communication strategies as other virtual teams. Definitions for GVTs appear to be fairly universally agreed upon for the most part in the literature, with the exception of a discussion of the difference between virtual teams and virtual communities of practice (VCoPs) as will be discussed in the next chapter on the framework.

Quite simply, at least in words if not execution, GVTs are technology-mediated groups comprised of people in various locations around the globe dedicated to working together on related tasks (Dekker, 2008, p. 2). The key point of emphasis is that GVTs “routinely cross borders” (whether internationally or otherwise geographically-dispersed or multiculturally diverse), using communication technology to link members (Shachaf, 2005, p. 46). And yet, not

so simply, GVTs, also referred to as dispersed or distributed teams, are difficult to categorize too since there are many variables among them (number of locations, number of employees in each location, duration of team, etc.). Moreover, dispersion in GVTs can be categorized in three dimensions: spatio-temporal (distance), socio-demographic (organizational, cultural, national differences), and geographic configuration (isolation) (Dekker, 2008, p. 89). Important to note is that the virtual team and local contexts are not independent in that they affect each other's participation, work processes, and accountability (Huang & Trauth, 2007, p. 37). GVT members differ in the degree of virtuality (dependence on technology for communication) but also in the national and cultural backgrounds represented. More significant than composition is the fact that participants are able to successfully think and work with the diversity of the global environment to create a successful GVT. In other words, according to Lipnak & Stamps (1997), they practice, out of necessity, a form of "working together apart" (as cited in Zakaria et al., 2004, p. 17).

There are three minor points of contention around the definition of GVTs. First, one researcher describes GVTs as "temporary with finite life span and specific task focus with no prior history working together and may never have to work together again" (Nataatmadja & Dyson, n.d., p. 498). I disagree with the statement about the lack of historical and future collaborations; although this is certainly possible, in today's fast-changing and frequently reorganizing transitional workforce, it is by no means the norm. Second, another researcher

suggests that GVTs “rapidly form, change and dissolve due to dynamic changes in the market…team members spread among many projects with competing priorities” (Daim, Ha, Reutiman, Hughes, Pathak, Bynum, & Bhatla, 2012, p. 199). Again, while this is often true in today’s flatter, matrixed environments in which employees are committed to projects across the organization under different leadership, this may not always be the case. Finally, despite the majority of the definitions in the literature that refer to GVTs as being comprised of individuals from different countries, there are distinctions such as expatriates moving temporarily to different countries and embedding themselves in new cultures, the fact that many countries have multiple languages or subcultures themselves, or that many organizations structure their business models around regions rather than countries. In my opinion, a virtual team may, in fact, have many characteristics of a GVT, notwithstanding the “representation across different countries” element of the definition. So whether a diverse team is called a *global* virtual team, an *international/intercultural* virtual team or a *multicultural/multilingual* virtual team, it will face many of the same sociolinguistic and sociocultural dimensions and challenges.

In summary, the unique dynamics of GVTs transcend time, space, cultures and organizations (Robey et al., 2004, p. 541). They serve as the building blocks of success for global virtual organizations, yet not without many pathways to navigate (Shachaf, 2008, p. 131). In fact, GVTs offer organizations a competitive advantage in today’s international environment (Grosse, 2002, p. 4).

There are many reasons for this competitive advantage, including rapid response to change, gained efficiencies, diversity of thought, talent management, flexibility, knowledge asset transfer and collaborative relationships. Although it is tempting to jump to the myriad challenges of GVTs due to their complex and fluid nature, their sheer number, and promising research angles, it is important to highlight first why there is an incentive for organizations to develop a culture of effective teams. Key advantages are discussed briefly below.

Advantages of GVTs

Organizations in the 21st century are facing many pressures requiring new ways of thinking and reacting. Such rapid changes require agility and effective communication that is complicated by the frequency, speed and urgency of work itself as well as changes in strategic direction, priorities, staffing reorganizations/downsizing/outsourcing, and matrixed organizational structures. This quickly transforming business environment requires organizations to respond equally rapidly and form effective teams, particularly virtual teams that can offer organizations a competitive advantage (Bergiel, Bergiel, & Balsmeier, 2008, p. 99). Indeed, organizations are almost forced to work with GVTs now to compete in the new environment (Dekker, 2008, p. 442). Within these organizations, technical and professional communicators find themselves immersed in a “global, distributed work, agile development, symbolic-analytic, support economy” of rapid, major changes (Dicks, 2010, p. 76). Without a doubt,

ubiquitous change and the need for managing the ambiguity with agility is a major challenge that may be met by successful GVTs.

Some of the more obvious benefits of GVTs include process efficiencies, such as common communication times and sources, work processes, and increased productivity. Potentially these efficiencies could increase the amount and speed of knowledge transfer and sharing across boundaries, a key focus of GVTs. Not only do GVTs accomplish old tasks more quickly, easily and cheaply with often accelerated decision-making, they add new tasks previously thought impossible or inconvenient (Gillam & Oppenheim, 2006, p. 162, Daim et al., 2012, p. 203). In addition to process efficiencies are the ever-important cost efficiencies, including travel cost and time savings, office space, and even energy such as reduced CO2 emissions from less travel (Bergiel et al., 2008, p. 107, Dekker, 2008, p. 12, Gillam & Oppenheim 2006, p. 162). These cost savings also extend to a promise of improved resource utilization (Bergiel et al., 2008, p. 100). While economics play an important role, GVTs nevertheless help connect and build relationships in distant places without travel or other inconveniences (Grosse, 2002, p. 4).

Another prime advantage to collaborating in GVTs is the diversity of thought, sharing and innovation that comes together through dispersed groups, particularly with increased global representation. There is a potential for a breakdown of silos of thought through leveraging best practices with a resulting positive impact on knowledge sharing among members and on group outcomes

(Daim et al., 2012, p. 205; Gillam & Oppenheim, 2006, p. 162; Hardin, Fuller, & Davison, 2007, p. 131; Kauppila, Rajala, & Jyrämä, 2011, p. 414). There is an ability to reach a wider audience as well where divergent knowledge perspectives are brought into the discussions (Bergiel et al., 2008, p. 107; Huang & Trauth, 2007, p. 42). Better decision-making is found in GVTs with cultural diversity, as they leverage diverse skills and knowledge while creating "culturally synergistic solutions" that promote greater acceptance of new ideas (Shachaf, 2008, p. 133; Zakaria et al., 2004, p. 17). Granted this wide range of diversity can be more challenging but also more rewarding, with differing values and styles yielding richer solutions and blending complementary skills (Smith & Blanck, 2002, p. 302).

GVTs also influence talent management at organizations by enabling recruitment of the most talented employees appropriate for a role regardless of geographic location (Bergiel et al., 2008, p. 107; Dekker, 2008, p. 12; Tannenbaum, et al., 2012, pp. 3-4). Incorporating talent from various locations on GVTs in this way allows organizations to become more competitive in the global economy (Dekker, 2008, p. 12). GVTs also offer opportunities for employee development (e.g., working across cultures, developing nuanced skills relevant to globalization) (Gillam & Oppenheim, 2006, p. 162). In fact, studies have shown that multi-cultural heterogeneous teams outperform homogenous teams, in a key measure of employee engagement (Dekker, 2008, p. 36).

GVTs, by their dispersed nature, ideally offer the promise of freedom and flexibility of team membership, increased work-life balance, shared accountability for actions and results, and inspired innovation through participation (Bergiel et al., 2008, p. 100; Gillam & Oppenheim, 2006, p. 162). Of course, managing different time zones and flexible scheduling can be a constraint but likewise a resource that can be exploited for benefit (Kimble, Li & Barlow, 2000, p. 5). This benefit can manifest itself as asynchronous technologies are accessed at an employee's convenience, such as on-demand viewing of information and training as needed (Daim et al., 2012, p. 203).

Related to talent management is the importance of the knowledge base retained by an organization's workforce. Whether organizational changes occur voluntarily or involuntarily, expectedly or unexpectedly, the loss of employees means loss of knowledge. Therefore, GVTs and related virtual communities of practice that contribute to preserving and sharing the embedded knowledge within an organization can help mitigate this risk. In today's fluid economy, knowledge is increasingly viewed as an asset that needs to be managed in organizations (Kimble et al., 2000, p. 2). As a corollary, then, GVTs should be viewed as an asset that operationalizes how we communicate, transfer, and grow this essential knowledge. Creating effective virtual teams is one strategy that organizations have to leverage this power.

Fostering collaborative relationships is another advantage of GVTs. Our current information age and knowledge economy are characterized by the

importance of networks, relationships and globalization. It is a reality today with the growing number of multinational organizations, with employees who have never met working on joint projects, and with more companies relying on outsourced labor (Nataatmadja & Dyson, n.d., p. 498). GVTs serve as a bridge between the different populations and their contributions to the organization's goals. In GVTs, we find enhanced collaboration, increased personal interactions (even if not face-to-face), and enhanced sense of social presence (Daim et al., 2012, p. 203). Such support for team relationships also helps create a sense of accountability where members are motivated to commit to the common goal by supporting each other and being willing to create an environment where others are equally engaged. And while language and culture differences can hinder the speed and/or quality of this relationship-building for a number of reasons as will be discussed further, if communication is managed intentionally, language differences can, in fact, be a source of team cohesion and possibly help nurture the all-important trust (Kassis Henderson, 2010, p. 263).

Challenges of GVTs

As noted above, there are numerous challenges that threaten the effectiveness of GVTs and indirectly impact organizations' bottom lines from the ripple effect of project failures and team disengagement. But what is equally interesting is that some characteristics that are noted as advantages of GVTs are duplicated here as challenges. This suggests that there is a delicate balance and teams that manage to get it right will earn greater success.

Organizations introducing GVTs face multilayered complexities, including social, economic, managerial and psychological as well as technical (Kimble et al., 2000, p. 9). In other words, in some scenarios, GVTs can represent serious disruptions in preferred ways of working. From where do these complexities and disruptions arise? For one, virtual teams operate in two spaces simultaneously (physical and electronic) that are not mutually exclusive, sometimes overlapping and with different governing norms (Kimble et al., 2000, p. 4). As result, both people and information technology issues are key, with an often-needed reminder that technology is a functional tool not to be overshadowed by the human challenges of teamwork (Zakaria et al., 2004, p. 17, 19).

Interestingly, and contrary to the earlier statement about accelerated decision-making, some suggest that GVTs require more time-consuming decision-making processes, and the resulting stress from miscommunications may be heightened or less easily neutralized as compared to face-to-face communication (Zakaria et al., 2004, p. 19). Collaboration may be impacted by communication disruptions, including a lack of shared understanding and missing contextual information when traditional communication mechanisms are lost or distorted (Beyene, Hinds, & Cramton, 2009, p. 4; Shachaf, 2008, p. 131). This may result in unevenly distributed information across GVTs (Gillam & Oppenheim, 2006, p. 162). Ultimately, miscommunication may stem from five factors: ethos (trust, credibility), social communication (casual or informal, not related to the task at hand), understanding the other (the context and how to

communicate to them effectively), technology (as an agent of communication in what it does and does not provide) and boundaries (rules that limit communication) (Brewer, 2010, pp. 329-330).

From a practical standpoint, GVTs need to honor distance, time zones and scheduling conundrums (Bergiel et al., 2008, p. 100, 104; Grosse, 2002, p. 2; Smith, 2002, p. 303). It is also advantageous to manage the disruptive impacts of information overload, even when asynchronous media add to perceptions of volume, pressure, and stress (Gillam & Oppenheim, 2006, p. 162, Zakaria et al., 2004, p. 24). This active management and consideration may help curtail such detrimental dynamics as low individual commitment, role ambiguity, and absenteeism (Nataatmadja & Dyson, n.d., p. 498).

In short, GVTs risk communication breakdowns due to many barriers, the most prominent of these being trust, interpersonal relations, culture and language diversity, team leadership, and technology (Daim et al., 2012, p. 202). Each of these is discussed in more detail below. In any form of work team, virtual or not, global or not, building and sustaining trust is cited repeatedly as a foundational precept (Dubé, Bourhis & Jacob, 2006, p. 70; Jarvenpaa & Leidner, 1998; Pantelli & Tucker, 2009, p. 113; Sarker et al., 2011, p. 284; Smith, 2002, p. 297). Aligned with trust as crucial components are team identity and member identification. Because the virtual world is composed of information rather than matter, the concept of self and one's identity is different and less unified than in the physical world (Kimble et al., 2000, p. 5). Some feel that identification is more

challenging in virtual environments because of the lack of face-to-face connections (Fiol & O'Connor, 2005, p. 29; Webster & Wong, 2008, p. 41). Others believe that factors such as anonymity and documentation of work and processes may actually help facilitate identification. Still others question whether the technology plays a significant role or whether it is actually the social identities that members bring to the team that have more influence (Sivunen, 2006, p. 346). Therefore, GVTs often have more difficulty establishing relationships and, concurrently, trust. However, that difficulty doesn't make trust any less critical as "there is a close conceptual affinity between the constructs of trust and communication in the digital world (Sarker et al., 2011, pp. 284).

Another frequent thread in the literature related to the relationship and trust building is the recommendation that it is a justified investment to have face-to-face encounters first if possible during team's formative stage (Bergiel et al., 2008, p. 100; Daim et al., 2012, p. 199, 204; Gillam & Oppenheim, 2006, p. 164; Grosse, 2002, p. 5; Kassis Henderson, 2010, p. 375; Kimble et al., 2000, p. 6; Smith, 2002, p. 294; Robey et al., 2004, p. 557; Ruppel, Gong, & Tworoger, 2013, p. 454-455). This personal connection ties into the continuing importance of physical space when possible to help sustain relationships even when the communication moves online (Kimble et al., 2000, p. 12).

Once the GVT is up and operating, establishing or sustaining (if indeed members were fortunate to have had an initial face-to-face meeting) that trust is critical for high performance and team satisfaction (Dekker, 2008, p. 62).

Unsurprisingly, though often overlooked or underestimated, trust is harder to establish virtually than face-to-face because it requires that certain close personal interaction or “physical touch” (Gillam & Oppenheim, 2006, p. 168; Nataatmadja & Dyson, n.d., p. 498).

There are several reasons why trust can be difficult to establish. It can be negatively impacted by incomplete knowledge and uncertainty (Grosse, 2002, p. 6; Shachaf, 2005, p. 46). Effective GVTs need “intragroup” trust but its development can be more difficult with global or cross-cultural groups (Zakaria et al., 2004, p. 22). Furthermore, development of trust in GVTs can be disadvantaged by a lack of common social norms, social interactions, shared experiences and anticipation of future association (Daim et al., 2012, p. 206). So, when distributed team members have limited or no prior collaboration history, shared understandings and group cohesion are difficult to establish (Huang & Trauth, 2007, p. 37). Also, difficult or remote access to information and sharing, as well as late responses or no responses (silence), can lead to conflict or reduced trust (Huang & Trauth, 2007, p. 37). To drive home this point, the degree of technology proficiency among participants is not always an accurate predictor of ultimate team success; rather, it is the degree of trust that serves as the harbinger (Zakaria et al., 2004, p. 19).

Important in establishing trust, interpersonal relationships is another concept that rates as both an advantage and a challenge, depending on how the interactions unfold as well as the perceptions of team members. So what are the

factors that might make interpersonal relationships a risk factor for GVTs? As one might imagine, there are many different facets.

Although we speak of teams as a collective group, teams are very much made up of individuals. One of the challenges is participants' struggle to feel a sense of belonging (Dubé et al., 2006, p. 70). A lack of individual or less frequent communication may reflect a more predominant tendency of GVT members not following up. Further, there is the difficulty of engaging in live communication, whether some cultures or individuals prefer an indirect communication style, as well as the potential reluctance of speaking up (Huang & Trauth, 2007, p. 41). As such, it is worth considering individual personality style issues, such as those measured by the Myers-Briggs Type Indicator (MBTI®) instrument (e.g., natural preferences for extroversion-introversion, sensing-intuition, thinking-feeling, judging-perceiving), which may manifest themselves in interpersonal interactions and can be aligned with many other challenges including intercultural communication (Kirby, Kendall, & Barger, 2007, p. 5). Similarly, the GVT environment may not be conducive to every employee's learning style, especially for those who prefer face-to-face interactions or a more heavily visual context (Bergiel, 2008, p. 107).

GVT members also need to consider different approaches to conflict resolution (Bergiel et al., 2008, p. 100). In a virtual setting, it has been found that relationship conflict and task conflict result, not surprisingly, from the two main challenges of lack of common social identity and increased compositional

diversity (Gillam & Oppenheim, 2006, p. 170). Directness and context play significant roles in these scenarios (Brewer, 2010, p. 330).

With interpersonal relationships and conflict, emotions become a factor. Emotional cues are more difficult to identify and interpret in a virtual setting. This may perhaps make “emotional contagion” or the spread of emotions within a team or organization (generally viewed as beneficial within groups) more difficult and impact meaning-making between members (Beyene et al., 2009, p. 27). Social loafing, where individuals put less effort into group work as compared to individuals work, is a problem in face-to-face teams that carries over and becomes magnified in virtual settings (Chen, Zhang, & Latimer, 2014, p. 652). Where sensitive language issues become a variable, both NSs and NNSs may display negative emotions and reactions as a reflection of others’ coping mechanisms (e.g., code-switching). These not always visible emotions include fear, anxiety, exclusion, devaluation, withdrawal and tension (Beyene et al., 2009, pp. 22-23, 26, 28). When GVT members have difficulty developing interpersonal relationships due to language or culture misunderstandings, interactions may focus strictly on the technical language of work versus the often perplexing small talk or informal communication and participants may remain emotionally detached (Chen & Jackson, n.d., p. 9; Charles, 2007, p. 272).

Notwithstanding the above challenges, some would say the positive aspects of technology and the benefits we receive from it, including in virtual or distributed teams, outweigh the negative emotions (Longo, 2010, p. 164). When

these interpersonal relationship challenges are addressed, the overall effect on the team can be positive, even for remotely located individuals. In fact, for isolated team members with no colleagues at their location, the net impact of social presence (psychological connection vs. physical connection) is positive (Dekker, 2008, p. 88). In conclusion, the previous section described myriad advantages and disadvantages characterizing the complexity of GVTs and sets the stage for framing the rest of this study's focus.

Four Key Communication Influences on GVTs

Clearly, GVTs play a critical role in today's business environment. While they offer many advantages to both organizations and individuals, there are many challenges as well, as discussed above. Many of these potential derailers can often be directly linked to communication. There are four key communication factors that play a role in influencing communication outcomes in global virtual environments that are reflected in the research questions: (1) language challenges, (2) culture challenges, (3) technology challenges, and (4) collaboration challenges. While the four influences are very interconnected, they will be separated for the purposes of analysis and discussion in this study, while at the same time connections are drawn between them where possible. Each is introduced below.

GVT communication influence #1: Language challenges. Language challenges – when they are, in fact, mentioned in studies – along with the closely related topic of cultural differences, are cited as a primary challenge of GVTs

(Bergiel et al., 2008; Chen & Jackson, n.d.; Chen, Geluykens & Choi, 2006; Grosse, 2002; Kassis Henderson, 2005 and 2010; Nataatmadja & Dyson, n.d.; Shachaf, 2005; Tenzer et al., 2014). One study suggests that the most problematic issues in GVTs in order are language, technology, information sharing and culture. And, the 64% of participants citing language struggled with issues around fluency, pronunciation, connotation and structure of key details (Brewer, 2010, pp. 337, 342).

Beyond the aforementioned studies, oftentimes the linguistic underpinnings are not explored more than superficially in the literature. This gap is surprising, given that language, with its impact on context, details, and connotations, is a primary cause of miscommunication in global virtual teams (Brewer, 2010, p. 343). Like other elements of team diversity, there may indeed be advantages resulting from language diversity in global teams, however the literature primarily illustrates the challenges (Chen et al., 2006, p. 691). What follows is a high-level introduction to some of the sub-themes of language on GVTs.

Miscommunication is likely to appear in areas such as the following: total lack of understanding, distortion of message, inappropriate formulation and insensitivity, and insufficient vocabulary or use of ideas where a vital linguistic element is missing (Gillam & Oppenheim, 2006, p. 168). Of course, mere translation is not the solution, resulting in “knowledge stickiness” when translation doesn’t convey the true richness of meaning (Chen & Jackson, p. 9). Other

elements of miscommunication due to language conflicts or indifference include reduced accuracy, slower speech, and various translation issues (Shachaf, 2005, p. 48). Unfamiliar communication patterns due to linguistic differences can contribute to ambiguity, uncertainty, and absent trust (Kassis Henderson, 2010, p. 363). A lack of accuracy results in increased costs of communication requiring additional time and effort for encoding and decoding messages (Shachaf, 2008, p. 134). These may occur in more complicated speech acts such as expressing disagreement or seeking consensus, beyond the more obvious form and structure issues such as phonetics (accent) or lexicon (word choice) that typically come to mind as language barriers.

Two potential communication barrier categories related to language include the more obvious language competence as well as sociolinguistic or communicative competence (interpreting social meaning and responding appropriately), the difficulties of which often go unnoticed (Kassis Henderson, 2005, p. 70). Language encompasses culture and meaning making in not only words (the “what” you say) but also the manner in which something is said (the “how”) which emphasizes the importance of both grammatical and sociolinguistic competence (Gillam & Oppenheim, 2006, p. 168).

From a linguistic perspective, some miscommunication in virtual environments may result from language form and structure (phonetics, phonology, morphology, syntax) such as a different pronunciation of a term or a strong and unfamiliar accent or from different word meanings and associations

carried over from native languages (semantics) (Chen et al., 2006, pp. 682-683). Also relevant are anthropological notions related to nonverbal signals, turn-taking and other behaviors as well as different understandings or associations for the same word across languages (Chen et al., 2006, pp. 684, 688-690).

My research questions seek to identify how linguistic challenges appear specifically within a GVT environment where English is the *lingua franca*, or common team language, as is often the case in international business interactions involving participants from many countries. English as the *lingua franca* can be further identified as "an international contact language between speakers from various linguistic and cultural backgrounds to communicate across languages. As such, it is characterized by a high degree of diversity in terms of regional linguacultural variation and levels of proficiency" (Ehrenreich, 2010, p. 414). Examples of challenges related to language that may be expected to surface in a *lingua franca* working environment include high-level writing, listening, and presenting, creating rapport, choosing appropriate tone and words, organizing and positioning main points, expressing disagreement, showing politeness, seeking consensus, and asking for or providing clarification. Also, GVT members may not realize that they are not providing enough (or, conversely, providing too many) key contextual details to dispersed team members for a given situation, thereby inhibiting comprehension. It may not be clear to the team that while they may need to "speak the same language" in such multicultural contexts, they may not necessarily "speak the same way," for

instance, because of underlying differences in sociocultural conventions or differences in linguistic competence (Rogerson-Revell, 2010, p. 433). As a result, polishing these high-level communication skills which, as noted earlier, is often challenging for NSs themselves in a virtual environment, becomes even more so in a multilingual setting.

This study proposes to investigate which of the above communication experiences are noted by the participants.

GVT communication influence #2: Culture challenges. A study pertaining to communication on GVTs naturally needs to be concerned with cultural influences, reflecting the nature of its multicultural composition. Intercultural miscommunication as a result of cultural differences can lead to conflicts, negative attitudes or misunderstandings (Dekker, 2008, p. 39; Hofstede, Hofstede, & Minkov, 2010; Shachaf, 2008, p. 133).

Pragmatics, which is closely related to sociolinguistics, considers all sociocultural aspects of the way language is used, including norms and contexts (Chen et al., 2006, p. 684-687). This may include stated or implied messages based on social, situational and conversational context and the amount of information needed by the other party. For example, related to politeness conventions, there are certain social and cultural expectations that may link to saving face or aligning with the relative power of the speaker or listener.

Additional potentially conflicting factors related to culture are time, haste, netiquette, criticism, directness, formality and disagreement or refusal (Brewer,

2010, p. 339; Huang & Trauth, 2007, p. 39). Individuals may tend to focus on day-to-day problems versus metacommunication influences such as ethos, rank, context, and social communication (Brewer, 2010, p. 342). The lack of nonverbal cues and other factors, including misinterpreting silence, is a challenge for all participants but particularly for those with native languages and cultures apart from the dominant one(s) of the organization and team (Gillam & Oppenheim, 2006, p. 163; Shachaf, 2008, p. 134). This can present difficulties especially in the critical initial trust-building stages of team and relationship formation in a multicultural environment (Zakaria et al., 2004, p. 23).

As demonstrated above, preventing or curtailing cultural barriers means understanding acceptable boundaries and behaviors. It also requires an awareness that different cultural groups prefer dissimilar modes and styles of communication (Huang & Trauth, 2007, p. 39). Such acknowledgement applies beyond individuals to the larger company as well. Here it is important to remember to look at a broader definition of culture, one that includes organizational and departmental/functional cultures within a company as well as national cultures represented by GVT members. These different types of cultures can be competing or conflicting (Smith, 2002, p. 302). In order to transform this challenge into a benefit, a company needs to support an organizational culture of valuing diversity and welcoming the generation of innovative ideas (Huang & Trauth, 2007, p. 42). This broader definition of culture is explored in-depth in Chapter 2.

Because of their dispersed nature, it is likely that GVTs will represent a greater number of different cultures and value systems than face-to-face teams (Dekker, 2008, p. 30). Team members representing varied national cultures have different expectations with regard to the most important behaviors of team members, which may result in miscommunication and impact team effectiveness (Dekker, Rutte & Van den Berg, 2008, p. 450). Oetzel et al. (2012) conclude that three team input factors (situational features, deep-level individual differences, and surface-level group composition) affect an intercultural workgroup's interaction climate (that is, the communication behaviors of cooperative conflict, respectful communication, consensus decision-making, and participation) which, in turn, impact the team's task and relational outcomes (p. 148). Therefore, cultural awareness and sensitivity is important in determining GVT team performance and satisfaction.

As will be discussed extensively in the next chapter, culture is extraordinarily difficult to conceptualize: "The cultural is too important to leave to chance or intuition…and must continue to be interrogated critically" by those working in intercultural technical communication. "Culture is one of those volatile uncertainties that ironically holds say over so much human interaction, especially as cultural differences have become a battleground for the economic and political issues in the globalizing world" (Hunsinger, p. 46). While the approach of this study is focused on intercultural communication and not a critical cultural studies paradigm, it is necessary to be aware that these complicating factors are present.

Language and culture, whether discussed jointly or separately, intersect in the area of intercultural communication, which becomes an essential half of my hybrid framework for this study in Chapter 2.

But first, another influence impacts and equally is impacted by both language and culture in GVTs, and that is technology. Zakaria and Talib (2011) believe that "new cross-cultural competencies need to be developed that align technology and cultural values so that issues of incompatibility become less risky for GVTs" (p. 10). One skill is activating 'switching behaviors' to adjust one's communication style to adapt to another culture's style, not only "contingent upon the situations but also to transcend their own normative cultural values when necessary" (p. 10).

GVT communication influence #3: Technology challenges. Similar to language and culture above, the challenges posed by technology in GVTs merit an extended discussion. Consider the following observation by Hulnick (2001) of the relationship between technology and communication on a team: "If technology is the foundation of the virtual business relationship, communication is the cement" (as cited in Dekker, 2008, p. 13). Another perspective is that technological solutions become the "glue" that repairs problems that arise in GVTs (Smith, 2002, p. 295). Regardless of the metaphor of choice, it is clear that technology's impact on organizational communication continues to increase in importance at an unpredictable pace, specifically within virtual environments. What GVTs need to remember is that the social rules of the game – that is, how

we fit in and succeed – haven't changed, but the "toys" of the game – the technologies – have changed beyond our imagination (Hofstede et al., 2010, p. 20). We know that this evolution will continue exponentially.

Choosing the right technology at the right time for the right purpose is a "matter of survival" (Nataatmadja & Dyson, n.d., p. 501). A dramatic statement, perhaps, but technology can indeed reduce or increase the chance of cultural or linguistic-related conflict, depending on the types of available tools and individual members. Effective selection of media can be complicated, depending on factors such as the nature of the team and its goals, team member accessibility to technology, and collective team experience in successfully performing virtual work with communication technologies (Berry, 2011, p. 189). The right choice of tool also depends on other key organizational culture factors such as technology availability, reliability and compatibility; individual preferences; project needs; and finding the balance between a tool and members' needs and capabilities (Nataatmadja & Dyson, n.d., pp. 500, 502). An organization's technological infrastructure and support system plays an important role in leveling the team experience across multiple regions, some of which may be disadvantaged from a resource perspective. There may be additional challenges to consider in implementing GVTs in developing countries (Nauman & Iqbal, 2005).

To best influence team dynamics and outcomes while still maintaining work-life boundaries, Ruppel et al. (2013) recommend that media choice should look beyond matching media with task demands as some theories (media

richness and media synchronicity) have advocated, and consider user and social perspectives, including relationships of the people involved. Their choices have "ramifications on their communication satisfaction and productivity, particularly in the long term" (pp. 441-442, 464). Moser & Axtell (2013) similarly call for attention to the blurring of private and professional norms with the various types and amount of technology available to keep employees plugged in continuously (p. 5). Carte and Chidambaram (2004) suggest that using technologies with bundles of reductive capabilities (synchronous or those with characteristics found in face-to-face communication) are particularly beneficial in the early forming stages of a team before a group identity and trust has been established, at which point technologies with additive capabilities (asynchronous communication with limited immediate feedback but documented electronic trails) may be effective (as cited in Staples & Zhao, 2006, p. 393).

An additional and often underestimated variable that should be considered in discussions about technology use in GVTs is its convergence with language and culture: "In essence, cultural distance intensifies geographical distance. As such, technology can be a facilitating tool for effective collaboration among global virtual teams and not a hindrance, but it must be selected carefully so that cultural biases are accommodated" (Zakaria & Talib, 2011, p. 10). The important choice of technologies may help the group move beyond initial, visible "surface-level diversity" judgments, avoid forming in-groups and out-groups and deepen their connections to create more cohesiveness and participation, as will be

discussed in the next section on the fourth influence of collaboration (Carte & Chidambaram, 2004; as cited in Staples & Zhao, 2006, p. 393).

However, as with so many facets of GVTs, the complexities of language and culture differences as they interact with collaborative technologies in a virtual environment are not always transparent. Often technology serves as a mediator or bridge to neutralize any negative impact of cultural diversity or, conversely, to foster a positive impact. In the case of online meetings, however, technology can affect diversity by either increasing or reducing its impact depending on the circumstances (Shachaf, 2008, p. 132, 136). One study has shown higher satisfaction was reported by heterogeneous teams who used technology (Shachaf, 2008, p. 133). Lack of careful technology planning and options can, however, sometimes “mask or exacerbate” cultural differences (Tannenbaum et al., 2012, p. 11).

Along with language and culture, how do chosen technology methods or media influence communication between the diverse participants on GVTs, specifically those teams where English is the designated *lingua franca,* or common language? Just as it was stated earlier that different national cultures tend to prefer dissimilar modes and styles of communication, so, too, might they prefer to use technology in various ways. It is worth a side note that many of the most prominent current media forms originated in one of the most individualistic (versus collectivistic) countries, the U.S. (Hofstede et al., 2010, p. 123).

Therefore, culture may influence choice of media, in addition to language (Hung & Nguyen, 2008, p. 4).

English proficiency in a virtual environment may vary according to the mode of technology, influencing the selection of, for example, text over voice (Brewer, 2010, p. 334). So it is perhaps not surprising that much of the literature on GVTs highlights a NNS preference for asynchronous media. Time pressures are absent in asynchronous meetings or email, where saving face is easier if questions or clarification are needed (Grosse, 2002, p. 14). Email asynchronicity in particular is also often a preferred choice for NNSs because of its reliance on reading and writing proficiency versus teleconference synchronicity that relies more on listening comprehension and speaking abilities (Huang & Trauth, 2007, p. 39). Some limitations of email become benefits from an intercultural communication perspective. For example, a lack of nonverbal and social cues, and the slower response speed may reduce intercultural misunderstandings and improve language accuracy. This leaner channel reduces any “noise” of accents and verbal style differences and provides text in a straightforward sequence that reduces misinterpretations (Shachaf, 2005, p. 51). These benefits also hold true for other asynchronous media such as discussion forums, intranets, and groupware (Nataatmadja & Dyson, n.d., p. 501). However, overdependence on asynchronous tools such as email may result in a lack of social presence and rapid feedback, and subsequent delays with a “high cost of interaction” between

both senders and receivers, whether NSs or NNSs (Huang & Trauth, 2007, p. 41; Nataatmadja & Dyson, n.d., p. 501; Shachaf, 2005, p. 50).

Finally, the suggestion made by some that technology will dominate or overcome cultural differences in our global village is viewed by at least one prominent thought-leader, Geert Hofstede, as skewed or illusory because “the software of the machines may be globalized, but the software of the minds that use them is not” (Hofstede et al., 2010, p. 391). Ever-increasing volumes of knowledge and information are more widely available but it does not change our ability to absorb it or change our values.

In summary, collaborative technologies can impact GVTs both positively and negatively but, echoing a message heard throughout this research, they alone are not sufficient to alleviate any ancillary intercultural or interpersonal communication conflicts and are only as effective as the individuals using them (Smith & Blanck, 2002, p. 295). Sometimes virtual social interactions are judged as inferior to traditional face-to-face interactions. However, according to Berry (2011), the problem “may be more in terms of how individuals compare the virtual communication channels with the more familiar face-to-face channel, instead of comparing the effectiveness or outcomes of the interactions” (p. 197). Technologies on virtual teams still need to be understood as “only a communication and collaboration tool and not as communication or collaboration itself” (Berry, 2011, p. 191). In other words, technological proficiency and benefits cannot compensate for weaknesses in other areas, such as communicative

incompetence or lack of forethought in planning the architecture of GVTs which might optimize collaboration, as discussed next.

<u>GVT communication influence #4</u>: Collaboration challenges. Continuing a common refrain heard throughout this study, the nature of collaboration has been changing at an accelerating pace, due to digitalization and globalization, and other contributing forces at work (Wageman et al., 2012, p. 301). Collaboration is a critical part of the effective GVT puzzle. It is how we work together to create a sense of shared community and learn and grow from each other as partners in order to reach our common and individual objectives. The value of this co-created community experience and our willingness and ability to become fully engaged in our membership in it stems from the research on communities of practice and legitimate peripheral participation, concepts that will form a foundational part of the framework for this study and will be discussed further in Chapter 2.

The essence of collaboration is a partnership of trust and respect among team members, resulting in high performance. To achieve the role of a valued contributor on a GVT, an individual needs to demonstrate strong communication and trusting behaviors through social networks with peers in order to create virtual "visibility" that will highlight the individual's contributions to the team (Sarker et al., 2011, p. 303). "Collaboration needs to be supported both from cognitive aspects and from social aspects…The implication is that the participants should discuss their shared goals and problem solving process"

(Leinonen, Jarvela & Hakkinen, 2005, pp. 316-317). It is perhaps obvious that strong participation of team members directly impacts the effectiveness of any GVT. Member participation – the quantity and quality of contributions of information, ideas, or suggestions to team decisions and actions – is a fundamental element necessary for team collaboration. (Hung & Nguyen, 2008, p. 3).

As noted in the above section on technology's influence, intentional choices of the right communication technologies can have an engaging, collaborative impact on a new team's formation. As a result, "enhanced quality of participation can increase participation, allow minority opinions to be heard, and foster a sense of belonging to a group" (Carte & Chidambaram, 2004; as cited in Staples & Zhao; 2006, p. 393). Selecting the right online tool to mediate online collaboration can also positively impact a high level of task performance (Karoui, Gurkan, & Dudezert, 2010, p. 2). For some teams, comfort with technology can play an integral role in creating team identification. The collaborative technologies provide a space for team members to gather and reconnect, either synchronously with each other in real-time or asynchronously to revisit posted documents or conversations. Tech-savvy teams may create their own language through jargon or IM abbreviations that also positively impact team identification (Sivunen, 2006, p. 360). Finally, care in selecting the right media option for communications can support a good first impression for the team (Daim et al., 2012, p. 207).

Regarding first impressions, “shared goals and shared understandings are required on any team, and negotiation of these common goals is an intrinsic part of the team-building process” (Berry, 2011, p. 189). To assist in creating this shared experience, team leaders will typically set norms (or encourage team members to contribute) in order to convey expectations and orient new members. As Berry (2011) cautions, “Employee membership and identification is a challenging concern as organizations become increasingly dispersed, decentralized, and virtual. Thus, members may well have competing allegiances, and overcoming these barriers will require purposeful management strategies” (p. 192). It is important to consider what other roles GVT leaders can play in fostering collaboration.

Without the advantages offered by face-to-face interactions, GVT leaders may depend more on the concept of finding identification through connecting with others on common interests. They may share symbols (such as values or goals) in the form of guidelines or processes or other actions which become a mode of persuasion that may be adopted by new team members and ultimately lead to their identification with the team (Sivunen, 2006, p. 348). Some strategies may include catering to the individual (stressing importance of individuality, respecting differing opinions in decision-making, addressing messages to each individual and soliciting participation from each); providing positive feedback (updating team progress, sharing praise from outsiders, posting positive results and messages); revisiting common goals (providing a united front away from the

team, showing team cohesion); talking up team activities and face-to-face meetings (increasing engagement and developing a common team spirit) (Sivunen, 2006, p. 345).

Staying cognizant of the collaborative digital tools they have available and also the ever-present organizational changes that may shift their teams and focus can help leaders and team members alike vary their approaches as needed to sustain member identification, subsequent high levels of trust, and effective communication on their GVTs. Kimble (2011) highlights this quest for balance by noting, “To ensure that virtual teams work effectively, you need to address both the people issues and the technology, rather than look for the answer in one or the other” (p. 13).

Study Focus

In summary, GVTs are increasingly important in our current fast-paced and equally fast-evolving working environment. Any team may struggle with the many factors at play including purpose, strategy, roles and responsibilities, process, timelines, budget constraints, among others. However, my focus is on the critical, often overlooked importance of communication. Typically, subject matter technical expertise and project management are highly appreciated and rewarded competencies on a team, as perhaps the most visible contributors in driving for business results – but communication (given the often derogatory label of an unmeasurable “soft” skill) is often undervalued as a key driver for effective teaming that contributes to reaching the same business objectives. As an

example, communication skills are infrequently considered or prioritized when selecting team members, including those in leadership roles. In addition, time and speed are often of the essence in getting business teams formed and launched quickly. Degree and quality of communication has impact here as well as at all stages of the team life cycle. All of these aforementioned factors grow in complexity in a global virtual environment.

As noted earlier, my research will answer the question of which differences in communication exist among NSs and NNSs on GVTs where English is the *lingua franca*, or common working language. The four GVT communication influences that I have introduced in this chapter – language, culture, technology and collaboration – will provide a roadmap by which to direct the key components of this study: relevant literature, framework, methods and design, data analysis, and interpretation of findings. In prioritizing the results and outcomes of my study, my focus will emphasize three of the four influences that were mentioned most frequently by study participants: language, culture and collaboration challenges. As noted by Henttonen & Blomqvist (2005), "interest in virtual team collaboration has been mainly technology so far and the social side of virtual teamwork has been under-researched…Relational communication and psychosocial factors such as trust, commitment and communication play an important role in the functioning of cultural teams." (p.117, 107). While this balance may have changed slightly in recent years, it still appears true to some extent. Technology certainly plays a critical role in virtual teams; after all, without

technology there is no virtuality. However, in terms of operational challenges as well as team member support, the influences of technology on communication feature less prominently in these findings than other variables, as will be shown in Chapters 4 and 5. As such, the focus of this study weighs more heavily on language and culture (tied to intercultural communication) and team collaboration (tied to community-building practices in virtual spaces).

Much of the past research on cross-boundary communication has been conducted in organizational communication and related fields addressing culture, small group behavior and conflict, interpersonal communication and psychology (Spilka, 2004, p. 375). Moreover, the literature acknowledges the relevance of cultural diversity but there is little to be found on the actual impact of that diversity on work in organizational settings and its convergence with organizational management (Huang & Trauth, 2007, p. 36). In addition, there is less attention specifically on GVTs. Therefore, my central research questions allow me to address this gap by examining the predominance of language and culture influences on communication in GVTs and the resulting impact on team collaboration in workplaces.

To outline the rest of this study, Chapter 1 has introduced the topic of communication in GVTs, defined GVTs in detail including the important shifting nature of teams in today's workplace environment, discussed the unique challenges and benefits, and explained the rationale for this study as it pertains to the significance for technical and professional communication and business

communication. My primary research question has been introduced here as well. Chapter 2 will describe my chosen hybrid framework of communities of practice (CoPs), particularly those in a virtual organizational environment (VCoPs), and intercultural communication. This framework will serve as a lens through which participant observations of communication on GVTs will be examined. Chapter 3 will describe the study design, including setting, sample population and the qualitative critical incident interview method. Questions relate to study participants' recollection of experiences related to communication on a global virtual team. Chapter 4 will present the data results that link to the framework of virtual CoPs and intercultural communication. The findings will be discussed in relation to the research questions raised in this first chapter about communication in GVTs. Chapter 5 will interpret the findings presented in Chapter 4, with a focus on connecting them back to the hybrid framework introduced in Chapter 2 and answering the research questions. Chapter 6 will provide an overall conclusion and discuss implications of the findings, including the significance and relevancy to technical and professional communication and business communication as well as various other disciplines, limitations of the study, and recommendations for further research opportunities.

The next chapter presents a hybrid framework that will provide an opportunity to thread the key components together and also guide the subsequent discussion.

Chapter 2: Hybrid Framework: Virtual Communities of Practice and Intercultural Communication

For GVTs, good communication demands more than just working towards shared goals (the typical definition of a team). Creating a community is also essential, including elements such as learning from one another, sharing knowledge, developing a sense of collaboration and full participation, among others that build stronger ties as part of a practice. The community portion of the framework will be informed by the seminal work of Jean Lave and Etienne Wenger.

Beyond creating such a community, another key piece to effective global teams is investigating how language and culture impact communication. Although language and culture are complex phenomena, the body of work in the interdisciplinary field of intercultural communication from notable scholars Geert Hofstede, Edward T. Hall and others explores the impact of different communication tendencies associated with national cultures that may appear in multicultural groups.

One solution for understanding how these many factors converge and delicately overlap is a hybrid framework that leverages research and theory from both areas – Communities of Practice (CoPs) and intercultural communication (Figure 2). Expanding the CoP view to a virtual one (VCoP) adds a nuanced picture of how this type of collaboration leads to a good remote team. Even more so for a global team, from a language and culture perspective, sharing and

relationship-building found in CoPs can be more important for some cultures than for others.

The goal of this chapter is to make the case for analyzing data from GVTs through these two lenses of VCoPs and intercultural communication. Explaining the link between these elements will set the stage for highlighting how knowledge of VCoP characteristics and national and other intercultural differences can enhance our understanding of communication on GVTs. CoPs consider the shared practice, identity, boundaries and social learning of members of a group – or community – and can be applied to both workplace and virtual settings in this study. In addition, it is natural to weave intercultural communication into a study of teams comprised of members representing multiple languages and cultures. Although intercultural communication's multidisciplinary scope is broad, I will focus primarily on Hofstede's dimensions of national culture with an acknowledgement of Hall's cultural factors of high-low context and time orientation. This approach will shed light on how GVT participants interpret and articulate their experiences in communicating and collaboration across many global and virtual boundaries. By targeting a substantial representation of diverse GVT scenarios, I will demonstrate how these two seemingly different theoretical perspectives coalesce well when aligned to the data.

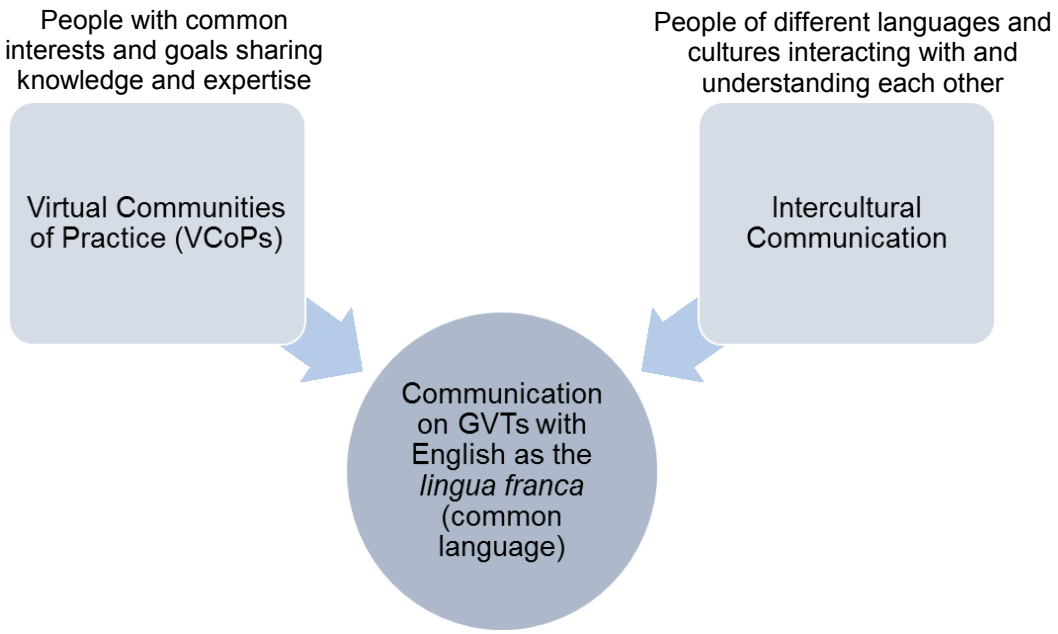


Figure 2: Hybrid Framework: Virtual Communities of Practice and Intercultural Communication

Communities of Practice (CoPs)

CoPs are cultivated "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis," thereby serving as a key to success in the global knowledge economy through adding tangible and intangible value to organizations (Wenger, McDermott & Snyder, 2002, p. 4, 6, 15).

This framework of learning as social participation is built on four premises: that humans are social beings, that knowledge is a matter of valued competence, that knowing is active engagement or participation, and that producing meaning is the ultimate goal of learning (Wenger, 1998, p. 4). The four components of this

framework – meaning, practice, community, and identity – provided some insights and connections to my study researching communication among diverse groups on GVTs.

Moreover, Wenger (1998) argues that a community finds coherence through three dimensions of practice: mutual engagement, a joint enterprise and a shared repertoire. In other words, a CoP can be described as “the property of a kind of community created over time by the sustained pursuit of a shared enterprise” (pp. 45, 73). The key words here around engagement, common goals, concern for others suggests a welcoming environment where members feel a sense of belonging and collaboration. However, new members of a CoP do need to make their way through the defined or undefined process of orientation (or, in corporate speak, onboarding).

Human communication involves the relationship between learning and the social situations in which the learning occurs. One example of this linkage, coined by Lave and Wenger (1991), is legitimate peripheral participation (LPP), or the process by which a newcomer becomes part of a CoP by becoming a full participant in a sociocultural process through the learning of knowledge and skills. This happens first by the newcomer engaging in the expert practice, to a limited degree at first on the periphery, while increasing gradually in engagement and complexity (Lave & Wenger, 1991, p. 29). Such co-participation involves learning as situated activity and a special type of social practice within the LPP framework (Lave & Wenger, 1991, p. 38). The idea germinated from the worker

trade apprenticeship models of the past, now with present-day learners representing the “apprentices.” These new members of CoPs need access to wide ranges of “old-timers” and other members, information, knowledge, resources, and opportunities for interaction and collaboration so that they can move towards full participation in the core community, rather than remain on the periphery. Learning in LPP is viewed as an integral and inseparable aspect of social practice and all related activity.

This learning takes place not in an individual mind and not with a sharp, largely cerebral dichotomy (internal and external) but in a participation framework (Lave & Wenger, 1991, p. 47). Therefore, learning is not a one-person act but dependent on diverse perspectives. Rather than an internalized reception of factual knowledge, learning that results in increasing participation in CoPs concerns the whole person acting in the world through evolving and continually renewed relations with others in the community (Lave & Wenger, 1991, p. 49). Such a whole person learns new activities, tasks, functions, understandings that don’t exist in isolation but are part of a broader system comprising identity, knowing, and social membership (Lave & Wenger, 1991, p. 53).

With regard to language, learning to become a legitimate participant in a community involves a member understanding how to talk (and be silent) in the manner of full participants and is more a matter of legitimacy of participation and peripherality than knowledge transmission (Lave & Wenger, 1991, p. 106). This point in particular seems highly relevant to my focus on communication in an

intercultural virtual environment. It might yield insights into what constitutes membership, when someone feels a sense of belonging or full participation, what verbal and non-verbal cues are expressed, and how NSs and NNSs respond.

LPP has since evolved from its traditional foundation based on the apprenticeship model (Hildreth, Kimble & Wright, 2000, p. 28; Kimble et al., 2000, p. 9). The concept has been extended to communities of practice (CoPs), reaching, in particular, into organizational and virtual environments, as will be discussed next.

While the traditional model of LPP argues that newcomers on the periphery move towards full participation in the community, Wenger et al. (2002) suggest that a successful CoP in an organization invites different levels of participation: the core group whose engagement resembles leadership (10-15%), the active group (15-20%) who regularly attends and participates, the peripheral group who may observe but not actively participate (the majority), and the outsiders who are not members but are interested in the community's existence (p. 56). Critiques of CoPs state that because of power differentials in some organizational contexts, "peripheral members may not necessarily develop beyond a position of peripheral participation" (Roberts, 2006, p. 627). Also, given the complexity of today's organizations, it is possible that there may be some minor or short-term contributors who might remain on the outer circle, or periphery (Tannenbaum et al., 2012, p. 5). For those situations where there is movement in and out of the CoP, Borzillo et al. (2011) describe a five-phase

ongoing process of integration (awareness, allocation, accountability, architectural, and advertising) for new members as well as core members (p. 25).

Depending on the context of the GVT, members will experience difference degrees of belonging at different stages. The CoP portion of this hybrid framework will add insights into the role of boundaries and different practices that create opportunities for a sense of belonging, knowledge sharing and collaboration. As introduced below, the body of literature for CoPs has since expanded into virtual environments and begun to align with literature on GVTs.

Virtual Communities of Practice (VCoPs). Related to the discussion on teams in Chapter 1, as virtual environments increasingly become the norm in many workplaces, the question arises whether co-location is a necessary element for full membership in a CoP. In fact, more important than physical proximity for the virtual gathering, where "the boundaries of space and time are generally irrelevant," is the sense of shared and value interactions (Lentz, 2007, p. 39, 68; Wenger et al., 2002, p. 4-5). Varied definitions of a virtual community have parallels to Wenger's framework, in noting the presence of a common purpose; shared history, culture, normal and values; organizing linguistic practices (shared lexicon, nonverbals, genres and humor); peer support; and openness including conflict (Baym, 2003; Herring, 2004). In addition, the technology employed in VCoPs serves a dual purpose: first, it has an important role in facilitating interaction among participants through increased access, ease-of-use and flexibility in knowledge-sharing; second, the architecture can support

different ways by which participants build trusted relationships that are necessary to sustain communities of practice (Lentz, 2007, p. 69. 73). This interpersonal trust is essential to removing resistance barriers that prevent knowledge sharing, a key tenet of VCoPs (Chen & Hung, 2010). Finally, the argument can be made that VCoPs are indeed learning communities because their members learn while participating in activities (Miller, 2014, p. 31).

Pertinent to this study, Wenger et al. (2002) briefly acknowledge the challenges of virtual environments, including those related to culture and language that are found in the literature on GVTs and intercultural communication in general. Specifically, members may participate in different manners or to different degrees depending on their national culture background or level of language proficiency (e.g., preferred styles of questioning or resolving conflict, building trust and personal relationships, knowledge of key terms, access to and familiarity with collaborative technologies)(Wenger et al., 2002, p. 118-119, 121). Cross-cultural research suggests that knowledge-sharing behaviors identified with VCoPs within global organizations may be influenced by national culture dimensions such as the following: in-group and out-group orientation; fear of losing face; differences in understanding what constitutes modest behavior; power distance; individualism vs. collectivism, and uncertainty avoidance (Ardichvili, Maurer, Li, Wentling & Stuedemann, 2006, p. 546; Li, 2010, pp. 46-47). As a further example, CoPs by their nature are likely to be

more effective and successful in regions and nations that support collaborative work practices and strong collectivist tendencies (Roberts, 2006, p. 634).

As with any CoP, large VCoPs may be viewed as part of a constellation of practices which involve interactive boundary processes such as brokering and boundary objects. Such a constellation can include members of a national culture, speakers of a language or other overarching characterizations of a population related to my study that are too broad or diverse to encompass a single CoP (Roberts, 2006, p. 630; Wenger, 1998, p. 127). As such, it is possible for members belonging to separate CoPs to have overlapping practices also found in other communities. Since CoPs do not exist in isolation, individual histories and ways of knowing become “histories of articulation with rest of the world” (Lentz, 2007, p. 37; Wenger, 1998, p. 103).

As Wenger et al. (2002) conclude, “True globalization requires community” (p. 135). Even with advances in technology, CoPs are needed to build the relationships for global integration (Wenger et al., 2002, p. 135). These statements suggest that such key relationships are built only within groups specifically identified as CoPs as opposed to, say, work teams. After all, to accomplish project goals in a team setting, members must also establish and create trusting, viable relationships. As such, VCoPs and GVTs may have more shared similarities than differences, which supports the analysis of GVTs via a VCoP framework, an argument I present next.

GVTs and a VCoP framework. My observations around how VCoPs inform research on GVTs suggest there is some scholarly disagreement around how teams and communities are distinguished, whether by ultimate objective (a specific performance goal or a group's common interests) or by source of legitimation (from a formal hierarchy in the organization or informally earned from one's standing in the community) (Ardichvili, 2008, p. 542; Hildreth et al., 2000, p. 29). There is also a distinction between who belongs (people assigned to a team who have a direct role in accomplishing a goal, or self-selection into a community based on expertise or passion for a topic) (Wenger et al., 2002, p. 42). What holds the entity together can vary as well, whether interdependent performance goals and project milestones in the case of a team; or instead, within a CoP, identification and connection with a group's interests as well as practices for sharing knowledge and social engagement (Wenger et al., 2002, p. 42; Ardichvili, 2008, p. 542). Likewise the duration is said to differ, from a predetermined date when the team project will be complete to an evolving and organic timeline, where the CoP lasts as long as it remains relevant and of value and interest to members (Wenger et al., 2002, p. 42). Finally, project team boundaries are viewed as clear when compared to the fuzziness of a CoP's boundaries (Wenger et al., 2002, p. 42). In summary, GVTs are often confused with CoPs and the labels have been used interchangeably in the past, but some, including Wenger et al. (2002), believe they should be viewed as distinct (Table 1).

Distinctions	Communities of Practice	Teams
What's the purpose?	To create, expand and exchange knowledge, and to develop individual capabilities	To accomplish a specified task
Who belongs?	Self-selection based on expertise or passion for a topic	People who have a direct role in accomplishing the task
How clear are the boundaries?	Fuzzy	Clear
What holds them together?	Passion, commitment and identification with the group and its expertise	The project's goals and milestones
How long do they last?	Evolve and end organically (last as long as there is relevance to the topic and value and interest in learning together)	Predetermined ending (when the project has been completed)

Table 1: Traditional View of Communities of Practice and Teams Distinctions
Source: Wenger et al., 2002

While the features in the above table appear to be distinguishing teams from CoPs, I contend that in today's increasingly volatile, fast-paced, agile marketplace, at least for multinational corporations, the boundaries between GVTs and VCoPs are blurring and therefore they are not incompatible or contradictory within a research study such as this. Market factors including intensification of competition, growing demand for continuous increasing business performance, and rapid technological innovations result in an environment of accelerating change within businesses that may not be conducive to forming and sustaining communities (Roberts, 2006, p. 633). Frequent reorganizations, reprioritizations of goals, elimination and reincarnation of teams, loss or gain of members voluntarily or involuntarily demands viewing today's teams as less static, more dynamic organizational entities. Tannenbaum et al. (2012) agree that, "In some cases, teams are formed with conscious forethought;

in other cases, they are assembled informally, spontaneously, or haphazardly. Regardless, given the prevalent use of teams, many employees are members of multiple teams simultaneously" (p. 3). Multiple memberships is a result of the prevalence of knowledge-intensive work on these teams and the ability to tap into the service of experts wherever they happen to be located (Cummings & Haas, 2012, p. 316). To be sure, "In this era of 'fast capitalism,' groups emerge and dissolve quickly" (Roberts, 2006, p. 633). Such groups could certainly include CoPs as well as GVTs for many of the same reasons. There may be newcomers joining a team with or without a prior body of knowledge in an area who require expedited onboarding. Part of teambuilding in GVTs may involve components or characteristics of trust, identity-building, boundary and periphery shifting that indeed resemble those of VCoPs. Finally, Hays (2010) lists many features that he attributes to both high-performance, self-directing teams and CoPs: initiative, professional development, identification with the work group and/or organization, independence/autonomy, leadership development/leadership, meaning of/from work, ownership/commitment, creativity/innovation, and motivation/sustained effort (p. 104).

Wenger et al. (2002) state that "the essence of a community of practice is the members' personal investment in its domain" as contrasted with a team leader who drives the team's focus on "a set of interdependent tasks that contribute to a predefined shared objective" (p. 43). While this approach is true of some teams, it is perhaps an overstatement to say that team members will not be

enabled or even accountable to find their own direction or share knowledge in a team setting. In contrast, there is research on the impact of management practices on the success of VCoPs, suggesting that there is a need for some structure, including a certain type of leadership (Bourhis & Dubé, 2010). According to Lindkvist (2005), another innovation in practice is the idea of rapid-forming *collectivities* of practice, "to refer to temporary groups or project teams concerned with knowledge creation and exchange…with members that embrace a collective goal and have a good representation of what others know…[and] based on a quite a minimalist base of shared knowledge, develop a pattern of interaction and the collective competence needed" (as cited in Roberts 2006, p. 633). This iteration is, then, a transformed type of knowledge sharing community linking GVTs to VCoPs.

CoPs were initially presented by Lave and Wenger as "spontaneous, self-organizing and fluid processes" but now they are "not only amenable to manipulation by organizational designers but can be applied in a wide variety of organizational contexts" (Roberts, 2006, p. 630). This again suggests that their intentional design may not be so far removed from that of teams.

Finally, Wenger et al. (2002) suggest that despite all of the frequent change individuals face in ambiguous organizations, "for people who change managers, team members, business units and even countries every few years, communities can become a primary source of stability. By creating a group of peers who have long-standing relationships and who truly understand and

appreciate each other's contributions, communities of practice can create a deep sense of organizational belonging" (p. 137). I argue that VCoPs, just like GVTs, are in no way immune today from these unanticipated changes nor any more stable over the long term. In fact, Wenger over a decade earlier noted similar discontinuities in CoPs, in that "the existence of a community of practice does not depend on a fixed membership. People move in and out" (1998, p 99). While he was discussing generational discontinuities and the inevitable change that occurs over time, it is very likely that such changes have accelerated in today's volatile change environment.

A few scholars have noted this potential for blurred boundaries between teams and CoPs such that "a team for a particular project may, in time, emerge as a CoP" (Roberts, 2006, p. 625). Similarly, "It is possible for a team to become a CoP as informal relationships begin to develop and the source of legitimation changes in emphasis" (Hildreth et al., 2000, p. 30). Here, again, is a seemingly qualified statement that CoPs are "not *usually* [emphasis added] working towards a goal" (Ardichvili, 2008, p. 542). As we know, to be successful, virtual teams actually need to create a team culture, ensure mutual understanding and establish new ways of knowledge sharing, and CoPs appear to address these challenges (Kimble et al., 2000, p. 12; Kimble, 2011, pp. 12-13). CoPs, which as stated may be virtual themselves (VCoPs), are a mechanism for overcoming critical barriers in virtual teams such as trust and social bonding, but may face many similar challenges such as power, trust, focus, predispositions, and size

and spatial reach (Kimble et al., 2000, p. 1). Wenger (2002) himself notes that CoPs “are not a silver bullet” and not meant to “replace teams or business units as structures for serving markets and delivering products and services” but through stewarding knowledge, will serve as “one of the primary contributors to success in the knowledge economy” (pp. 14-15).

Research suggests that the definition of CoP has expanded beyond Lave and Wenger’s original idea (Kimble et al., 2000, p. 9). For example, Dubé et al. (2006) present a typology of VCoPs that delineates the many manifestations of CoPs, including the spectrum from homogeneous to heterogeneous cultural diversity that incorporates national, organizational and professional cultures (p. 80). Wenger et al. note that multiple CoP variations include size, duration, distribution, degree of homogeneity, boundaries, degree of spontaneity, and recognition (2002, pp. 24-27). So too, now, are there many “teams” – project, functional, department, and operational, among others – with increasingly permeable boundaries as they move to virtual (Workman, 2005).

To conclude, today’s GVTs and VCoPs are not so distinct in at least some organizations, and GVTs can learn from and incorporate elements of VCoPs to accelerate transitions and deepen knowledge sharing even if working toward a common project goal. Therefore, I propose stretching the framework of VCoPs as it has been traditionally presented. That is, rather than drawing a sharp distinction between teams and CoPs, we can acknowledge that the virtual environment and globalization impacting our organizations demands that we

instead embrace a hybrid model of collaboration and knowledge sharing, regardless of the group's granular composition and structure. If we remain open to the idea that teams do share common characteristics or will sometimes endure to morph into communities and blur the lines between the two social group phenomena, then we can look to a VCoP framework to facilitate analysis of the complexities of GVTs.

Intercultural Communication

The second illustrative facet of the hybrid framework that will be integrated into my study is intercultural communication, a multidisciplinary approach incorporating perspectives from communication, anthropology, linguistics, psychology, and other fields that examines how humans interact with, perceive and understand each other. As noted by Gudykunst & Kim (2003), intercultural communication can be described as "a transactional, symbolic process involving the attribution of meaning between people from different cultures," one that seeks to reduce the uncertainty in understanding others (as cited in Coggio, 2010, p. 66). It can "best be understood from the perspective of the receiver, not the sender or the channel or even the encoded message itself" (Beamer, 2004, p. 400). Additionally, one must also consider the social and cultural environment, including the values, attitudes, beliefs and behaviors described earlier that comprise "culture."

Miscommunication in an intercultural setting occurs when the receiver of a message fails to recognize the cultural or linguistic signs that fail to match up to

those in his/her repository. Intercultural competency is thus developed when the receiver is aware of these signs and expands the repository through learning how to acknowledge unexpected differences, questioning fundamental communication values and meanings, analyzing communication behavior within the values context, and finally exchanging messages as if from within another culture or linguistic perspective (Beamer, 2004, p. 402, 412). In other words, intercultural competence is “the capability to shift cultural perspective and appropriately adapt behavior to cultural differences and commonalities” (“The Roadmap to Intercultural Competence,” n.d.). Intercultural competencies can be assessed by a number of validated instruments and furthermore can be developed with focused attention. While the tactics are beyond the scope of this study, these important implications are revisited in Chapter 6 where I provide recommendations for actionable self-awareness and professional development planning.

The intercultural component of my framework will be rooted primarily in national culture identities, with relevant connection to Hall’s high-low communication and time orientation contexts, but focusing more on Hofstede’s five dimensions of national culture. Before discussing these two important contributions in greater detail, I will explore the various definitions and types of culture and its link to language.

Definition of culture. Although there is no clear consensus on the definition of culture, there are discernable patterns and similarities that spring

forth. Various perspectives exist on this deceptively complex concept, reflecting its evolution during times of change, its social element within digital and human communities, our learned and shared values and beliefs, its relation to culture, and the inherent difficulty in attempting to define culture.

The definition of culture has also evolved over time, as a mirror reflecting the vast and complex industrial, political, historical and social changes in our milieu: “a tending of natural growth,” “a general state or habit of the mind,” “the general state of intellectual development, in a society as a whole,” “the general body of the arts,” then “a whole way of life, material, intellectual and spiritual” (Williams, 1983, p. xvi). Beyond enveloping a corpus of intellectual and creative work, a culture is “essentially a whole way of life,” but the community of the culture can never fully know itself (Williams, 1983, pp. 325, 334). Another way to approach the idea of collective representation, is through defining culture as “the unwritten rules of the social game…the collective programming of the mind that distinguishes the members of one group or category of people from others” (Hofstede et al., 2010, p. 6). Cultural differences appear in many formations but, from one perspective, they may be grouped into four primary categories: symbols, heroes, rituals, and values (Hofstede et al., 2010, p. 7). Culture is also often viewed as a surprisingly stable marker over generations as sweeping changes occur in societies, leaving culture to “rise from its ashes like a phoenix” (Hofstede et al., 2010, p. 26). And yet, as Starke-Meyerring (2005) notes, “The context of globalization radically foregrounds and questions traditional ways of

understanding the term *culture* and increasingly questions the ideologies and politics involved in its use" (p. 478).

In addition to its transformative elements, we should also consider the social elements of culture. In a virtual environment, our computers create and hold a space in which we connect with other humans to form a community and culture, one influenced by decisions around inclusion and exclusion (Longo, 2010, p. 147). Longo (2010) suggests that digital culture of "human + machine" operates quite differently from our "human + human" culture and may influence our interactions in these new communities, which must be considered within a cultural context (Longo, p. 147). In fact, culture is the way people relate to each other within our social circles or context of our daily lives. Often the cultural context is invisible, but technical and professional communicators can extract knowledge about it through our language and the social relationships embedded in people's use of it (Longo, 2010, p. 149).

Building on its social nature, it is said that culture is learned and not innate. It evolves, albeit sometimes unconsciously, from one's social environment rather than genes. In Hofstede's model of human behavior – a human mental programming pyramid – culture (as the "software of the mind") holds the prominent place in the center. At the baseline sits the universal human nature that we all inherit (our genetic "operating system") and at the top sits individual personality (Figure 3; Hofstede et al., 2010, p. 6).

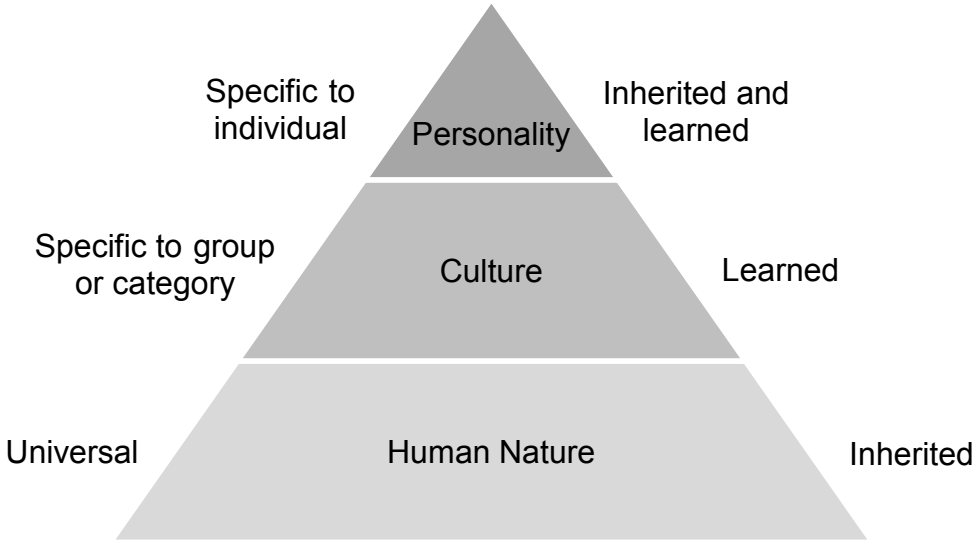


Figure 3: Three Levels of Uniqueness in Mental Programming
Source: Hofstede et al., 2010

Culture, then, is learned through "the set of key values, norms, beliefs that members of a society or an organization share" (Nataatmadja & Dyson, n.d., p. 498). It is a record of our reactions, meaning and definitions that are understandable within the context of our actions (Williams, 1983, p. 295). Definitions of culture generally incorporate group perception impacting thought, feeling and action (Brewer, 2010, p. 339). Note, however, that what we may define as a common culture does not assume a culture of equality, which will be discussed further later (Williams, 1983, p. 317). In essence, "Culture is like the air: it is all around us and we rely on it; we breathe it in and out, but we don't usually notice it. We take for granted that our cultural values and beliefs are 'normal'…" (Longo, 2010, p. 149).

As noted earlier, culture is a multi-faceted phenomenon that defies boundaries, especially as it relates to a diversity of disciplines from anthropology to linguistics to management (Coggio, 2010, p. 62). Often depicted in an iceberg metaphor, there are visible (above the water line) and invisible (hidden beneath) values which complicate communication and mutual understanding. Culture influences the shaping of our values (what we believe to be right), which impacts our attitudes (how strongly we believe it), which are reflected through our behavior. It is important to remember that the complexity of our individual selves as well as the nature of our collective teams is a formulation of myriad diverse internal, external and organizational dimensions. A number of these wrap around this study as told through participant experiences: Management Status, Functional Level/Classification, Work Content/Field, Division/Department/Unit/Group, Work Location, Geographic Location, Personal Habits, Educational Background, Work Experience and Gender (Figure 4). In the context of communication, it is through these dimensions that we create shared meaning.

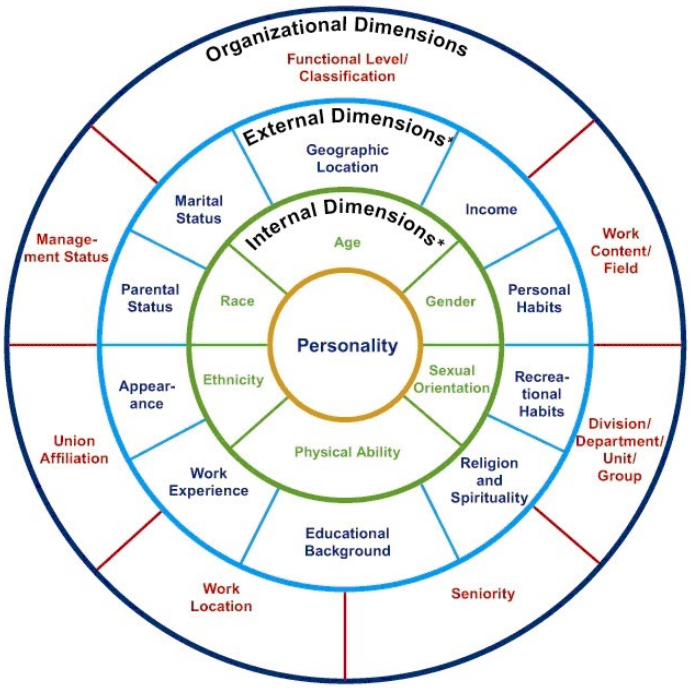


Figure 4: Dimensions of Diverse Work Teams
Source: Gardenswartz, & Rowe, 1994

In summarizing the myriad definitions, I agree with this following succinct definition that culture is “shared and passed on by members of a social group, and through social interaction and meaning making, it shapes how we perceive the world around us” (Coggio, 2010, p. 63).

Language’s relationship to culture. Of importance to my study is the relationship of language to culture. Within the sphere of intercultural communication, it is natural and logical to consider language when we speak of culture and intercultural communication since the two are so closely related (as compared in Chapter 1). Indeed, some might argue that language and culture do overlap, with the distinction between the two concepts appearing to be

“somewhat contrived and artificial” (Kassis Henderson, 2005, p. 69). Being truly fluent in a language means adopting another frame of reference. Words as symbols sit at the surface level of a culture but they are also (sometimes obstinate) “vehicles of culture transfer” (Hofstede et al., 2010, p. 389). It is important to remember that while language and culture are intertwined, they are not interchangeable or automatically indicative of shared values or cultures (Hofstede et al., 2010, p. 389).

With regard to communication in GVTs, language is closely related to culture but perhaps the integrations and overlaps are not always clearly understood. Because of the complexity of these concepts, and the presumed tendency for people to use them casually or take them for granted, it is worth stepping back to examine their origin, their evolution, and their transformation as increasingly-globalized organizations risk haphazardly integrating the “global” into virtual teams. We have an opportunity to better understand the cultural and linguistic influences on communication and put words around what is or isn’t working in GVTs. As such, the definitions of culture here and also GVTs in Chapter 1 are a fine springboard from which to begin the conversation and extend them to organizational research.

Culture in workplace research. Equally relevant to my study and worthy of highlighting here are the different manifestations of culture in organizations. Communication issues stemming from culture differences in the workplace are associated with three different cultural groupings: *functional* designations – the

professions affiliated with the team members, the *organizational* structure of the company – the learned behaviors and values connected to a corporate culture, and *national* culture – the cultural attributes characteristic of group members' nationalities or the nation in which the groups exist (Daim et al., 2012, p. 203).

Not only are there different types of cultures, but there are many layers that are carried within our mental programming from our environment and upbringing. Such layers include nationality, region, ethnicity, language, gender, generation, social class, and religion, among others. In work settings, as stated above, additional layers of socialization include professional/functional and organizational cultures. Myriad factors at different levels "coexist, interact with each other, and together produce different work environments and dynamics" (Huang & Trauth, 2007, p. 37). These sometimes conflicting layers may lead to uncertainty in predicting someone's reactions or behaviors in new situations (Hofstede et al., 2010, p. 18).

Nevertheless, it is important to note that cultural differences across segments of an organization may be viewed as an advantage for workplaces to leverage. Despite the many challenges, there are rewards including sharing richer solutions and melding complementary skills, and therefore "culture is not something to be homogenized, even if this could be done" (Smith & Blanck, 2002, p. 302). The next section introduces each of these three main cultural categorizations – professional/functional, organizational and national – and their contributions to discussions around workplace research.

Professional/functional culture. While national and organizational cultures receive more attention, cross-cultural differences can be observed at the nuanced level of profession or function, not only at higher thresholds (Huang & Trauth, 2007, p. 41). One way to observe these differences is to consider distinct sub-cultures in an organization such as professional, administrative, and customer interfacing (Hofstede et al., 2010, p. 364). Another manner in which to slice this segment is by job function according to titles or specialized knowledge and skill sets such as engineering, marketing, computer programming, or sales. Disciplines initiate their members a certain way, drawing on certain strengths and preferences that attract individuals to that work (Smith & Blanck, 2002, p. 303). Although no expansive cross-occupational studies are known, predictions suggest the following dimensions of professional/functional cultures may apply: handling people vs. handling things, specialist vs. generalist, disciplined vs. independent, structured vs. unstructured, theoretical vs. practical, normative vs. pragmatic (Hofstede et al., 2010, p. 369).

Certainly cross-boundary or cross-functional communication is quite common these days in large, matrixed organizations with competing horizontal project demands and priorities. One workplace study found that when these interactions are unsuccessful, internal anxiety, tension and territorial battles between units can ensue. Negative impacts on social groups include wasted resources of time and money, shaken identity through perceived reputation damage or loss of credibility, fear of losing progress on established goals, and

insensitive, clumsy or alienating interactions with the “outside collaborators” (Spilka, 2004, p. 374).

To operate most smoothly, functions need some shared philosophy and goals (perhaps tied at an organizational strategic level) in order to understand the others and see the value in moving ahead through differences but they also must be dissimilar in some ways to gain value from collaborating with each other to share limited resources and gain diverse perspectives through newly acquired social and technical knowledge (Spilka, 2004, p. 379). Potential challenges with cross-boundary working relationships include inefficiency in knowledge transfer and logistics, as well as tension between competing goals, related to an underlying stake in self-preservation. Functions balance maintaining independence and authority while involving others in decision-making, while at the same time seeking to preserve or grow their unit’s identity while adapting to the natural social and identity changes germinated in partnerships with other units. Both of these concerns can be addressed by implementing certain social and rhetorical strategies in the planning process (Spilka, 2004, p. 380). Depending on the composition of the cross-functional team, differences such as knowledge bases, reasoning abilities, motivations and similar processing approaches may be seen as advantages or disadvantages (Dain et al., 2012, p. 203).

While workplace differences manifesting themselves in functional culture are intriguing, they are more likely to be influenced by larger dynamics found in the associated organizational culture.

Organizational culture. To explain organizational culture, Hofstede's earlier-quoted definition of culture is modified to "the collective programming of the mind that distinguishes the members of one *organization* [emphasis added] from others" (Hofstede et al., 2010, p. 344). Rather than being limited to the members themselves, both internal and external stakeholders perceive the attributes of an organizational culture. When positioning organizational culture and potential research, there are two camps: one that believes culture is something an organization *has* and one that believes culture is something the organization *is,* the latter found more often within academic environs (Hofstede et al., 2010, p. 6).

In reality, there have been limited empirical studies on organizational culture. Referencing Hofstede's precedent-setting study on national culture dimensions which will be discussed in the next section, another smaller cross-organizational study resulted in six new dimensions, not of values but of *practices:* process-oriented vs. results-oriented, employee-oriented vs. job-oriented, parochial vs. professional, open system vs. closed system, loose vs. tight control, normative vs. pragmatic (Hofstede et al., 2010, p. 354). Other researchers have considered organizational cultural characteristics including learning and adaptation processes, diverse behaviors, institutional systems, and

employee expectations (Dubé et al., 2006, p. 80). Of further consideration are the spectrums of organizational context such as degrees of creation process, boundary crossing, environment, organizational slack, degree of institutionalized formalism and leadership (Dubé et al., 2006, pp. 76-77).

Organizational culture is “one of the most important enablers of knowledge sharing” (Ardichvili, 2008, p. 547). And, in fact, corporate cultures can exert stronger power by reaching beyond the exteriors of corporations, shaping and being shaped by a wider culture context (Longo, 2000, p. 8). If organizational cultures are so influential, how does this knowledge transfer to employees themselves? As new members join the “family,” they learn the prevailing shared assumptions and values that have developed over time, some of which are difficult to describe but are readily apparent and clearly felt (Smith & Blanck, 2002, p. 303). They also continue to learn through the artifacts, symbols, language, traditions, rituals and stories that are routinely shared by organizations. These tangibles reflect the range, diversity and complexity of the values and assumptions of global organizations (Zakaria et al., 2004, p. 19).

The learning of organizational cultures differs from national cultures in key ways. Corporate cultures are unveiled as historically-based, socially-constructed, anthropologically-ritualized and symbolized, rather static, shared means for employees to think, feel and act – essentially “a soft, holistic concept with presumably hard consequences” (Hofstede et al., 2010, p. 47). Unlike with their national cultures of origin, employees usually join organizations later in life of

their own free will, limit their involvement to working hours for the most part, and choose to leave them at some point. Therefore, organizational culture is based on business practices and more superficial. The deeper values, meanings and shared perceptions of the organization's practices that might be there are often overlooked. National culture, on the other hand, is acquired early in life based on influences from our families, education, social environment and other factors that imbue us with our values (Hofstede et al., 2010, p. 346).

Moreover, organizational culture may be viewed as a bridge or neutralizer to national culture. One study demonstrated that a strong organizational culture helped bridge ambiguity and foster cohesiveness and effective communication while the employee group as a whole sought to understand the complexities of the different national culture ideologies represented on the team (Daim et al., 2012, p. 207). In this way, building a shared organizational culture and transmitting it to teams may offset conflicts resulting from other multicultural concerns (Huang & Trauth, 2007, p. 40). There is also an apparent relationship between the level of trust and organizational culture in the communicative effectiveness of virtual teams (Dani, Burns, Backhouse & Kochar, 2006, p. 951). After all, the organization and communication share a strong connection in that "communication is where the organization is produced" (Lauring, 2011, p. 238).

National culture. National culture has received much attention around the broader question of defining culture. Hofstede, whose landmark research in this area is well-known and discussed further below, defines national culture as "an

average pattern of beliefs and values, around which individuals in the country vary," representing common elements across nations, with some exceptions, but avoiding generalizations to every individual in a nation (Hofstede, 1983, p. 78). What makes nationality so integral to discussions of culture in workplaces and other arenas? It has been shown to be a consideration in issues of management for political, sociological and psychological reasons. Also, national culture influences are enduring; slow to change, they are embedded in our institutions as well as in our minds. In the workplace, managing and organizing are culturally dependent, involving manipulation of symbols which have deep and often different meanings to employees based on their life experiences (Hofstede, 1983, p. 75-76, 88).

Hofstede's national workplace surveys on values revealed five cultural dimensions, which are measurable aspects of a culture relative to others and based on correlations. This empirical study resulted in a ranking of nations along a spectrum for each dimension as follows: large or small power distance (how society deals with power and inequalities), individualism vs. collectivism (whether society values self-interest over interest of the group), masculinity vs. femininity (how society divides and values gender roles), strong or weak uncertainty avoidance (how society deals with uncertainty and risk) and long-term vs. short-term orientation (whether society fosters virtues oriented toward past and present or future rewards) (Hofstede, 1983, pp. 78-85; Hofstede et al., 2010, p. 239; Hofstede, 2010, p. 8-16). In 2010, Hofstede and team proposed a sixth

dimension – indulgence versus restraint, or the acceptance of relatively free gratification of basic and natural human drives related to enjoying life versus the suppression of gratification of needs and regulation by means of strict social norms. While the sixth dimension represents fairly recent insights, it does not carry the same weight as the primary five dimensions and therefore I will limit my discussion to them. Table 2 below presents more detail on the dimensions.

Individualism vs. Collectivism (IDV)	The high side of this dimension, called individualism, can be defined as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate families. Its opposite, collectivism, represents a preference for a tightly-knit framework in society in which individuals can expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty. A society's position on this dimension is reflected in whether people's self-image is defined in terms of "I" or "we."
High vs. Low Power Distance Index (PDI)	Power distance is the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. People in societies exhibiting a large degree of power distance accept a hierarchical order in which everybody has a place and which needs no further justification. In societies with low power distance, people strive to equalize the distribution of power and demand justification for inequalities of power.
Masculinity vs. Femininity (MAS)	The masculinity side of this dimension represents a preference in society for achievement, heroism, assertiveness and material rewards for success. Society at large is more competitive. Its opposite, femininity, stands for a preference for cooperation, modesty, caring for the weak and quality of life. Society at large is more consensus-oriented.
High vs. Low Uncertainty Avoidance Index (UAI)	The uncertainty avoidance dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue here is how a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? Countries exhibiting strong UAI maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas. Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles.
Long-Term vs. Short-Term Orientation (LTO)	Long-term orientation vs. short term orientation: First called "Confucian dynamism", it describes societies' time horizon. Long-term oriented societies attach more importance to the future. They foster pragmatic values oriented towards rewards, including persistence, saving and capacity for adaptation. In short-term oriented societies, values promoted are related to the past and present: steadiness, respect for tradition, preservation of face, reciprocation and fulfilling social obligations.

Table 2: Hofstede's Dimensions of Culture
Source: Hofstede, 2010

Despite potential limitations around the age of his study, with a sample population embedded in only one organization and an associated risk of overgeneralization, Hofstede's work, conducted in a multinational corporation with highly-skilled professional workers, is similar to the target audience in my sample population, is widely accepted, has been replicated, and is frequently used in similar research studies across many disciplines (e.g., Dekker et al., 2008; Dekker, 2008; Coggio, 2010; Ardichvili et al., 2006; Hardin et al., 2007; Hung & Nguyen, 2008; Li, 2010; Nataatmadja & Dyson, n.d.; Workman, 2005). For example, one study has shown that GVT members' perceptions of interaction behaviors leading to effective team satisfaction and performance outcomes are influenced by their national culture differences as analyzed with Hofstede's dimensions (Dekker et al., 2008, p. 444).

Others have built on Hofstede's work over the past few decades. One study validated several national culture characteristics from other researchers that may influence knowledge sharing patterns and vary significantly among countries: individualism-collectivism, ingroup-outgroup orientation, fear of losing face, importance of status/power distance/horizontal and vertical cultures, and achievement and ascription-oriented cultures (Ardichvili et al., 2006, p. 96). As suggested earlier, it is certainly possible that organizational culture may in some circumstances mitigate the influence of national culture in workplace settings. For example, in the case of communication practices, one must consider that certain declared acceptable communication norms may be assumed by the

headquarters country but not so readily in other locations where norms vary significantly (Ardichvili et al., 2006, p. 105). National cultures can certainly still have diversity of major, commonly used languages, further complicating communication. Certainly language issues can also present themselves in multicultural groups located within one nation (Dubé et al., 2006, p. 80).

As widely cited as Hofstede continues to be, there are many others who have contributed to the discipline. One other prominent figure that merits attention in this discussion, Edward T. Hall, is one of many firsts: starting with his work appearing in the 1950s, he is widely regarded as the first “interculturalist,” the “father” of intercultural communication, and the first to use the term intercultural communication to explore frameworks for understanding cultural interactions (Pusch, n.d., p. 2). His theory of high-context and low-context cultures are a foundational part of understanding national culture communication differences. Characteristics of communication found in high-context cultures include: indirect and understated, cyclical not logical order, attention to nonverbal cues, meaning found in context (gestures, shared knowledge & assumptions) and relationships (saving face). In contrast, characteristics of communication found in low-context cultures include: direct and to the point, logical and sequenced, clearly spelled-out information, meaning found in the message, and exchange of information.

The second major cultural paradigm attributed to Hall is related to time orientation, specifically the polychronic or monochronic tendencies of a given

culture. Polychronic cultures often tend to plan a grand outline or “vision,” do several things at once, place less emphasis on punctuality, be comfortable changing plans, juggle facts, obtain first-hand oral information, be more comfortable talking for long periods of time versus writing and prefers flexibility to commitment. On the other hand, monochronic cultures often tend to plan ahead methodically, be punctual, stick to plans, value facts, gather information from objective sources (statistics, reference books, databases, etc.), keep communication focused and to the point, and prefer written documentation and records. Hall’s framework also continues to serve as a theoretical foundation in many recent research studies, including Zakaria & Talib’s (2011) and Lauring’s (2011) earlier cited analyses of GVTs.

Hofstede’s and Hall’s dimensions and factors demonstrate clearer value and meaning when assigned to specific countries for relative comparison. My sample population will be discussed in greater detail in Chapter 3, Study Design and Methods, and then Hofstede’s and Hall’s models will be applied to this study’s countries and discussed further in Chapter 5, Interpretation of Findings.

Even within intercultural communication, the scope of national culture influence is very broad and encompasses many avenues which may be intimidating to a researcher. To that end, below is a concise summary of key cultural differences compiled from the body of work of thought leaders in intercultural communication, including Hofstede and Hall, much of them with a national culture emphasis (Table 3). Of the 16 categories presented, 12 of them

surfaced in the participant interviews in this study, with varying degrees of frequency. Concept of Self, Response to Ambiguity, Decision Making, Gender Roles, Orientation to Time align with Hofstede's national culture dimensions, whereas, Communication Style, Communication and Orientation to Time align with Hall's research. Each of the previous categories was also influenced by the work of other scholars. Additional themes represented in the interviews but not connected directly to Hofstede and Hall included Beliefs about Productivity, Motivational Approach, Assumptions about Status and, interestingly absent given the strong connect with culture, Language. And, finally, Sense of Responsibility, Holding of Beliefs, Control Orientation and Spirituality were the four which were not predominantly mentioned in the interviews. The table adds supporting value to the hybrid framework of this study by categorizing key research paradigms at a high enough level but also highlighting the intricacies of intercultural communication, thereby illustrating why human communication can be a most challenging endeavor.

Overview of Key Cultural Differences			
Concept of Self Individualism: Success of team depends on success of individual Collectivism: Success of individual depends on success of group Face: Ways that pride, ego and image are built up or damaged	**Sense of Responsibility** Particularism: What is right depends on the situation Universalism: Right is right and wrong is wrong Personal: Treat each person as unique Societal: Treat everyone equally	**Beliefs about Productivity** Harmony: Getting along well with others and minimizing conflict are important Results: Getting the task done is most important Process: Process improvement will ensure success	**Motivational Approach** Association: Success is determined by personal relationships Accomplishment: Success means getting ahead and having opportunities
Response to Ambiguity Uncertainty Avoidance{ Perfection and past experience valued Risk Tolerance: Trial and error experimentation valued	**Decision Making** Hierarchical: Centralized authority and clear instructions Egalitarian: Democratic initiative and authority	**Assumptions about Status** Ascription: Position, title, social class, age, seniority Achievement: Meritocracy (rank and respect based on performance)	**Gender Roles** Differentiation: Roles in society are distinguished according to gender Unity: Gender does not influence roles in society
Language Language: Role in determining what we see and how we can talk about it Fluency: The degree to which the language is spoken without effort	**Communication Style** Verbal Body Language Space Volume Touch Tone Pace Turn-taking	**Communication** High Context: Meaning is implicit, in the context Low Context: Meaning is explicit, in the words Media: The mode of communication used and its efficacy	**Trust** Protective: An inner circle of lifelong friends and reserve towards others Open: Initial openness and friendliness with clear personal boundaries
Holding of Beliefs Tight: Belief that there is one clear way to practice spirituality Flexible: Belief that there are many ways to practice spirituality	**Control Orientation** Fate: Belief in predetermined, natural limits Effort: People can do anything if they make the effort	**Spirituality** Holism: Everything is interrelated and spirituality is part of work Compartmentalization: Religion has no place at work	**Orientation to Time** Monochronic: Limited time is available – use it wisely Polychronic: Time is a tool and circumstances take precedence Simultaneous: Multitasking Sequential: One thing at a time

			Past: Focus on heritage and tradition Present Focus on the here and now: Future: Focus on how to improve things next time

Table 3: Overview of Key Cultural Differences
*Source: Saphiere, D.H., 1998-2008, www.*culturaldetective.com/diffsmap.
(Based on the work of Abdulah, A., Condon, J., DeVries, B.I., Fukuyama, F., Hampden-Turner, C., Hofstede, G., Kappler, B., Rokeach, W., Saphiere, D.H., Storti, C., Ting-Toomey, S., Triandis, H., Trompenaars, F.)

Cultural typologies (national or other) are not without their limitations and may serve best as a starting point when seeking to understand specific situations (Gillam & Oppenheim, 2006, p. 167). National culture is a widely-used research paradigm and Hofstede himself concurs that the data for nationalities is easy to obtain but must be used with care and understanding of its limitations (Hofstede et al., 2010, p. 21). Presumably, employees, their workplace, and their projects are “situated within complex and multi-level socio-cultural contexts” and therefore all of the cultural complexities should be viewed through these multiple lenses (Huang & Trauth, 2007, p. 40). Starke-Meyerring (2005) cautions against overreliance on fixed cultural traits within the blurred boundaries and complex identities fronted by globalization. In addition to the more commonly cited divisions of national, organizational and functional/professional cultures, one might also consider individual differences in outlook or personality style as well as encourage in-depth knowledge of interpersonal interactions, particularly in a

virtual environment (Brandl & Neyer, 2009, pp. 346-347; Smith & Blanck, 2002, p. 302).

Similarly, as valuable and resilient as it has proven to be over time, intercultural communication research based solely on national culture typologies can also be criticized for missing fluid, multilingual scenarios where language is spotlighted (Kassis Henderson, 2005, p. 74). Therefore, intercultural communication in GVTs should include an examination of language differences and both verbal and non-verbal style differences among team members representing different cultural and linguistic groups (Shachaf, 2005, p. 48). After all, language habits of any individual and the resulting expectations influence interaction behaviors and perceptions on a GVT (Kassis Henderson, 2005, p. 68). This focus on specific language analysis helps distinguish the blur between language and culture differences.

Taking into the account the above caveats and constraints, and while functional/professional and organizational cultures are important considerations and often overlooked in their significance, national culture dimensions constitute the essence of the intercultural communication element of my hybrid framework. Drawing on Hofstede's and Hall's landmark cultural dimensions and other contributing factors provides some rich communication foundations from which to explore influences of language in GVTs and its close proximity to culture. Moreover, by intentionally separating out my research questions and analysis for language and culture as part of the global segment of GVTs, I seek to contribute

to this wider discussion and highlight the similarities and differences of these two prongs of intercultural communication.

Summary of Hybrid Approach

As advocated above, a hybrid framework will best enable the peeling back of layers of communication complexity on GVTs. I have selected the increasing body of work around VCoPs to address the virtual and teaming components while connecting the global aspect of language and culture through the perspective of intercultural communication, primarily national culture dimensions but also linguistic elements. Certainly this is but one possible approach that is sufficiently complex for a study of this scope, and leaves opportunity for further research and contributions in this area.

These GVT elements of communication and their respective framework alignments do overlap and share many synergies. I will proceed to highlight some of these findings and their relevance in Chapters 4 and 5. However, first I will step back and present the background informing my study design and methodology, which will illustrate how the dual framework components were integrated into the data collection and analysis planning.

Chapter 3: Study Design and Methods

The foundation of any methodologically-sound study begins with an examination of the objectives of the research questions, choice of setting, the researcher's role, purpose and motivation as well as the selected sample population. This reflection leads to rigorous application of best practices in research design methods around type of study, inquiry protocol and mode of analysis. In this chapter, I will discuss the above criteria as well as the root of my inspiration and the evolution of my design based on precedent studies and subject matter expert consultation. The IRB Human Subjects Committee granted my study (assigned number 1208E19545) exemption from review under federal guidelines 45 CFR Part 46.101(b) category 2: Surveys/Interviews; Standardized Educational Tests; Observation of Public Behavior (supporting documentation included in Appendix 1).

Research Questions Restated

While still underrepresented, more studies on communication in GVTs are moving into workplace settings and using a qualitative inquiry approach. For example, Brewer (2010) asks, "Do certain factors seem to contribute to miscommunication, confusion, or offense in international virtual workplaces? If so, what are those factors?" Included is a related interview question: "Have you noticed any problems that were caused by communication across cultures? If so, what factors do you think contributed to such problems?" (Brewer, 2010, p. 333).

These examples, as well as the gaps in the literature discussed earlier, led to the formulation of my own research questions below:

- *What differences in communication exist among native and non-native English speakers (NSs and NNSs) on global virtual teams (GVTs) where English is the lingua franca, or common working language?*
    - *What differences relate to language?*
    - *What differences relate to culture?*
    - *What differences relate to technology?*
    - *What differences relate to collaboration?*

As a side note here, the fact that there tends to be more focus on the challenges with language and culture in the GVT literature raises the question of the degree to which there are any notable benefits or advantages to operating on GVTs. There are a very small number of references to diverse GVTs as more challenging but also more rewarding, with differing values and styles yielding richer solutions and complementary skills (Smith & Blanck, 2002, p. 302). Further, cultural diversity "may be beneficial for promoting creativity and innovation, which are important for knowledge intensive work" (Huang & Trauth, 2007, p. 36). In addition to creativity, culturally heterogeneous groups may contribute more and better ideas, fall into "groupthink" less often, and improve decision-making, thereby possibly increasing performance (Shachaf, 2008, pp. 132, 135). Specifically, participants' native language diversity can contribute to team-building, group cohesion and possibly trust, and eventually can be viewed

as an opportunity rather than an obstacle (Kassis Henderson, 2010, pp. 363, 375). Aligned with this position, my interview questions were intentionally worded with attention to balance (referencing inquiries around “experiences” and “strategies” – both “challenges” and “opportunities”) so as not to bias the responses by my making assumptions or leading respondents to only address problematic communication.

As an additional caveat, mentioned in Chapter 1, these four influences of language, culture, technology, and collaboration are decidedly large, complex topics themselves. However, this is the approach that I have chosen to dissect the equally large phenomenon of GVTs. Although these influences are very interconnected, they will often be separated for the purposes of analysis and discussion in this study, while at the same time connections are drawn between them where possible.

Setting

Parallel to topic, research questions and methodology, other factors such as setting, researcher’s role and sample participant population need to be judiciously planned. I initially chose as my study setting my own organization (a very large multinational corporation in the agriculture industry). As a professional employee, I was fortunate to have relatively easy access to many potential participant pools and resources to facilitate my research. Ultimately, my final sample population included 16 different organizations, which will be detailed later

in this chapter. However, first, I will discuss the issues influencing my decision-making process to at least begin internally.

Certain challenges arise from conducting research in one's own workplace environment and it is important to consider them in the planning stages. These challenges may include the struggle against perceptions such as academia's marginalization of this methodology, concerns about validity, and insider bias while serving dual roles as researcher-employee, among others (Coghlan, 2001; Coghlan, 2007; Coghlan & Holian, 2007; Moore, 2007).

Depending on the purpose, a research immersion experience inside an organization may make sense for a study investigator. Benefits cited include the insider researcher's ability to use inside knowledge of culture and norms to seek access, approvals, and resources from organizations that might not be afforded an outsider; gain access to academic support structures and knowledge; and create an environment of trust through stakeholder participation and buy-in that can lead to tangible learning and change (Coghlan, 2001; Coghlan, 2007; Coghlan & Holian, 2007; Moore, 2007). While these studies focused on insider *action* research, which is a collaborative inquiry blurring lines between a researcher and participants who question practice, make changes and assess effects, the concepts related to insider research in general certainly apply to my study (Marshall & Rossman, 2006, p. 7). Understanding these subtleties of insider research early on assists in the design of a good study with a methodology and methods that will take these unique attributes into account.

After weighing the considerations, I focused my research on workplace settings versus educational (classroom) settings. This is noteworthy in that, as mentioned earlier, the latter are much more common, presumably because of a typical lack of outsider investigator access to organizations (especially corporations) with which they are not affiliated. In addition, much of the more recent empirical research on GVTs is situated in laboratories or classrooms, where the relevant issues and contextual influences of real workplace settings are not captured or well-represented (Dekker, 2008, p. 6; Huang & Trauth, 2007, p. 38; Karoui et al., 2010, p. 8). Therefore, my study represents a contribution to the body of work of technical and professional communication research centered in organizational settings.

Because of my insider position and professional network, I did not encounter typical researcher barriers to corporate access. While GVTs are also increasingly found in non-profit, education, government and other sectors, my research interest here leaned toward multinational corporations based on my own professional experience. As such, I identified the corporation at which I was employed as the primary organization for my study. However, somewhat surprisingly, I soon obtained interested participants at additional organizations worldwide and welcomed the broader set of data for comparison. As I developed new relationships in my network, these individuals served as sponsors to provide me with access to a larger pool of potential candidates across different job

functional areas and unfamiliar organizations. At the same time that I was deciding on the setting, I had to address my own role as researcher.

Researcher's Role

When considering ethical, political and other significant issues in designing communication research, one significant factor also related to the choice of setting is the role of the researcher. Issues include how the researcher defines his/her role, the importance of distance and objectivity, the researcher-participant relationship, potential role conflicts and audience disclosure (Breuch, Olson & Frantz, 2002, p. 5). During the discovery, interpretation and data communication phases, the researcher must balance the roles of observer, analyzer, and negotiator (Breuch et al., 2002, p. 16). These concerns become magnified when conducting research in one's own organization, as I did. As a practitioner (as well as academic researcher) in this field, I was able to obtain an advantageous accessibility to people, processes and data within my company that would likely have been a struggle for outsiders.

However, as noted above, there are many potential landmines to conducting research in one's organization that need to be considered, too, when weighing the overall feasibility of insider research. To summarize the concern, an insider researcher may have greater access to people, organizational history, and strategy, but may also be subject to increased tensions, bias, and confidentiality concerns (Marshall & Rossman, 2006, p. 61). As an insider employee at the organization, my professional role could not realistically be

separated from my researcher role, and the fact that my livelihood was essentially intertwined at the time with this study means that I had to make a very conscious effort to mitigate any such bias. For these reasons, as mentioned before, although the majority of participants were from my organization, I soon diversified my population across several organizations. I also sought to mitigate additional risk by using multiple organizations in case of legal policy red tape or unforeseen termination of relationships for whatever reason (e.g., due to company reorganization or downsizing). Coghlan and Holian (2007) note that, in particular, post-graduate student-insider researchers may have a unique advantage and capability in being able to tap their expertise in both academic and professional arenas to investigate problems of interest to both (p. 8). I felt confident that I was addressing this concern sufficiently to avoid the "double-edged sword" of inside research (Moore, 2007, p. 36). Again, acknowledging this limitation is critical but, at the same time, so is balancing the concerns with the unparalleled benefits from having such deep contextual ties to an organization and access to knowledge and the value that brings.

A researcher, particularly conducting a qualitative study as discussed below, also needs to be aware of positionality in designing a study so that his/her personal experience and interest in the topic will not bias the research (Marshall & Rossman, 2006, p. 30). Careful conceptualization and framing of a problem will integrate tacit theory from one's personal understanding of a phenomenon into a formal theoretical rationale that supplements existing literature in the field. This

will lead to research questions and a study design that are more aptly focused (Marshall & Rossman, 2006, p. 31). In this early phase, the value of intuition becomes apparent and should be nurtured (Marshall & Rossman, 2006, p. 32). My intuition together with years of research, teaching and professional experience in intercultural business communication with both NSs and NNSs, as mentioned in Chapter 1, afforded me several unique vantage points into conceptualizing my study as well as into the value of this inquiry to the field. Previous experience can indeed be advantageous for a researcher. A variety of relevant practical and theoretical experiences working with GVTs and with NNSs on language- and culture-specific issues in the workplace provided me with credibility on this topic. Nevertheless, I was aware of the potential for bias and sought frequent expert advisement from several sources to avoid any perceived or real conflicts. This consulting resulted in enhancements to my participant population, research questions and interview protocol, as discussed in the next sections.

Sample Population

In accordance with the IRB-approved design, my target population met two criteria. First, they were either NS or advanced English proficiency NNSs, and in professional management or individual contributor roles in an office environment. Advanced English proficiency was a subjective term, defined by self-assessment and an ability to hold a live one hour interview in English without interpretation or assistance. It is worth noting that the sociocultural construct of

self-identification as a NS or NNS is also sometimes open to interpretation and a matter of discussion in the scholarship of language studies (Norton, 2006; Norton & Toohey, 2011; Park, 2012). It is certainly not as black and white as my criteria appears, given that so much of the world's population learns to use English at varying paces and for varying purposes in their world and they may also consider themselves natively bilingual depending on their individual circumstances (e.g., learning English at home or school at a young age or later as an adult). Both of these variables – native-speakerness identification and language proficiency – posit deeper questions beyond the scope of this study and present an opportunity for future research. I entered into this research wishing to respect participants' self-assessment and welcoming diversity all along the identity and proficiency spectrum if doing so would not impede clear responses to communication differences on GVTs. There were no obvious hindrances impacting the results from this approach.

The initial email or phone communication I had with participants regarding acceptance, scheduling and study-specific questions also served as an informal screening indication for me of their English proficiency level and no candidates were disqualified. While initially considering a NNS-only pool, I ultimately included a mixed population of both NSs and NNSs. Since I am interested in differences in communication on GVTs with English as the *lingua franca,* or common language, it made sense to elicit insights and comparison from two groups, as distinguished by whether they were NSs or NNSs of English.

Secondly, potential participants were currently or recently members of a GVT in a global corporate workplace setting. They could be located on-site in the U.S. or living outside the U.S.

Initially I envisioned a sample size of 20, an average number within selected studies I reviewed that ranged from approximately 10 to 40 participants. However, with the increased interest in the study and scope of the pool of qualified participants, I expanded the sample size and ultimately capped it at an even 50 participants (21 NSs and 29 NNSs) due to timing constraints.

I had also considered a case study following one intact GVT comprised of mixed NSs and NNSs at one organization. However, further reflection suggested this would be very difficult for the following reasons: projects are unpredictably paused or terminated in a rapidly changing environment; teams are changed or disbanded; individuals leave or are asked to leave the team, department or organization and will be hard to track over time; or teams may not include multiple NNSs. As a result, I decided that participants did not need to be members of the same GVT as other participants, although, of course, their experiences could not help but be connected to these interactions. The information I sought was about their experiences on GVTs, not specifically the interactions of or between many individuals on one team. The latter scenario is an opportunity for future research in this area.

Final participant demographics. Below is a summary of the characteristics of my final pool of 50 participants. Demographic categories

captured in the master participant list (Table 4) include gender, native language, country of origin, department/functional areas and organization/industry type, and team role (leader or participant).

Participants represented a wide range of geographical regions across the globe (North America, Latin America, Asia-Pacific, Europe, Africa), countries of origin (17), native languages (15), numbers of organizations (16) across many diverse industries (12), and job functions and departments (11) (Table 4, Figures 6 and 7). Some participants were located in their countries of origin; others were living in a different country due to expatriation or other life circumstances, which exemplifies the increasing mobility of today's workforce and the need to ideally look at both country of residence and country of origin when considering cultural influences.

Figure 5 breaks down the sample into NS or NNS identification and also gender. NS or NNS identification (42% NS, 48% NNS) and gender (44% male, 56% female) were split fairly evenly. This result happened naturally and was not an intentional effort to balance selection. Gender is not a focus of the results in this study, but is provided as a point of interest and could be used as new data in further research angles. This is the same reasoning for providing a breakdown of diversity in organization/industry type and functional areas (Figure 7.).

It is interesting that there was unanticipated diversity among the NS sample representing five different countries and varieties of English. The 29 NSs included American (11), Australian (3), British (5), Canadian (1) and Liberian (1).

The Liberian NS, now living in the U.S., was the only study participant from Africa. Of the regions represented, the most diversity in languages and countries of origin was found in Asia-Pacific (12), versus Europe (7) or Latin America (10). In terms of native languages represented by the 29 NNS, Brazilian Portuguese had the highest representation (6), followed by Mandarin Chinese (5) and French/Swiss French (5), then Mexican Spanish (4), Japanese (3), Tagalog (2) and several with one native speaker (Hmong, Urdu, Dutch, German).

Participants had varying degrees of professional experience in their fields and tenure at their organizations, and this was not a factor in qualification for the study. Some were managers or senior executives, others were early career or individual contributors; some were leading GVTs, and still others played the role of core team member.

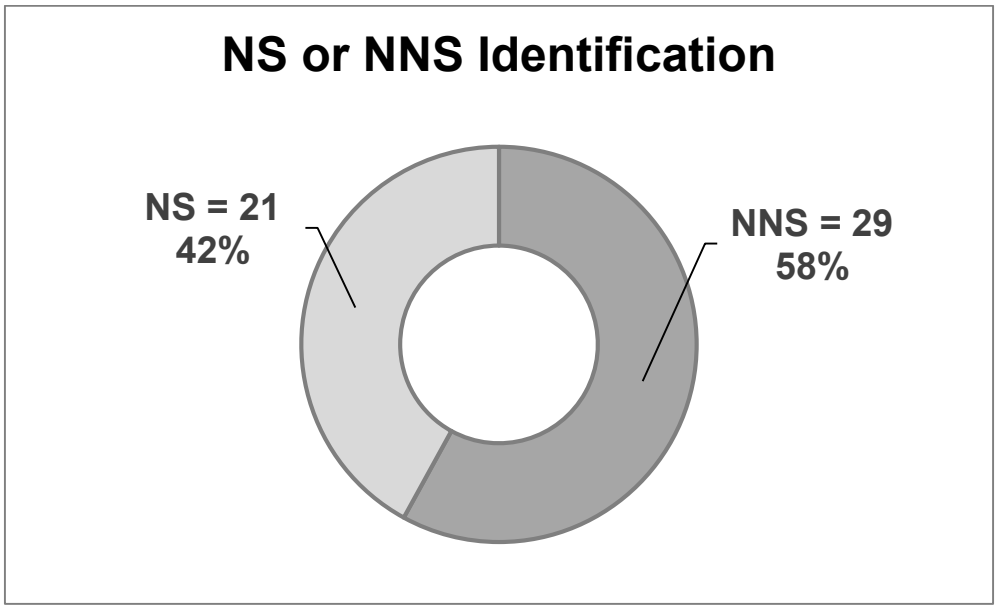
Many of the participants were very interested in the topic of GVTs and several had education, backgrounds or significant life experiences to tap related to intercultural communication. It's perhaps not surprising that most of these self-selected volunteers seemed to have a vested interest in the topic (as leaders or otherwise) and in being successful on GVTs and therefore were fully engaged in the interviews. Perhaps a small handful struggled to provide in-depth details or stories around their experiences and completed shorter interviews but those were in the minority. In contrast, a few interviews slightly exceeded the one hour mark.

Below are the tables and figures detailing the participant demographics.

Participant Number	Gender	Native Language	Country of Origin	Job Functional Area	Organization/ Industry	GVT Role
Native English Speakers (NSs)						
1	F	English	U.S.	HR	Agriculture	Participant
2	F	English	Liberia (based in U.S.)	Marketing	Agriculture	Participant
3	M	English	U.S.	R&D	Agriculture	Leader
4	F	English	Australia (based in U.S.)	Sales	Agriculture	Leader
5	M	English	U.S.	Marketing	Medical Devices	Leader
6	F	English	U.S.	Project Management	Agriculture	Participant
7	F	English	U.S.	HR Technical Education	Agriculture	Leader
8	M	English	U.S.	R&D	Agriculture	Leader
9	M	English	U.K.	IT	Agriculture	Leader
10	F	English	U.S.	HR	Agriculture	Leader
11	M	English	Australia	Technical Services	Agriculture	Leader
12	M	English	U.K.	IT	Consumer Retail Products	Leader
13	M	English	U.K.	IT	Consumer Retail Products	Leader
14	M	English	U.S.	Marketing	Medical Devices	Leader
15	F	English	U.K. (based in Switzerland)	Marketing	Agriculture	Leader
16	M	English	Australia (based in France)	HR and Consulting	Consumer Retail Products and Consulting	Leader
17	F	English	U.S.	Knowledge Management	Agriculture and Chemical	Leader
18	F	English	U.S.	HR Technical Education	Agriculture	Leader
19	F	English	U.S.	Project Management	Medical Devices	Participant
20	M	English	U.K. (based in Switzerland)	IT	Agriculture	Leader
21	F	English	Canada (based in Singapore)	Risk Management	Agriculture	Participant
Non-Native English Speakers (NNSs)						
22	F	Spanish	Mexico	Sales	Agriculture	Participant
23	F	Hmong	Laos	HR	Healthcare	Participant
24	F	French	Switzerland	IT	Agriculture	Leader
25	F	Portuguese	Brazil	HR	Technology	Participant
26	M	German	Germany	R&D	Agriculture	Leader

27	F	Portuguese	Brazil (based in U.S.)	Finance	Finance Corp	Participant
28	F	Mandarin Chinese	Singapore	HR	Agriculture	Participant
29	M	French	France (based in Switzerland)	IT	Agriculture	Participant
30	M	Japanese	Japan	Trading	Agriculture	Leader
31	M	Japanese	Japan (based in U.K.)	Operations	Agriculture	Leader
32	M	Mandarin Chinese	China	HR	Agriculture	Leader
33	F	Mandarin Chinese	Singapore	IT	Agriculture	Leader
34	M	Tagalog	Philippines	IT	Agriculture	Leader
35	M	Portuguese	Brazil (based in U.S.)	HR	Agriculture	Leader
36	F	Mandarin Chinese	China	HR	Consumer Retail Products	Participant
37	M	Portuguese	Brazil	IT	Agriculture	Participant
38	M	French	France (based in Belgium)	R&D	Agriculture	Leader
39	F	French	France	Finance	Consumer Retail Products	Leader
40	M	Portuguese	Brazil	HR	Telecommunications	Participant
41	M	Tagalog	Philippines (based in Taiwan)	Operations	Agriculture	Leader
42	M	Dutch	Netherlands	IT	Agriculture	Participant
43	F	Spanish	Mexico	Sales	Agriculture	Participant
44	M	Spanish	Mexico	Marketing	Industrial Products	Leader
45	F	Mandarin Chinese	China	HR	Agriculture	Leader
46	M	Japanese	Japan	Sales	Agriculture	Leader
47	F	French	France (based in Germany)	HR	Aeronautics/ Defense Systems	Participant
48	F	Portuguese	Brazil	HR	Agriculture	Participant
49	M	Spanish	Mexico	Marketing	Food	Leader
50	M	Urdu	Pakistan (based in Singapore)	Trading	Agriculture and Oil	Leader

Table 4: Detailed Participant Demographics



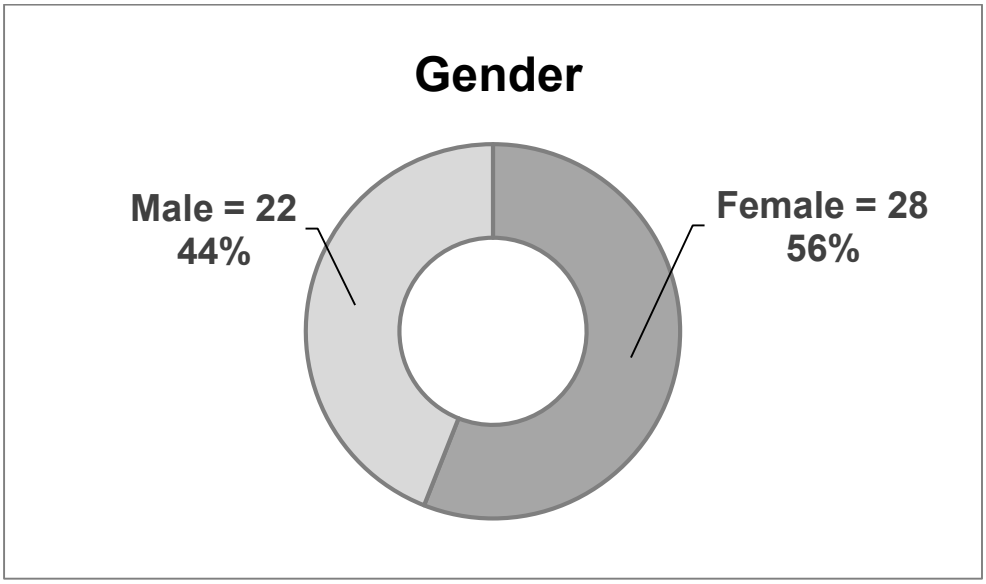


Figure 5: Participants by NS or NNS Identification and Gender

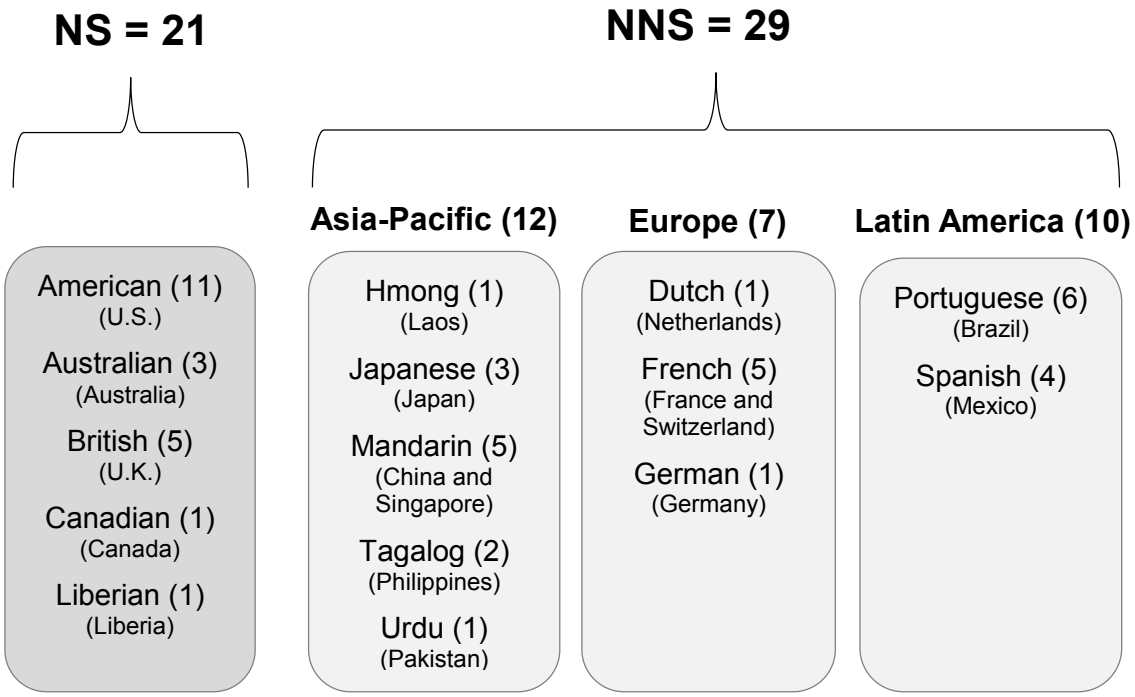


Figure 6: Participant Native Languages by Region and Country of Origin

Organizations (16) & Industries (12)

- Aeronautics/Defense Systems
- Banking/Finance
- Chemical
- Consulting
- Consumer Retail Products (3)
- Food/Agriculture (2)
- Healthcare
- Industrial Products
- Medical Devices (2)
- Oil
- Technology
- Telecommunications

Job Functional Areas (11)

- Finance/Trading (4 participants)
- Human Resources (15)
- Information Technology (10)
- Knowledge Management (1)
- Marketing (6)
- Operations (2)
- Project Management (2)
- Research & Development (4)
- Risk Management (1)
- Sales (4)
- Technical Services (1)

Figure 7: Participant Organizations/Industries and Job Functional Areas

Behind the list of demographic variables are many different perspectives and stories from all over the globe, as illustrated in participants' team experience recollections through the Critical Incident Technique, a method that will be described in the next section. Such narrative provides a glimpse of the broad scope of GVTs and, at the same time, suggests the desire to create alternative connections and communities in the transforming global workplace.

In summary, my sample population included NSs and NNSs at several multinational corporations who shared critical incidents, or memorable experiences, while they were serving on GVTs. Before enumerating my interview questions and procedure below, I will next explain my choice of a qualitative method, introduce the Critical Incident Technique and summarize a few key studies related to my topic which informed my own study design.

Methods

For my research, I selected a qualitative approach which, at its most basic level, is a study that does not rely on statistically-analyzed numbers like its quantitative counterparts (MacNealy, 1999, p. 42). Qualitative research traditions may be categorized into three nuanced traditions: individual-lived experience, society and culture, and language and communication (Marshall & Rossman, 2006, p. 55). My study crosses into all of these but particularly into the third, by demonstrating interest in the context and setting of the individuals' experiences and the social and cultural workplace environment in which they find themselves but narrowing the focus of my inquiry to the specifics of language and

communication interactions. Furthermore, there are four purposes of a qualitative study from which to select: exploratory, explanatory, descriptive and emancipatory (Marshall & Rossman, 2006, p. 34). I conceptualized my study as descriptive, in seeking to document and describe the environment of communication on diverse GVTs.

There are some best practices to consider in this domain of inquiry. While qualitative research has become a respected approach in many disciplines including technical and professional communication and business communication, a thoughtful research design can allay any residual doubts for an audience. Researchers anticipating qualitative designs should create the following: "a conceptual framework that is thorough, concise, and elegant; …a design that is systematic and manageable, yet flexible; and…a coherent document that convinces…that the study should be done, can be done, and will be done" (Marshall & Rossman, 2006, p. 10). The memorable criteria for a sound qualitative study design are as follows: credibility that the topic was appropriately vetted and participants were appropriately identified, transferability of findings to other similar situations, dependability attempting to account for changing conditions, and confirmability that findings could be confirmed by another study (Marshall & Rossman, 2006, p. 201). Taking these thoughtful steps will assist qualitative researchers should they find themselves in a position to defend why nonmeasurable "soft" data is so valuable when studying real world, multi-cultural, context sensitive problems such as communication in ever-morphing social

environments (Marshall & Rossman, 2006, p. 208). While acknowledging the caveats of qualitative design, and anticipating that transferability and confirmability might pose the bigger challenges, I attempted to mitigate risk by again seeking consultative feedback on my design.

My study is also considered empirical. Empirical research resembles library-based research in that the researcher encounters a dissonance, defines the problem and research questions, and argues for acceptance and significance of the results. The difference between the two stems from the approach to gathering and analyzing data and reporting on the details of the method (MacNealy, 1999, p. 7). While I tapped into published sources through a literature review, I incorporated an empirical approach through direct qualitative and systematic collection of data from my participants via substantive interviewing to describe differences in GVT communication.

Within my qualitative study design, I framed my interviewing method by incorporating the Critical Incident Technique (CIT). Below is an overview of CIT and some relevant studies incorporating this method and similar frameworks which have informed my own design.

Critical Incident Technique (CIT). Rooted in studies undertaken by the U.S. Air Force's Aviation Psychology Program during World War II, CIT comprises "a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles," or "essentially

a procedure for gathering certain important facts concerning behavior in defined situations" (Flanagan, 1954, p. 327, 335). An incident is "any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act" (Flanagan, 1954, p. 327). The 5-step CIT procedure consists of articulating 1) General Aims, or describing the goal of the study; 2) Plans and Specifications, or determining precise instructions for the observers and the individuals and situations to be observed, 3) Collecting the Data, or conducting the interviews or questionnaires, 4) Analyzing the Data, or summarizing and describing the data for practical use, and 5) Interpreting and Reporting, or acknowledging limitations and biases (Flanagan, 1954, pp. 336-347).

Interviewers should apply these criteria for collecting incidents: the actual behavior was reported, the behavior was observed by the individual reporting it, all relevant factors in the situation were given, the observer definitively judged the behavior to be critical, and the observer clearly explained the behavior's criticality (Flanagan, 1954, p. 342). One potential disadvantage of CIT is the fact that capturing these incidents is reliant on the perceptions and memories of the individuals, which are not necessarily objective or foolproof and the frequency of mention of an incident may or may not mean that such a behavior is deemed most important (Dekker, 2008, p. 32).

Sample precedent studies using CIT. Early applications of CIT included performance measurement, training, selection and classification, job design,

operating procedures, equipment design, motivation and leadership attitudes, and counseling and psychotherapy (Flanagan, 1954, p. 347). More recent CIT applications include cross-cultural studies (Arthur, 2001, and Driskill & Downs, 1995; as cited in Dekker et al, 2008, p. 446). My literature review includes two scholars, Dekker and Kassis Henderson, who have employed CIT in studies related to global teams, both virtual and co-located. I will briefly describe their methods, research questions and interview questions as a prelude to discussing how these studies will inform my own research design.

Dekker (2008) and Dekker et al. (2008) focused on effectiveness in GVTs through identifying and validating 14 critical effective virtual team behaviors and then comparing them across different countries using Hofstede's national culture dimensions. These 14 interaction behaviors included media use, handling diversity (including language and cultural differences), interaction volume, in-role behavior, structuring of meeting, reliable interaction, active participation, including team members, task-progress communication, extra-role behavior, sharing by leader, attendance, social-emotional communication, and respectfulness (Dekker et al., 2008, p. 442). Dekker (2008) posed five research questions through interviews of 30 and 36 virtual team workers representing corporations in various countries and an online survey of 168 individuals:

- What behaviors are perceived as critical for the effectiveness of global virtual teams?
- Are effective virtual team behaviors culture specific?

- How can effective virtual team behaviors (EVTB) be measured in a reliable and valid way?
- Does team trust mediate the relation between EVTB and team satisfaction and performance, respectively?
- Does social presence mediate the positive relation between isolation and effectiveness in global virtual teams? (pp. 6-8)

Dekker and colleagues (2008) partnered to publish further results on research question number two above. Employing CIT, Dekker's interview questions included the following:

- Now I want you to think back to specific incidents that you have seen occur in the last year.
- Can you think of an incident in which your virtual team members showed a critical interaction behavior?
- Would you describe for each example:
    - What were the circumstances surrounding the incident?
    - What exactly did the team member(s) do that was critical?
    - How did the behavior (positively or negatively) affect the satisfaction of the team members and/or the performance of the team? (p. 446)

Kassis Henderson (2005 and 2010) investigated language diversity in international management teams and implications of language boundaries on the development of trust in these teams. Kassis Henderson's methods included 10

recorded telephone or face-to-face interviews with European professionals in her first research study and later 14 interviews via telephone and videoconferencing with senior executives in a major European company. Kassis Henderson's 2005 study did not employ CIT; however, her research questions are worth noting since they establish her interest in this same line of research and link towards her later study. The 2005 study posed the following research questions (but did not include any interview questions):

- How does language diversity in a team affect the ability of individuals to interpret each other's specific communication practices and general language behavior?
- How does language diversity both hinder and facilitate socialization among team members?

Kassis Henderson's subsequent research (2010) explained the following:

- How does using English as a shared working language both break down and create language boundaries?
- How do these language boundaries influence the development of trust in multicultural, multilingual teams?

In this latter study, Kassis Henderson's interview questions regarding team focus included:

- How diverse, in terms of language spoken, is your team?
- How is this diversity managed? What policies and practices have been adopted to facilitate interaction and cooperation?

- Can you think of any particular ‘critical incident’ or difficult situation which arose in your team because of the language diversity of the group members?
- Have you observed any factors connected with speech behavior or language use that (a) hinder, (b) encourage, productive communication?
- Does language diversity add value to your team or is it an obstacle?

Note that the third question invokes a critical incident.

Dekker and Kassis Henderson each present different insights that help provide clarity and influence my scope. Both are focused on teams in a global corporate workplace setting. Both use an interviewing method, either in-person or via telephone. Both use CIT elements at least once. Dekker is focused on GVTs and cultural differences using Hofstede’s framework. However, she does not emphasize language diversity much, even though handling diversity is listed as the second interaction behavior. That is where Kassis Henderson provides me with deeper insight into the role of language on global teams. Although she does not integrate the virtual environment and cautions against generalizing with national culture dimensions (Hofstede), her work confirmed to me why my intuition leaned toward challenges for NNS as I sought to narrow my topic of GVTs. In summary, by drawing on both of their research but not fully replicating either, I propose going deeper with Dekker’s “handling diversity” behavior and extending Kassis Henderson’s research into virtual environments.

In my study, participants recalled communication experiences in their GVT participation related to language, culture, technology, and collaboration. As previously mentioned, the wording in my interview questions was balanced to elicit both positive and negative reflections. The well-established CIT technique had potential to provide firsthand insight into workplace GVT behavior from the very people at the source.

Interviewing procedure and questions. As noted earlier, I chose interviewing as my method. Interviews can be a valuable way to gather valuable data and insight but the participant's perspective must unfold as he/she sees it (the emic perspective) and not be influenced by the researcher's viewpoint (the etic perspective)(Marshall & Rossman, 2006, p. 101). Even though in-person or virtual interviews may sometimes prove to be more resource-intensive and more susceptible to researcher and participant bias, my awareness of these risks from the onset prepared me for my role as an "insider investigator" (MacNealy, 1999, pp. 202, 204). Also, despite the high English proficiency of my NNS participants, this degree of personal contact (versus an online survey, for example) was thought to be especially helpful if there was a need for me clarify any misunderstandings related to the interview questions or terminology The strategic choice of interviewing and my ability to easily adjust to the convenience of the participants' schedules was beneficial since all were busy full-time professionals in organizations and under time and other constraints. An important goal of mine was to make the data collection process commitment feasible and appealing to

them in order to secure the best rate and level of participation, compliance and, ideally, genuine interest in the outcomes. Judging by the high number of participants who asked to learn the results at the end of this study, I succeeded in this regard. It also demonstrated an ongoing interest in and the currency of this topic, and therefore continually motivated me for the duration of this project.

Over five months, I recorded interviews with 50 individuals according to the following procedure:

- I identified an adequate sample of NSs and NNSs (at one or more multinational organizations) with experience participating on GVTs.
- I sent an initial introductory email introducing myself and the study to seek informed consent (per the IRB-approved procedure) as well as to provide the interview questions so that participants had advance notice to recall some critical incidents (phrased as “memorable experiences”).
- I scheduled a single one-hour interview with each participant to take place in-person or via telephone.
- During the actual recorded interviews, I again reviewed the purpose and conditions of the study and asked for and answered any questions or issues related to informed consent (there were almost none, presumably given the advance preparation) before proceeding with the following questions:

- *Primary question:*
    - *Tell me about a global virtual team that you have been on recently. Describe a memorable experience on that team.*
- *Follow-up questions:*
    - *What challenges or opportunities with language and culture did you experience?*
    - *What challenges or opportunities with technologies did you experience?*
    - *What challenges or opportunities with collaboration did you experience?*
- *Two additional questions:*
    - *Was your GVT an effective team? Why or why not?*
    - *What advice or strategies do you have for someone new to GVTs?*

These last two questions were included to hone in on some practical observations. Oftentimes these questions would help parse out insights that weren't disclosed earlier. Also, given the interest in this topic by various stakeholders in the businesses, I correctly anticipated their request to learn some practical recommendations from their colleagues that they might implement.

The choice of interview questions is, not surprisingly, the "most crucial aspect of the data collection procedure" (Flanagan, 1954, p. 342). Slight wording changes may result in misunderstandings or biases and therefore a pilot test is

recommended before the study begins. I identified and interviewed two pilot participants (one NS from the U.S. and one NNS from Brazil) before refining the questions slightly and proceeding with the rest of the interviews. Also, while the interviewer should refrain from asking questions that might lead the participant, it is permissible to repeat questions for clarification. In fact, if the incident recall seems incomplete, the interviewer may restate the information shared and therefore encourage the participant to continue and possibly add “many relevant details that the interviewer did not know the situation well enough to ask for” (Flanagan, 1954, p. 342). As noted earlier, the opportunity for such restatement and encouragement when language comprehension issues appear was one reason for my preference for live interviews.

Ultimately, in line with the studies highlighted and after my two pilot interviews, my initial CIT approach was modified to semi-structured interviews and expanded with the follow-up questions noted above to facilitate participants’ ability to provide more detail and elaboration on their GVT experiences. A semi-structured interview format provides for a degree of consistency in questions and comparability, while also allowing participants to reveal important but unanticipated comments and themes (Myers, 2008; as cited in Tanzer et al., 2014, p. 514).

Content analysis. The data provided by the 50 participants from their semi-structured interviews were analyzed using the content analysis method. Content analysis can either be holistic or embedded, depending on the purpose.

Holistic analysis usually involves a general analysis of the entire data, revealing general themes and patterns with less focus on systematic procedure. Embedded analysis, on the other hand, involves a more systematic approach to content analysis, where the researcher examines the data and identify categories and themes from the text. The text is organized into several categories of ideas, where several themes and sub-themes are subsumed, as is the case in my study (Krippendorff, 2012).

There are several frameworks in which meaning can be ascribed to the data. These frameworks may include the role of participants, the communication process between people, the history of people, themes, resources and challenges (Merriam, 2009). My study specifically focuses on themes, or recurrent ideas or thoughts from the data. These categories and themes reflect patterns of thoughts or perceptions that emerged from several sources of data; in this case, multiple participants.

In addition, Krippendorff's (2012) method of content analysis based on six primary questions informed my analysis*:*

1) *Type of data to be analyzed*: This study involved analyzing the transcript of semi-structured interviews.
2) *Definition of the data*: In this study, the data were defined as the opinions and perceptions of the participants as reflected by their responses in the semi-structured interview transcripts.

3) *Population from which the analysis was drawn*: The population for this study was divided into two groups: (a) NS professionals with experience on a GVT, and (b) advanced proficiency NNS professionals with experience on a GVT.
4) *Which data will be analyzed*: All transcripts were analyzed, with emphasis on responses answering the research questions of the study.
5) *Boundaries of the analysis*: Themes and patterns were identified based on the frequency of recurring ideas that emerged from the analysis.
6) *Target of the inferences*: The scope was confined to the 50 participants, with results not generalizable to all GVTs.

Once the interviews were complete, per the study protocol, each of the 50 digital audio recordings was transcribed, reviewed and proofed prior to beginning the data analysis stage. Participants were de-identified and assigned a unique number in the results (Table 4). While a professional was retained to transcribe the recordings, I proofed all of the transcriptions alongside their respective recordings in order to confirm their accuracy and to familiarize myself with the data. Similarly, an experienced consultant provided initial assistance in uploading the secured Microsoft Word document transcript files into NVivo software in order to initiate and systematize the data processing. NVivo is a qualitative software that supports data analysis in an organized and systematic manner with visibility to patterns and aggregation across the data set. The results of a qualitative

analysis may be more likely to be perceived as valid and reliable when qualitative software is used.

The content analysis was performed in two phases. Phase 1 used an inductive, open coding process, which provided flexibility to create codes based on the content presented, without being restricted to a pre-determined fixed set of codes as occurs with closed coding. While my interview questions around language, culture, technology and collaboration provided some framing resulting in seven thematic categories, there was no fixed set of codes to which participants were obligated to respond. Below are the seven categories that emerged, in alignment with the interview questions:

- Category 1: Language Challenges
- Category 2: Culture Challenges
- Category 3: Technology Challenges
- Category 4: Collaboration Challenges
- Category 5: Technology Methods
- Category 6: Team Effectiveness Evaluation
- Category 7: Recommended Strategies

From here, participant interview responses were broken down into manageable segments, with a corresponding label (or, code) applied to reflect the main idea of each. I determined the appropriate label or code to embody each sample of text that was analyzed. These codes were instrumental in determining which ideas or thoughts from the data were recurrent across several

participants. The number of code occurrences were then totaled in order to see the extent to which these labels appeared across the entire data set. The higher the frequency of codes from the summary total, the more representative these thoughts were of the entire sample population. In this manner, this qualitative study's method of categorizing the interview responses assists in identifying and interpreting patterns and insights from the participant experiences.

For Phase 2 of coding, after the first analysis in NVivo was complete, a second extensive manual self-review of the coding of the data was performed, in which responses were prioritized to align with the four key communication influence categories for GVTs as well as with three categories for the supplemental questions. The recheck resulted in some additional codings in the original seven main categories. All themes and codes were arranged in a Microsoft Excel spreadsheet to facilitate review and sorting.

Each unique idea relevant to the research questions was coded. However, only one occurrence total for each unique code was assigned to a participant (regardless of how many times the participant mentioned it during the interview). Therefore, the coding is not the frequency of that occurrence per individual participant but rather whether a given participant mentioned it at least once. For example, if a participant mentioned building relationships as a challenge twice, it was only marked once. Each participant could have an unlimited number of codes under a category (e.g., building relationships, perception of time, politeness and hierarchy as four codes under the category of cultural

challenges), each noted only once. A theme was subsequently identified as a result of the frequency report (number of participants to offer a given experience) that was created after the coding was completed.

While not all of the following reflection questions were specifically answered in my analysis, they served as a guide to identifying key themes and patterns to inform the findings:

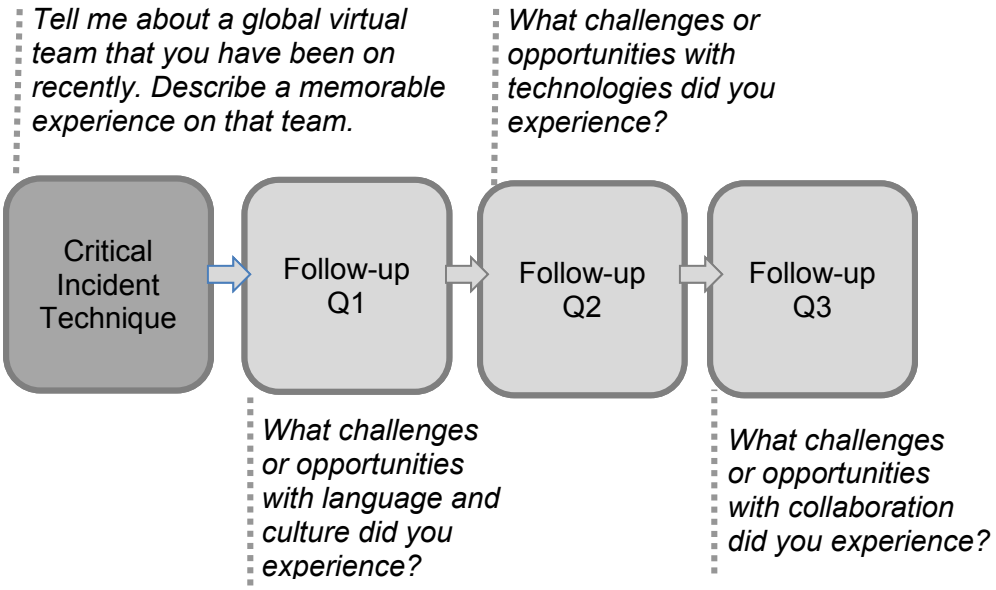
- What are the most frequently mentioned codes for NSs? For NNSs?
- What are common codes for both NSs and NNSs? Where were there noticeable gaps in the number of occurrences despite the common code?
- What are the codes unique to NSs? Unique to NNSs?
- What is surprising? Not surprising?
- What connections are there to VCoPs?
- What connections are there to intercultural communication?
- What is the ratio of positive experiences to negative experiences (challenges)?
- What are key threads related to the four communication influences that appear as recommended strategies?
- Is there any overlap in codes between categories?

In summary, the combined specific themes and codes from the content analysis, were aligned with the components of GVTs and communication influences from Chapter 1 as well as the hybrid framework of VCoPs and

intercultural communication in Chapter 2. Consequently, the findings of the data from the interviews will be informed by these choices and grouped accordingly for clarity when presented in the next chapter.

Chapter 4: Findings

This chapter presents the detailed results of the 50 participant interviews, providing findings for both NSs and NNSs speakers for each of seven identified categories and corresponding themes. Then, key differences and similarities for the four GVT communication influences outlined in Chapter 1 will be discussed before interpreting the findings within Chapter 5. As a reminder, here are the interview questions that were asked of each participant:



Concluding questions:

- *Was your team effective? Why or why not?*
- *What advice or strategies do you have for someone new to GVTs?*

Figure 8: Interview Questions

To begin the conversation, each participant was asked to describe a team he or she had been on recently and, in particular, to recall a critical incident (phrased as “memorable experience” to avoid any technical terminology misunderstanding). As mentioned earlier in Chapter 3, my initial CIT approach was modified to semi-structured interviews and expanded with the follow-up questions noted above to facilitate participants’ ability to provide more detail and elaboration on their GVT experiences. The table below briefly summarizes the context of each participant’s primary recollection. These summaries highlight the breadth of experiences covered across the participation population described in Chapter 3, including key themes aligning with the four communication influences of language, culture, technology and collaboration. While not all themes are represented here, there are evident similarities and differences, many of which will be developed throughout this chapter and the following chapter by way of supporting quotations as well as coding and response frequencies. What this table also provides for the first time is some job functional or organizational context with a glimpse into the nature of the team and/or its purpose.

Participant Number	Native Language	GVT Role	Critical Incident
NS Critical Incidents (Participants 1-21)			
1	English (U.S)	Participant	Technical project team: difficulties with late deliverables and manager hierarchy, agreement on timelines, trust, responsiveness, accountability
2	English (Liberia)	Participant	Marketing project team: difficulties with time zones, schedules, phones lines, language confusion required one participant to document input for clarification after meetings
3	English (U.S.)	Leader	R&D team: Addressing underperformance, trying to encourage participation and interaction with introverted group, confirming who is learning what

4	English (Australia)	Leader	Business acquisition team: Accelerated project timeline, misunderstanding came across as borderline unethical decision, technology challenges, time zones, accent issues
5	English (U.S.)	Leader	Marketing new product launch team: kickoff and onboarding struggle; unclear objectives, roles, responsibilities, deliverables; unspoken frustrations, language, culture, time zone issues
6	English (U.S.)	Participant	Project management team: searching for better way to communicate, teach others, deploy best practices, participants not opening up, silence, accents, misunderstandings
7	English (U.S.)	Leader	Educational technology team: Cultural disconnect with expectations on work responsibilities, accountability, delegation, discomfort speaking directly and openly, hierarchy, chain of command
8	English (U.S.)	Leader	Global leadership team: work styles/preferences, time zones, work-life conflict, making assumptions, differences on speed to action vs. planning
9	English (U.K.)	Leader	IT team: leader-initiated conversation about awareness, clarification, encouraging open dialogue, culture-specific references/humor/slang, building trust, encouraging open communication
10	English (U.S.)	Leader	R&D strategy meeting: highly educated employees interpreting white paper with jargon, emotions tied into words, assumptions about comprehension, difficult translations between languages, flexibility
11	English (Australia)	Leader	Tech services team: mix of participation, journey towards better communication, leaders as liaison to connect members, working for better engagement and commitment to team
12	English (U.K.)	Leader	Compliance team: struggle with one group not admitting mistakes, how to mitigate suspicion between levels and create team culture of trust and openness, two-way feedback loop
13	English (U.K.)	Leader	Testing team: how to address communication mishaps, interactions hampered by heavy amount of email chains, use tech better for closer connections
14	English (U.S.)	Leader	New product launch team: formation stage, time zones, language/culture differences, missing richness of exchanges through email, need streamlined way for open communication
15	English (U.K.)	Leader	Marketing team: new member slow to contribute on call, no nonverbal, how to welcome and connect with new members, emotions beyond just facts, introduce and share knowledge/diversity
16	English (Australia)	Leader	Retail team: how to minimize isolation and increase connectivity while maintaining balance and keeping people motivated, time zones, loneliness, disconnect, disruptive schedules, building trust
17	English (U.S.)	Leader	Knowledge management team: different comfort with moving forward with ambiguity vs. having and vetting all details, anticipating conflicting styles, not making assumptions, lack of nonverbals, effort to connect
18	English (U.S.)	Leader	IT team: large collocated group vs. remote individuals, understand outlying culture and work

			styles/norms, language disconnects and accommodations, taking ownership, openness
19	English (U.S.)	Participant	Tech system implementation: large division in many regions, multiple processes expecting localization, clear communication, time zones, written vs. spoken, language barriers, hierarchy, politeness
20	English (U.K.)	Leader	IT team: onboarding new members, welcoming and connections, isolation of single remote members, F2F initial bridging, organizational culture, choice of media
21	English (Canada)	Participant	Audit team: individual motivations and needs, making sincere connections, lack of cultural orientation/training in field, trust and bonding, finding confidants to navigate cultures (including functional)
NNS Critical Incidents (Participants 22-50)			
22	Spanish (Mexico)	Participant	Sales contract team: language and culture misunderstandings, slang misinterpreted and offensive, time perceptions, respecting local schedules, understand personal style differences
23	Hmong (Laos)	Participant	HR project: how to quickly orient members, wrap in organization's values and choice of media to speed interaction, building trust quickly, time zones, accents, personal connections
24	French (Switzerland)	Leader	IT team: create and sustain team spirit, slang, accents, hard to connect socially, small talk harder than business and deep personal connections hardest, managing lack of "feel" in virtual
25	Portuguese (Brazil)	Participant	HR strategy project: language, lack of vocabulary for full expression, more effort/energy/concentration required, clarifying and confirming understanding, connection through empathy and humor
26	German (Germany)	Leader	Product development: disrespect when people in room mute phone to comment on others, get to root of communication issues (tech, culture, language), extra effort to visualize message still misunderstood
27	Portuguese (Brazil)	Participant	Finance policy implementation: decreased attendance/participation, lack of trust/respect, no feedback, leadership, unclear outcomes, sharing, generalizations, hierarchy, challenging opinions
28	Mandarin (Singapore)	Participant	HR team: new leader orientation, same native language but awkward shifts to English, not sharing in English vs. native language, need for follow-up, right mix/frequency of communication, clarification
29	French (France)	Participant	IT software team: training new group from different region for first time, worked closely as group but no question/interactions, discussed in private, hard to read, functional culture of mostly introverted "geeks"
30	Japanese (Japan)	Leader	Trading team: extra efforts/multiple communications, language barriers, word choice, less confidence in speaking, speed, choice of media, clarification, avoiding conflict and directness, high-context culture
31	Japanese (Japan)	Leader	Process improvement team: managing cultural issues, establishing relationships, poor technology connections impacting efficiency, unclear expectations, physically present but not engaged

32	Mandarin (China)	Leader	HR system deployment team: differences in cultural expectations in two regions around initiative, directness, conflict avoidance, dominating conversations, mental translations, clarification
33	Mandarin (Singapore)	Leader	IT business team: awareness of inconsistent participation, culture (saving face, hierarchy, interjecting, silence, unclear responses), language (proficiency, confidence), avoid overgeneralizations
34	Tagalog (Philippines)	Leader	IT software team: accelerating adjustment to culture, language, technology (directness, listening, sharing point of view, politeness, avoiding generalizing, time differences, scheduling, speed of language, slang)
35	Portuguese (Brazil)	Leader	HRIT team: increasing leader influence, technical language, real-time translation, speed and effort, pause for input, turn-taking, time perceptions, trust, isolation, onboarding, personal relationships
36	Mandarin (China)	Participant	HR team: aligning different viewpoints, encouraging participation, choice of words, directness, unspoken context, accommodating to cultures, silence, discomfort, barriers with native speakers, awareness
37	Portuguese (Brazil)	Participant	IT business intelligence team: preventing remote isolation, culture and language frustrations causing alienation, listening without barriers, trust, effort to prove oneself, recognize value of multilingualism
38	French (France)	Leader	R&D team: share expertise, unwritten rules, trust, directness, subtleties, fear of speaking, manage emotions, misinterpreting technical vs. language competence, multiple inputs, be open to challenges
39	French (France)	Leader	Credit team: culture challenges, directness, rudeness, adapting communication style, energy required, word choice, different meanings, humor, less confidence in speaking, no nonverbals, trust
40	Portuguese (Brazil)	Participant	HR team: company expanding into new country, language and culture barriers, simultaneous translation, time and effort, seriousness, discomfort, documentation, hierarchy, formality, time zones
41	Tagalog (Philippines)	Leader	Business leadership team: no visual cues, silence, hesitancy, deferring, outspokenness, dominating conversations, adapting styles, emotions, fluency expectations, presentation style, multitasking
42	Dutch (Netherlands)	Participant	IT risk analysis team: adapting to proficiency, speed, silence, time and effort, required follow-up, openness about language, formality, time zones, small talk, cultural/personal connections, humor
43	Spanish (Mexico)	Participant	Sales account team: balancing internal/external communication, hesitancy, time, documentation, multiple inputs and formats, confidence, frequent clarification, word choice, social practices, openness
44	Spanish (Mexico)	Leader	Marketing team: aligning generational differences, confidence, proficiency levels, attitudes, emotions, language switching, organizational culture, local translation, accents, media preferences/cost
45	Mandarin (China)	Leader	HR team: recognizing individual challenges, time zones, work-life balance, cautious about language, tech tools, multiple inputs, follow-up, empathy, flexibility, speaking up, sharing knowledge

46	Japanese (Japan)	Leader	Business development team: cultural bonding, overgeneralization, confidence, facets of language, clarification, preparation, nonverbals, directness, messaging format, listening effort, mental translation
47	French (France)	Participant	Leadership development team: integrating post-merger team, different proficiencies, confidence, language switching, team spirit, consensus, accommodations, business practices, multitasking
48	Portuguese (Brazil)	Participant	HR policy team: localization challenges, language barriers, time perceptions, technical jargon, media preferences, peer sharing, formality, social practices, business focus, translation time, visuals, confidence
49	Spanish (Mexico)	Leader	Marketing team: managing language with precise wording for product attributes, word nuances, mental translation, time and effort, patience, acknowledging challenges, business/social practices, time zones
50	Urdu (Pakistan)	Leader	HR team: need for candidness about barriers, task -based transactional relationship, norms, time zones, work-life balance, investing in virtual leadership, onboarding, emotional attachment, translation effort

Table 5: Participant Critical Incidents

Although I asked each participant about both challenges and opportunities they experienced, they discussed vastly more challenges than opportunities. Since the positive experiences are too few in number to constitute a category, my analysis will focus on the top challenges of each category.

The data are presented in three formats in this chapter, in descending level of detail:

- First, the most detailed, 14 full data tables listing all codes sorted as common or unique to NSs and NNSs;
- Second, a single table comparing the top codes and largest gaps by NSs and NNSs; and
- Third, a pair of numbers-only tables summarizing the total number of codes and total number of responses by NSs and NNSs.

As a reminder, the seven thematic categories are:

- Category 1: Language Challenges
- Category 2: Culture Challenges
- Category 3: Technology Challenges
- Category 4: Collaboration Challenges
- Category 5: Technology Methods
- Category 6: Team Effectiveness Evaluation
- Category 7: Recommended Strategies

The first four categories constitute the four primary communication influences on GVTs as presented in Chapter 1. The last three categories are descriptive (in the case of technology methods) or added as summary interview questions resulting in some redundancy (team effectiveness evaluation and recommended strategies). Because the latter are descriptive or summative in nature, discussion of these results will be limited to a very high-level overview, with the focus of the analysis reserved for the four communication influences (challenges with language, culture, technology and collaboration).

Coding results from the 50 participant interviews are summarized in 14 master tables which follow, each corresponding to one of the four GVT communication influences of language, culture, technology and collaboration, as well as the supplemental questions around technology method, team effectiveness evaluation and recommended strategies. For each category, codes were compiled into two tables, with one illustrating codes common to both NSs

and NNSs, and the second comparing codes unique to NSs and to NNSs as follows:

Global	
Language Challenges	• *Table 7: Codes Common to Both NSs and NNSs* • *Table 8: Codes Unique to NSs and NNSs*
Culture Challenges	• *Table 9: Codes Common to Both NSs and NNSs* • *Table 10: Codes Unique to NSs and NNSs*
Virtual	
Technology Challenges	• *Table 11: Codes Common to Both NSs and NNSs* • *Table 12: Codes Unique to NSs and NNSs*
Team	
Collaboration Challenges	• *Table 13: Codes Common to Both NSs and NNSs* • *Table 14: Codes Unique to NSs and NNSs*
Other	
Technology Methods	• *Table 15: Codes Common to Both NSs and NNSs* • *Table 16: Codes Unique to NSs and NNSs*
Team Effectiveness Evaluation	• *Table 17: Codes Common to Both NSs and NNSs* • *Table 18: Codes Unique to NSs and NNSs*
Recommended Strategies	• *Table 19: Codes Common to Both NSs and NNSs* • *Table 20: Codes Unique to NSs and NNSs*

Table 6: List of Master Codes Tables

Each master table includes four columns: a list of identified codes, the number and percentage of NSs citing an experience represented by a code, similarly the number and percentage of NNSs citing an experience represented by a code, and then the percentage difference in NS and NNS responses for comparison. In the second and third columns of each table, participant responses greater than one are highlighted in light gray. In the fourth column of each table, any differences greater than 20% between NSs and NNSs are shaded in dark gray. While my research questions focus on communication differences, in many cases the fact that a code was mentioned by both NSs and NNSs could be misleading without deeper examination if there is a wide variation in the number

of occurrences. In some of these cases, highlighting not only the *number* of occurrences but also the *percentage* difference in their occurrence (as presented in the fourth column) suggests that some codes are, in fact, more of a difference than a similarity in NS and NNS perceptions.

Note that the raw data tables from all seven categories and their subsequent themes resulting from both NS and NNS responses are available in the Appendix. The 14 master tables in this chapter below share the same data, but in a slightly different and condensed format. Note that this chapter closes with four summary tables that present the key data in an even more succinct, high-level format.

Finally, participant voices are included through quotations representative of the key findings for each category.

Findings: Common and Unique NS and NNS Codes

The following section presents the findings – common and unique NS and NNS codes – for the seven categories identified from the responses corresponding to the interview questions. Simply for association and clarity, the four main questions associated with the four communication influences are introduced in the research question header by the relevant component of GVTs. In other words, the global component of a GVT is mapped to two parts (language and culture findings), the virtual component is mapped to the technology findings, and the teams component is mapped to the collaboration findings.

Research question related to "global" component of GVTs, part 1:

What differences relate to language?

For the thematic category of language challenges, most of the NSs cited slang/idioms/colloquialisms/word choice (15 participants, 71%) and miscommunication/misunderstanding (13 participants, 62%) as the main challenges that they experienced. Other top challenges cited by the participants included English as a second language issues (12 participants, 57%), time/patience/energy/extra effort/empathy (11 participants, 52%), and accents (NNS/NS)/pronunciation/avoidance (9 participants, 33%).

The use of slang/idioms/colloquialisms/word choice was the most important language challenge. Below are three examples from Participants 9, 10, and 12 which highlight the difficulties, confusion, and emotional frustration around various uses of vocabulary:

> *The other thing that we have to really focus on is avoiding slang use, because again that is not something that somebody has spent a lot of time speaking in English they necessarily understand. We can have the same challenges between English English and American English. I was in a meeting the other day where someone was talking about, they were using baseball terminology and that is not necessarily something that everybody would understand around the English-speaking globe. [NS9]*

> *The person in [the U.S.] contacted me, very distraught, because she had received an email from this person in Europe. And the lady in Europe had used this word "trust," and I know, because I have worked with the person in Europe, her English is good but it is a crisp English. It's a lot of functional words but not a lot of emotional words, and so it is a true translation, but she does not understand the emotions that are laced into some of these words, so she used this word trust in a way that basically made this person in the U.S. feel bad, likely ethically this was awful. And that's not what was intended, but it was what was written. [NS10]*

There has been a few times that I tend to use euphemisms and metaphors quite a lot when I have been communicating with them and I think yardstick was one that came up and the person I was talking to they were like "I don't understand what you're talking about" and went straight to Wikipedia and looked it up and then came back and said "okay, I know exactly what you're talking about" and had a better explanation from where yardstick had come from than I had in the first place. [NS12]

Another language challenge cited by the participants was the miscommunication/misunderstanding experienced as a result of the multitude of language used in the virtual global team. Participants 9, 15 and 17 shared their following reflections around working to resolve issues of disconnect between parties, which may include strategies of using supporting reference materials or awareness of the need to consciously ask for and confirm understanding.

Quite often, we would be having a conversation and if there was a word, if I said something he couldn't understand we agreed up front that I'd then type it in instant messaging to him so he had time to look it up, paste it into his only thesaurus or dictionary to understand what it was. [NS9]

As soon as a non first speaking English is on the phone, you can just tell that we use a different type of language and everyone does. The other thing that we do particularly on calls like this, conference calls or WebEx calls, is there has been sort of a habit starting and saying "okay, I'm going to stop now" to see if everyone is tracking with me and following because it is very easy just to dump a load of information down on these calls. So some of those habits I see coming in now when actually some from Canada started doing that and then I copied it because it thought it was a very good thing to do. Now when I was copying it, I see other people copying it as well. So it's a sort of self learning process as well. [NS15]

One of the signs of an effectively collaborating virtual team where they don't share a common native language is that team members are very comfortable with "Could you please repeat that? I didn't get that." Even if it takes several times. Because what I have found with teams that do not know each other very well, sometimes they will just let it go. They are uncomfortable making an issue of it, so they let it slide, and then that can lead to confusion about objectives and who is doing what and things like that or people's concerns not being reflected because they really weren't

heard and understood. Trying to create that environment of, acknowledging the elephant in the room, really. We do have language issues. Let's not cover it up. It is a fact, and let's not be shy about asking for clarification when we need clarification. [NS17]

Below is an example about the time and extra effort put in by a NNS as noticed by Participant 2, highlighting not only awareness of communication challenges but proceeding a step further by also expressing empathy towards another's experience while putting oneself in another's place:

Sometimes she found it very difficult to explain what she was learning or what feedback she was gathering. She would put that in writing and email it to us the next day and say this is what I was trying to say, if you didn't understand it. And for me, I kind of felt a bit, I felt a bit sorry for her in a way because I just really thought she was doing double portion. She was doing double of her work. When I imagine myself having to communicate with folks on the phone and then leaving have to go back and write everything down I was trying to communicate. I think that's really painful. [NS2]

Many NSs cited English as second language as a language challenge experienced by NSs in GVTs. Participants 5, 10, and 19 shared these observations, which demonstrates at least for these three, an acute awareness of some challenges of communication in a different language, perhaps even coming from their own experiences with second language learning or learners. Once again there are some accommodation strategies noted such as adjusting the rate of one's speech or the format of ones' writing:

I think we always overestimate English as a second language for people, yeah they can speak it and communicate with you and so forth, but are they really getting a lot of the complex points that get talked about and the answer was no. It was especially in the marketing space where you don't really have documents to work from. [NS5]

Language did get to be a problem with this global team. We all learned to talk slower, and to this day I find my cadence when I am talking changes considerably when I go elsewhere because when we realize the thought process that a person who does not have English as their primary language has to go through in order to respond, and we had to check some of our assumptions. [NS10]

It was really important that the communications were often, that they were clear, that they let people know what was going on and especially if I was working with one of the different language areas,… well there's a certain way that I try to write when I'm writing for non-English and sometimes I get a little clunky with it and then I have to back up a little bit, but I do try to be clear without the extra words that we add just for inflection or something like that. [NS19]

Accents were mentioned by several NSs as well, including participant 6 below. This is a not uncommon reference point generally for many NSs when describing communication interactions since it is often one of more immediately obvious and visible differences and can cause discomfort or embarrassment as noted in this example:

A lot of times with language, the accents were a challenge. Two of our people would ask, I'm sorry, can you repeat that, a few times, up to the point where it just became uncomfortable, myself included. Or I'd say can you send me an email about that because I couldn't quite understand and wanted to make sure I followed up…I just felt bad that I couldn't address their question and I didn't want to embarrass them. [NS6]

For NNSs, the top most cited challenges included miscommunication/misunderstanding (23 participants, 79%), English as a second language issues (23 participants, 79%) and repetition/rephrasing/clarification/frustration (23 participants, 79%). Other top challenges cited by the participants included slang/idioms/word choice/sentence structure (22 participants, 76%), preferences for writing vs. speaking (22

participants, 76%), and time/patience/energy/extra effort/empathy (20 participants, 69%).

Similar to NSs, most of the NNS participants cited miscommunication/misunderstanding as the main challenge that they experienced, as noted in these examples below from participants 36, 46, and 48. These anecdotes bring in factors such as differing national tendencies for high- or low-context communication per Hall's work in Chapter 2, levels of directness and pathways for sharing main points or requests, the role of perceptions of perfection in language fluency, and another strategy involving reliance on peers and reverting to one's native language to reach comprehension.

> *What I have noticed in that typical written e-mail from the western culture you come up with your point and then you provide supportive data and then you may have a proposal. In the typical Chinese way of expressing the same idea, they will come up with a lot of data, explanations and information, and then they will lead to a conclusion in a less direct way… For a western culture you just say I would like to have one day off, they say blah, blah, blah, that is it. For a Chinese typical setting, you would say okay I have some appointments. There are a lot of chain reactions. For example, my grandma is sick and she is the one who is looking after my boy and then given she is sick I have to look after my boy. That is why I have to have one day off, on March the 3rd, or something like that. There is information he is not looking for and it takes a lot of time for him to eventually understand that actually the people who sent the message wants to have one day off…The manager may have this impression that this team member is not expressing himself appropriately or something like that. [NNS36]*

> *They speak English like their mother accent from their mother language so it's in English but different levels and different kinds of English. So that's what we all have a hard time listening to other people's English maybe because they are not 100% native but the question is, is native good or bad because if American people speak perfect English, if other participants don't understand then it's not perfect for them right? [NNS46]*

> *I had a lot of conference calls and it's very interesting because sometimes we gather in a room, a lot of Brazilians, and the conference is running and sometimes we don't understand and everybody look at each other and they write down the question and then okay, I'm going to ask later. Sometimes we put the call on mute and discuss it in Portuguese. [NNS48]*

Perhaps not surprisingly, English as second language was also cited as a primary language challenge among NNSs, as shown in the following five excerpts, which call for some additional commentary here since a number of themes are embedded. These participants appear aware of the role of English as the language of business as well as their own proficiency and comfort level as a non-native speaker, even referencing perfection again. There are common threads once more of challenges of oral communication, speaking up, listening effectively, and seeking clarification or confirmation of their understanding. There are inferences regarding self-confidence and self-talk in terms of acknowledging perspectives of both NSs and NNSs and articulating strategies related to improvement. Finally, an interesting theme concerns experiences of NS-NNS communication versus NNS-NNS alone. Participants 39 and 44 share how they perceive interactions with similar non-native speakers as resulting in better or easier communication, including a reference to employing English as a practical business tool (also seen in the literature as Business English as a Lingua Franca (BELF)) which counteracts the idea mentioned several times in these interviews that NNSs are aware of a level of "perfect" or "proper" English, which arguably in reality is undefinable or even nonexistent in a world of increasing forms of global English.

English is definitely our working language. At the same time using English to work is very different as well. My experience is that you feel more comfortable talking to the people who use English as their second language. Sometimes it can be challenging to talk with people whose mother tongue is English. The reason being that when we speak English as a second language, we use the terminology or the language from the textbook, so it is more like a written language in an oral way. [NNS36]

When we started to discuss about this global team, to be a global team, I was not that fluent in English. So for me it was really a challenge. I really had to concentrate and study hard to be in a comfort level. Sometimes you were afraid to speak or to participate more in the discussions because you do not want to be like ridiculous or speak incorrect or think oh they will not understand me, or if they come back with a question that I do not understand, how will I do in that situation, so all of this thinking came to your mind…It is a two-way road. I had to force myself and work hard to speak a better language, to communicate better, but it was others work as well to work hard to understand me and understand that was not my native language. So it was a second language for me, but I was very challenged. [NNS37]

Mainly I am talking with non-English people, Dutch, Italian, Spanish, so we are all the same weakness in terms of language. We have poor vocabulary. We use very simple sentences, so more or less we understand very well each other. My main issue if I can say that, or my main challenging situation, is with the English people. My manager, my big boss, they are all English or American. It is much more complicated, because with English people sometimes the same sentence will totally mean a different thing. [NNS39]

From this nine people, no one is the mother language is English. And this helps a lot because English is a business tool, nobody push a lot to be very proficient in English. Everybody say it is a tool; let's use it as a tool and try to do our work, but if not the best, we understand. For example, if I don't speak so well in the tense, past tense or present or future tense, there is no problem. [NNS44]

First of all I think the language is a little bit difficult because I know English but I'm not a perfect speaker, as you can see. Sometimes when you are in a conference call with a lot of people and you are not able to understand everything that is said because of the language, so sometimes you lose information because of the difficulty of the language because you are not native. It's a little bit common and sometimes I had to contact, if I don't

understand the context of the conversation; sometimes I needed to clarify later. [NNS48]

Another top language challenge noted by NNSs was repetition/rephrasing/clarification/frustration. This theme wraps in factors of vocabulary and humor challenges at the word and sentence level (Participant 24) as well as the technology medium influence (in Participant 39's quotation, the need for extra attention to clarification over the phone) and the recurring sense of confidence and comfort to ask for confirmation or additional clarification (Participant 43).

I have one person from England, so he is English native speaker and this is the one that I have the most difficulty to understand because he has a very English typical vocabulary with English jokes and English way of saying stuff and really it's difficult. Sometimes I have to repeat three times because he's using slang, maybe casual words and stuff I don't know. [NNS24]

On the phone I always try to reformulate: 'Do you understand that?' To rephrase, to make sure that I have understood very well. I do that also with my team. I try to rephrase and ask questions and make sure that they understand what I say. Over the phone it is the only way I found to make sure that we are on the same line and everybody has understood the same. [NNS39]

Language can be a huge barrier if you do not feel comfortable enough talking to someone. You feel like maybe if you ask again to repeat something will be probably rude or something so having an open conversation with everyone and having the confidence to say, you know I did not understand what you were trying to say or can you explain it to me in a different way because I do not know the words or I did not understand the idea. [NNS43]

Another language challenge mentioned frequently by NNS participants included slang/idioms/word choice/sentence structure. NNSs are also aware of the stumbling blocks of vocabulary and expressions, which are constantly

morphing in living, breathing languages and posing challenges for even highly proficient multilinguals. This same challenge was observed by NSs interviewed in this study as well, although Participant 43 notes that other NSs often may need to be reminded of this.

> *Sometimes it is easier for me to speak English with people in Asia because they are speaking a second language which means that they don't know difficult English expressions. Their English is very basic which is very easy to understand but the challenge is the accent. [NNS30]*
>
> *For the people who speak English as a mother tongue, they use a lot of idioms and slang that we may not be able to get exposed to, unless we are live in this same area. So sometimes I find that English can be kind of a barrier when we talk to the native speakers. [NNS36]*
>
> *I think it is more about probably not being sure about the meanings of the words or sometimes I will probably not know all the different ways to say something, like the synonyms. So I am not really sure sometimes when I am trying to say something probably the way to say it. I think of the word in Spanish and I do not know the word in English I have to explain that word so it makes sense. Something that can be probably really fast to say or to ask it will take me longer because I have to explain one or two of the words that I am using to ask for something…Like if we work with someone else in another U.S. office, if they are not used to work with the Mexican team they will probably talk too fast or use a lot of slang and then we can feel a little bit lost and we have to remind them that this is not our first language and if possible not to use so many slangs. [NNS43*]

One interesting theme setting NNSs apart from NSs, was a preference for writing vs. speaking as a frequently noted language challenge. As explained by participants 37, 38, and 43, NNSs will often have more (or perceived) skill in written versus oral communication. While this can vary widely according to myriad factors such as exposure to English through work experience and educational background, personal learning styles, availability and quality of technology media, among others, participants in this study often noted this draw

towards written communication. Influencing factors for this preference include ease of documentation and visibility to text, mitigating disadvantages of not being able to find the right words at the right time, lack of interference from listening or pronunciation or unclear phone transmission, and diminishing “fright” arising from spontaneous phone calls. Similar emotional connections are illustrated by Participant 43, with reference to comfort, security, frustration, loss, and feeling of closeness.

> *You would prefer more writing, like email or IM, because sometimes it is hard to understand or to speak the real meaning you want. Even if you can speak good English, you were always at a small disadvantage, for example in a discussion when you have to put your point of view and you want to mean something and it is hard to find the correct words that you are trying to say. So when you are not, and this is much more potentially bigger when you are not so fluent and so you at the intermediate stage or something like that. It is a potentially bigger challenge. So you write, using much more email, the IM and all of that. It is preferable until you are in a better condition to communicate. [NNS37]*

> *I think when there is a lack of practice of the English language, people will not just spontaneously take the phone because the phone can be a bit frightening because you are not sure if you will understand what the other side will tell you, so this kind of thing I have seen… in writing I think people have all this language of specifications, technical area in all the fields, and it is a big issue there. But, sometimes so what we have to take care is not to misinterpret something we can consider as a technical weakness just because it is an English language barrier. [NNS38]*

> *Usually when it is not your first language you will feel more comfortable and secure writing them down so the other person can read it because sometimes you know the words, you know how to spell it or write it but you are not sure about how to pronounce it. It is quite frustrating when you say a word and then they ask you "what was that?” And you say it again and you say it in the same way that you know and they do not understand it so usually they will not ask a third time to repeat that question or that word. If it is something that is important in the context that you are talking about you can lose a lot of the information just because you did not know how to pronounce it or they did not understand what you were trying to stay.*

Instant messaging, that allows you to write it down and it will be easier for the people who is reading if you just mistype it they will know because of the context and most of the letters that the word has what you were trying to say. Then you can feel closer, like if you are talking but writing it down. [NNS43]

Time/patience/energy/extra effort/empathy was also noted as a language challenge by NNSs. Communicating in a second language requires more from NNSs than NS may realize. Factors highlighted in these examples include increased focus and effort, the criticality of time in processing, interjecting during a window of opportunity, lack of control, extreme fatigue to the point of "crashing," preparation and planning in anticipation of challenges, and a finite amount of time and energy for effective listening to accents without visual cues. Similar words arise in these examples that are seen elsewhere, including confidence, spontaneity, and concentration. Once again, these reflect challenges for NNSs which may not always be visible.

When we need to talk in another language, this require more effort from us to express our opinion and to tell using the proper words that we want to use, and if you be able to use our native language it would be much easier. So that requires from us more energy or more concentration and more effort to deliver a message, than the energy and effort that we use if you are sharing using our local language. [NN25]

To me the time was crucial. People were speaking in a faster pace. It was hard for me catch and be able to communicate my thoughts. You can establish the pauses as you speaking, but in a large group, you can't control that. Although you understand everything, you feel frustrated because you cannot…When you are ready to say something, everybody already said a sentence and you lost that window. It took me time to realize that. I remember that first week to me, I used to go to hotel and just crash because I couldn't keep up. Over time you build that confidence about what you want to say. Your translation engine works faster and you basically don't feel anything. Today I work in this environment and it's fine to me if I just speak English the whole day. [NNS35]

Maybe the meeting of the phone, virtual mode, I will prepare it and anticipate it much more. If I have a meeting in person with the people in Lyon in France, I can go, we can talk together and have a quick chat without the preparation and anticipation. Over the phone I always have to prepare myself to prepare the meeting for a structured meeting. Over the phone you have to take the phone and ask the question, it is totally different, it lacks, how can I say that, I do not know the word in French, I always say in French, spontané…So you see my to do list, I have several points to tackle with the person so each topic I will write down the main ideas to share with the person. So one is for language, the right word and also how to tell them, how to send the message, how to share the idea. It is the word and how to say the word. [NNS39]

It's not easy to listen and understand other accents of a non-native speaker, so listening very seriously is tough and you get tired after one hour. Two hours maybe okay but four hours listening you don't see the faces so you have to listen to their voices and who is speaking and where's the point and you have to either write down, remember takeaways from the conversation, so my point is that one hour is long enough to concentrate. [NNS46]

Finally, this discussion concludes with Participant 37's experience that integrates all four communication challenges of language as well as culture, technology and collaboration, which will be presented in turn next. Below, English as a second language is mentioned in the context of a preference for writing over speaking, asking for clarification, understanding accent, and creating awareness for language challenges. The cultural facets of silence and hesitancy are joined with an acknowledgement of a technology preference for email or instant messaging, as well as perspectives on empathy and understanding and impact on collaboration and teamwork.

Today it is easier, but I think that can help people in a situation. You do not need to speak on a conference call or stop everyone and ask a question, but you can send an email and Same Time or a Lync message and say, hey could you please clarify that. I am not sure about this

meeting. So there are ways using the technology today to help not be shy. Again, so English as second language, so people can set up to speak another language so the others need to recognize that you are speaking their language, so the team needs to be challenged to make efforts to understand the remote, to understand the accent, to understand it is very difficult and to help. So it is a 2-way learning opportunity. [NNS37]

Tables 7 and 8 below show the remaining common and unique codes that emerged for NSs and NNSs from the thematic category, language challenges.

Table 7: Language Challenges Common to Both NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Repetition/rephrasing/clarification/frustration	9 (33%)	23 (79%)	46%
Compare understanding/notes with others	1 (5%)	14 (48%)	43%
Mixing of two languages	2 (10%)	10 (34%)	24%
Listening/speaking skills/turn-taking	1 (5%)	8 (28%)	23%
English as a second language issues	12 (57%)	23 (79%)	21%
Miscommunication/misunderstanding	13 (62%)	23 (79%)	17%
Time/patience/energy/extra effort/empathy	11 (52%)	20 (69%)	17%
Subtle concepts/nuances/unspoken context	8 (38%)	7 (24%)	14%
Translation/language preference	2 (10%)	14 (48%)	12%
Lack of non-verbal cues	5 (24%)	10 (34%)	10%
Technical/business terminology/acronyms	3 (14%)	10 (34%)	10%
Speed/altering cadence/slowing/keeping up	6 (29%)	11 (38%)	9%
Slang/idioms/word choice/sentence structure	15 (71%)	22 (76%)	5%
Assumptions/overestimation of proficiency	4 (19%)	4 (14%)	5%
None/not much	2 (10%)	5 (17%)	5%
Written vs. spoken proficiency levels	8 (38%)	12 (41%)	3%
Voice (tone/pitch/volume)	2 (10%)	2 (7%)	3%
Accents (NNS/NS)/pronunciation/avoidance	9 (43%)	13 (45%)	2%

Table 8: Language Challenges Unique to NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Uncertainty (accuracy/comprehension)	3 (14%)	0	14%
Compensation/adjustments	3 (14%)	0	14%
Need for clarity/precision/no extra words	3 (14%)	0	14%
Level of detail/specificity in messaging	2 (10%)	0	10%
F2F meeting (read people/voices easier)	1 (5%)	0	5%

Lack of exposure/ear tuning	1 (5%)	0	5%
Unclear level of comprehension (“yes”)	1 (5%)	0	5%
Giving latitude for improper use of language	1 (5%)	0	5%
Using different type of language with NNS	1 (5%)	0	5%
No filter ability challenge for NNS-NNS	1 (5%)	0	5%
Shared responsibility for understanding	1 (5%)	0	5%
NS unaware of second language challenge	1 (5%)	0	5%
Preferences for writing vs. speaking	0	22 (76%)	76%
English as common language for team	0	17 (59%)	59%
Different language difficult, natural barrier	0	16 (55%)	55%
Lack of confidence in conversational speaking	0	16 (55%)	55%
Multiple communication inputs/reinforcements	0	11 (38%)	38%
NNS-NNS communication easier without NS	0	9 (31%)	31%
Different message rhetorical structure	0	5 (17%)	17%
Lack of confidence in writing without support	0	4 (14%)	14%
Formal language training and resources	0	3 (10%)	10%
Fear/exposure/making mistakes	0	3 (10%)	10%
Shyness/caution using English	0	3 (10%)	10%
Laughed at/embarrassed	0	2 (7%)	7%
Discomfort in interrupting/jumping in to speak	0	2 (7%)	7%
Hiring (weighing English over job skills)	0	2 (7%)	7%
Using Google as dictionary	0	2 (7%)	7%
Giving up/acquiescing if no time to respond	0	2 (7%)	7%
Comprehension better than productive skills	0	1 (3%)	3%
Informal language/chat/small talk	0	1 (3%)	3%
Feeling disrespectful (choice of language)	0	1 (3%)	3%
Social attitude toward language choice (snob)	0	1 (3%)	3%
Language issues vs. personality in jumping in	0	1 (3%)	3%
Being offended	0	1 (3%)	3%
Uncomfortable asking large group questions	0	1 (3%)	3%
Lack of awareness of language differences	0	1 (3%)	3%
High-level conversations easier than detailed	0	1 (3%)	3%
Emotions can escalate with misunderstanding	0	1 (3%)	3%
Imperfect English acceptable as business tool	0	1 (3%)	3%
Not convincing	0	1 (3%)	3%

Knowing business well offsets language	0	1 (3%)	3%
Understanding basic meaning	0	1 (3%)	3%
Unwillingness to improve English skills	0	1 (3%)	3%
F2F better for opinions, constructive, practical	0	1 (3%)	3%
Speaking local language creates opening	0	1 (3%)	3%
Draw NNS into conversations or lose them	0	1 (3%)	3%
Overdoing it/trying too hard	0	1 (3%)	3%
Adjust to language over time with exposure	0	1 (3%)	3%
Multilingualism not recognized as skill/asset	0	1 (3%)	3%
NNS always disadvantaged if good English	0	1 (3%)	3%
Misinterpret technical weakness as language	0	1 (3%)	3%
Two-way learning opportunity for NS and NNS	0	1 (3%)	3%
Difficulty expressing true meaning	0	1 (3%)	3%
Same sentence different meanings	0	1 (3%)	3%
Reminding English is not your first language	0	1 (3%)	3%
Timing/content as important as language	0	1 (3%)	3%
Missing window of opportunity to share	0	1 (3%)	3%
Difficult to keep up so lose attention/focus	0	1 (3%)	3%

Research question related to "global" component of GVTs, part 2:

What differences relate to culture?

For the thematic category of culture challenges, most of the NSs cited time differences/time zones (20 participants, 95%) and working habits/ preferences/individual styles (13 participants, 62%) as the main challenges that they experienced. Other top challenges cited by the participants included silence/hesitant/wait for pause/name (12 participants, 57%), hierarchy/deference to authority, manager (10 participants, 48%), organizational culture/values/requirements (7 participants, 33%), and lifestyle impact/balance (hours, peak mental) (7 participants, 33%).

. Nearly all NS participants noted the challenges of time differences/time zones and the impact. Here are three examples from Participants 1, 4 and 8, who highlight the ongoing quest for a balanced work-life schedule (also a later code in this section) in a multiple time zone business environment, where days and nights and even weekdays and weekends blur for certain team members. As Participant 8 suggests, regular work pressures are compounded by the frustration, fatigue and "dread" associated with unrelenting responsibilities outside of regular office hours that conflict with family and personal choices. The weight of this responsibility may regularly fall more heavily on certain regions unless an organization is progressive about rotating meeting schedules for offering multiple meeting times.

> *We had our weekly team meetings once a week, but when the project was really heavy underway we would be on the phone with them on a daily basis, so on a constant basis. They actually held meetings on Friday nights, which is our Friday morning, so yes they actually worked a tougher schedule than we did. [NS1]*
>
> *Everything was on a very accelerated timeline and the technology that was available to us that was most efficient was a regular conference call and we set those at specific times to try to accommodate the different time zones which made it very challenging for some geographies. [NS4]*
>
> *I think the frustrating aspect of it was that it would go for so many hours and I had already worked a long day and you would have this lengthy time commitment in the evening and you just typically end up with a sense of dread about it that I'm already tired, I'm not at my peak mental acuity at that hour and often times it would be, they tried to be sensitive to the fact that it was my evening and they would move it up and so they would propose the call to start at 7 pm instead of starting at 9 or 10 pm. That was good for my sleep but it was not as good for the precious family time that I really was less willing to give up and so this went on for some time and there was just an assumption that this worked well for all. [NS8]*

Most of the participants cited working habits/preferences/individual styles as another main cultural challenge in GVTs. Participants 8 and 17 recall the following incidents that highlight clear differences in U.S. versus European approaches in project planning and decision-making in these two instances. The U.S. is viewed as more willing to take chances and implement new ideas and adjust as necessary along the way, whereas the European colleagues (Belgium in particular as well as other unmentioned countries) were described as having a more thoughtful, intentional, cautious and perhaps risk-averse approach to new ideas. These examples may be tied to Hofstede's dimensions of Individualism vs. Collectivism (with the U.S. ranked the most individualistic culture in this study, and slightly higher than the European countries) and Uncertainty Avoidance (with the U.S. ranked slightly lower than the European countries in this study, meaning that the U.S. is more comfortable with ambiguity and practice over principles).

> *It seems that often times my colleagues from Europe would prefer a much higher level of detail and planning in whatever we are talking about and I have come from an American culture where the American groups, generally speaking, would prefer to jump in and start in doing something and plan as we go. My supervisor, as I mentioned is a Scottish gentleman, he says from his observation that many times the European colleagues would rather plan for several months before taking a step if you're going to have a project to build a bus and take a trip. Americans would prepare something that could get going and fix it while it's going down the road with parts falling off and I think that analogy is pretty good. I do think that there is a distinct difference in the way they approach things. [NS8]*
>
> *In the U.S. we tend to be more comfortable with ambiguity and willing to move forward without all the details. In Europe they like to prepare more. They like to have more details outlined before they make that step forward…[Here] it's like, let's move on. We know what we need to do. We have not got everything written down yet, but let's go do it. In Belgium, they are like, well we really want to have all the roles explicitly defined and*

know everything, all of these details, have them ironed out. We tend to be kind of more in the U.S. that shoot from the hip. Ah, it looks good. Let's jump. That will sometimes rub the wrong way. I am sure if you look at it from the other point of view, they are going "Those people do not know what they are doing yet. They are just ready to race down the road." So that really came home to me…I shared that with the team here because they were kind of chafing a bit, like 'what is the problem with those people?' It is just a different way of working. [NS17]

Silence/hesitant/wait for pause/name was another theme cited by NS participants. Once again, two incidents below contrast the visible U.S. style of openness and directness with counterparts from India and China, who adopted an approach of selective silence, perceived lack of openness and transparency, and hierarchy. These examples suggest an alignment with Hofstede's dimensions of Individualism vs. Collectivism (with the U.S. ranked the most individualistic culture in this study) and Power Distance (with the U.S. ranked lower).

What was interesting was that when issues would come up, suddenly they would be unavailable. So we were forced to deal directly with our [U.S.] contact in Texas to be able to try to track them down, because they weren't responding to us. We had candid conversations with his boss as well to say this just is not working. This can't continue this way. We need open communication, and we need for them to tell us when something is not working, when something is not right. They would dance the dance. We would see progress for a while, then the ball would be dropped, we would have the same conversation, and then we would see progress for a while. It was sort of that pattern. [NS1]

Americans tend to be pretty open and on the table with what's going on. For the most part compared to other places, we don't keep very much hidden. When you go to places, especially what comes to mind is Japan and China, there is so much hidden that they're never going to tell you; they'll never tell you until they know that you are on their side or that you've really gotten to know them. They're not going to tell you. It's like an iceberg. They'll tell you the very top of it, but you have this whole thing underneath that you'd never have any idea about. And even after years

and years of maybe being there, you're not going to know half of what is under the water. An expat coming from China will tell you that even people who speak fluent Chinese without any accent whatsoever and has been there for five years, they're like I still have no idea what's going on there. [NS5]

Another frequent observation by NSs was hierarchy/deference to authority, manager as a cultural challenge, per the examples below from Participants 5 and 7. The relationship between a manager and an employee in a hierarchical society is one that is influenced by Hofstede's dimension of high Power Distance where roles are clearly defined and accepted. There are also some indications of the harmony, politeness, and respect for others found in collectivist societies, and possibly gender role influences. The reflections by the NSs below note their awareness of these differences.

Getting people from the different countries to step out of their cultural hierarchy. One example of that is Americans tend to be very informal whereas in China, there is a lot of informality also, however, if the boss is there, everybody defers to the boss and nobody says what they are thinking so you really can't get stuff done. So it's kind of like Chinese had to kind of become American and we kind of had to become Chinese. We had to kind of go into the middle, into a different space to get this done. For me personally, I was aware of it happening. Maybe not before it happened but as it was happening, you can see it and yes I was aware of it. It's even more clearer afterwards and I think the other people would agree for them, most of them couldn't think about this stuff very much, it was after the fact that they realized what happened. [NS5]

She was extremely uncomfortable and was very timid and afraid to speak to me and to speak up. She would go to her manager with things that she was uncomfortable with and he would have to circle around and let me know how she was perceiving things and so it took us quite some time to get to the point where, now, after a lot of work, after going over there and visiting and spending time, now we have an understanding of each other's style and we have excellent conversations where we really are able to collaborate and create some wonderful training materials and new ideas. But it took a long time to get there and it was very uncomfortable for her to

sit down and speak with me. We sat down for two hours while she was here and she was able to ask all of her questions and get through them but she constantly apologized for taking up my time, for me having to spend time with her. It's a respect, she just wanted to be very respectful of me and my time, where to me, my most important thing was to make sure that she was being successful. [NS7]

Participants confirmed that organizational culture/values/requirements are part of the culture conversation. Here is one example from Participant 4 that addresses a potential legal issue interpretation with connections to values in addition to laws.

There were some cultural challenges I found, practices that might be acceptable in [one culture] regarding privacy law and other things that don't necessarily translate to [another country's] law. So we had some challenges bumping up on things that felt borderline unethical for me and so we really had to make sure that we were crystal clear on those sorts of issues and again check and validate. [NS4]

Also, lifestyle impact/balance (hours, peak mental) – which overlaps in many ways with the first theme of time differences/time zones – was also mentioned by several NSs, such as Participant 5. This example also ties to implications for team trust and accountability and the importance of leadership recognition for extra efforts.

You're putting in huge hours or 7:00 or 8:00 at night you get on a call for a couple hours; two or three, sometimes four hours to be on that call and then be expected up right away doing your normal eight or nine hours. It just got to be too much for everybody. We also had to go to management and sort of tell people, we're not out fishing. We were on a call until midnight last night, so I'm not going to be there right away in the morning. [NS5]

Finally, Participant 4 wraps up the cultural challenge discussion with an experience that integrates all four communication challenges of language,

culture, technology and collaboration. The cultural attributes of directness and tolerance for ambiguity and communication style are combined with second language comprehension issues, the imagination of individual style as depicted not visually but over the phone lines, and finally the realization of cues that provide more of a complete personal picture and slowly inform the team relationships.

> *The way I would describe the interactions with him was that he spoke with a sledge hammer. I mean he was very direct and could be very intimidating but that was not his intent at all. That was their way of making sure that there was clarity where there was otherwise a lot of ambiguity so it can come across as "thou shalt" and "this is how it will be" and "I must get" and "you will do" and it was almost like there was this constant fist-beating at the table with every stern word spoken but that was their way, they were all very similar in that regard in that it was very direct and I think you had to understand that English was their second language and often you simplify the sentence when it is your second language and so some of the niceties, if you like, are the first to go…Yes and then of course their accent, just the whole thing when you're on the other side of the world and on the other side of the phone and you have no visual of what this person looks like, I just pictured this man with a sledge hammer. We had the same thing bringing in some personal element in getting to know the people on the team was important and through that process you hear the laugh and you can see the personal side to them but the shortness of the sentence still remains but it's with a laugh and so you can understand that that's just the way they communicate. [NS4]*

For NNSs, the top most cited challenges included silence/hesitant/wait for pause/name (28 participants, 97%) and working habits/preferences/ individual styles (19 participants, 66%). Other top challenges cited by the participants included directness/indirectness/outspokenness (18 participants, 62%), time difference/time zones (16 participants, 55%), and social practices/greetings/ etiquette/politeness (14 participants, 48%).

Nearly all NNSs cited silence/hesitant/wait for pause/name as cultural challenges on GVTs. A large number of the experiences related to participants from Asia. While several participants stressed the diversity of the region and its very different country characteristics, they also confirmed some general traits that relate to participation on teams and especially conference calls. There are also a variety of interpretations of whether it is desirable to call on individuals, and if so, when in the course of the meeting to do so and whether to reach out and indicate that intention in advance (per Participants 28 and 32). Often culture was indicated as a factor in silence and hesitation and group consensus (perhaps a collectivistic tendency). Other ties were to language and the discomfort in knowing when to speak up or interject or field questions. Also, as Participants 29 and 36 describe, team members may conduct separate discussions before and after the main meeting. Therefore, participants may not be as satisfied with a brainstorming approach and choose to withhold their ideas. In this way, there may be many behind-the-scenes influences that are not readily apparent to others on the team.

> *On the call, we do have people from Vietnam so the Vietnamese participant can be very, very quiet and because language is already a concern to them, they do not know how to interrupt because to them, they find it difficult and it takes more effort to jump in and give their comments. The Singaporans generally act also comfortable…but the Singaporans tend to not speak up unless they feel some point or their name is being mentioned or they are required to answer a certain question, then they will start to speak up. So it's a very interesting mix of people on the call and also to be mindful managing the different cultures that were in the call and it is only for an hour but what I also observe is that the Vietnamese leave hardly anything but when we call upon them to share their view, they just*

share and they are comfortable sharing. It's just that they don't know how to jump in and they find it more difficult to interrupt. [NNS28]

You could see that [the Thai] were really working as a group so if you started to train them, I usually did training sessions of two hours or three hours, and there were absolutely no questions about doing this for hours. They were all just sitting and not really interacting. Then after these sessions they would gather in the room and just discuss what they have found, which is really different to the way we work, for instance here, when we went into a room and anyone that has something to say will just say it. [NNS29]

Asking probably at the very beginning of it will not make the attendants comfortable, to be frank, because my name is called on conversation; for example, 'do you want to say anything?' I will remain silent. Okay, so far I have no problem and then after certain conversation goes on and then I really have some question on mind, the end of the conversation I will say something. Whether this is right or wrong but if someone asks for my opinion, at the very beginning of a conversation, I will say so far I have no comments. [NNS32]

Typical Chinese communication, when you are answering at the meeting, it is more like a signature of what you have aligned beforehand. So if it is a typical Chinese meeting setting, for example you are the leader or facilitator of this meeting, usually you will have an informal catchup or informal alignment with the majority of the team before the meeting, and in this meeting you just bring out this issue and everyone will say okay we are aware of that and we are happy with that, and we will go ahead with that. So this is a traditional setting of a meeting, as well as operate in the current and see that we have this topic and we enter into the meeting and we throw our ideas into the air so that people can hear each other and have a discussion. So sometimes you will find that it is not so attractive if people are not comfortable with this kind of approach, they will keep their ideas to themselves. After the meeting they may come back to their leader and say okay this is not something that I think I will agree on, but in the meeting they may not articulate their viewpoint and they will stay silent, and this silence will be interpreted in a different way and the leader may assume that the silence means that there is no objection. Actually for some trivial but important messages, it sometimes may result in some big conflict or frustration from different parties. [NNS36]

Another frequently mentioned culture challenge by NNS participants was working habits/preferences/individual styles. There are many different factors that

influence how these national, organizational and personal values and styles come together. As noted in the examples below, this may be a reflection of common work guiding principles, or at a more tactical level, how culture is reflected in documents designed by employees, or how employees in different locations choose to socialize and mix work and personal lives. It is advantageous for an employee to be agile and adaptive to change with all of these different facets comprising the workplace. Participant 36 noted how she "shows up in a slightly different way" depending on the situation.

> *Because we have the guiding principles, the values, being candid, respecting others, those type of things, valuing differences with our values, of course with some of us or most of us have that already in ourselves, but it is more emphasized or more encouraged with [the organization]. So in a way we have a common direction to go towards being candid, being respectful for other ideas and value differences. So I think that across the different locations and cultures, at least we have a common culture in a way…It actually enhances culture of Filipinos, but not for everyone. For the people, of course in different cultures, in my opinion, you cannot really generalize. There are bad apples and good apples. So you connect the good apples from a tree and then you have [an organizational] culture, then basically that would enhance the foundation of that person. [NNS34]*
>
> *If I am in a webinar with my U.S. counterparts or Holland counterparts, I would be more expressive. I am cautiously aware that I need to speak up more. It is out of my comfort zone, being a typical Chinese, and to really contribute. I think I understand the expectation on me so that I can contribute more in this webinar, whereas in Asia it is more the choice to respect the culture. I become less expressive in an Asian webinar…So I do show up in a slightly different way. [NNS36]*
>
> *When you see a presentation you know when you open it if the presentation was made by US people or if it was made by the Mexican team. Because, for example, if you see a lot of acronyms you will know that it was something that someone from the U.S. sent you and usually you will not know the meaning of most of the slides that they are trying to teach you. I do not know but that is something the U.S. cultures has.*

…And if you see a lot of, like a presentation that is a PowerPoint and you see a long line explaining just one topic then you will know, in our case, the Mexican team did it… If you see a presentation made by the US team it will be more plain. Maybe not so different letters, not so different colors, it will be more like black and white and maybe just the name of the company and things like then. We like colors so you will probably see different colors and I do not know, some letters will be bold or underlines or graphics, more colorful. [NNS43]

I noted that when I go to Paris that they are doing a lot of fun during the breaks or for the lunch when the lunch is finished, then going back to their office and having a coffee, often a nice area to continue talking from. This is the social time that we don't have in Germany at all… on the German style also, we are working when we are at the office and then exchanging sometimes our emails or short messages during our free time, but it's really well organized and planned so when we are on office time, we are working and sharing some project-related questions and feedback and when we are then at home, it's really time for the family and the private life. Whereas in France, it's embedded actually into the whole day. [NNS47]

Different levels directness/indirectness/outspokenness were also cited as cultural challenges. Several NNS participants noted the general dominance of NSs in conversations, particularly Americans. Some of that tendency for directness can be linked to the designation of the U.S., in Hall's framework, as a relatively low-context communication culture. The examples below highlight this awareness as well as accommodation strategies such as actively questioning and drawing in other participants, mentoring younger generations, and "synchronizing" behavior to other cultures.

English is more direct to express what they are thinking. So for example, if we don't like it we say to people that we don't like it but in Japan, we try to avoid such kind of direct expression as much as possible… English is more logical than Japanese. In the case of Japan, race is probably only one which means homogenous and Japan is a fairly small country…So in that kind of situation, people understand each other. We self explain what they are thinking but in the U.S., background of people are very different

so to have other people understand us, we have to explain logically what they are thinking. [NNS30]

So primarily the English-based speakers will tend to dominate conversations at the meetings. One of the things, my learning, is that I do have to take questions. I have to perhaps ask the guy from Indonesia, what are your thoughts on this? I have to specifically draw people into conversations because otherwise you tend to lose some of the not-so-strong English speakers when it comes to just having a meeting or brainstorming session. [NNS33]

I experience a different culture when I am interacting with people from Holland. They are very straight forward if they have any questions. There is a lot of open discussion or healthy debate when in a meeting, which is very different from the culture of the typical Chinese culture setting. Fortunately I am aware of that based on my previous work experience with my boss who is Belgian and by the interacting with him a lot I have started to understand the difference. It is also, for the younger generation in the current organization, I will share my experiences with them so that they can feel comfortable with this open debate or open questioning. So I think for people who are working and then stay in China, especially with the younger generation, they start to get a feel of what is the difference. Most of the time this group of people do their best to accommodate and to adapt to this so-called western culture. [NNS36]

I have to switch my communication mode from the French one to the Spanish one. So when I speak with the Spanish team I have to be Spanish, so I am also very direct. I am in synchronization. If he is direct, I am direct. If he wants to talk about the weather, okay we talk about the weather or the context, but if he wants to go direct to the job, direct to the issue, direct to the point, I will also be very direct. I will be in full synchronization. If I talk with the same director in Italy, I would be totally different. My communication would be totally different. If I speak with the Dutch people, it would be another communication. So every time I have to talk with one country with someone in a country, I have to switch myself and to adapt my communication to the country and to the people. It is very, very challenging, and it takes me a lot of energy to do that. [NNS39]

Another frequent observation by NNSs was time difference/time zones as a cultural challenge. NNSs face similar time zone challenges as NNS, although those outside of the time zone of company headquarters, for example, may carry

more of the burden in terms of off-schedule meetings. Once again, there is a connection here to themes of work-life balance and blurring lines between typical working days and weekends. As Participant 45 experienced, perhaps more organizations are becoming more conscious of scheduling now, however this improvement may be overshadowed by increasing commitments for employees who serve on not one, but multiple GVTs. One time-related difference mentioned more often by NNSs than NSs was perceptions of time, or as Hall depicted it (noted in Chapter 2), the monochronic-polychronic spectrum. Participant 22 discusses the clear differences in time interpretation between Latin cultures (polychronic and more flexible with time) and the U.S. culture (monochronic and more planful and punctual) which may lead to misunderstandings.

> *I think as far as culture there are a lot of differences between the U.S. or American culture versus the Latin culture in terms of time, in terms of socializing. There are huge, huge differences. Here in Mexico, if we have a meeting, the customer order, the supplier may be running 20-30 minutes late and there is no problem, everybody is fine with that. We may talk about everything except for business until the very last 5 minutes. Or it can just go on and on for hours and hours and it can be a lunch meeting for example. And that is no problem and nobody really has an issue, or we may have an appointment set at a certain time and people run late. It is not seen as being disrespectful in any way. [NNS22]*
>
> *The Chinese work 24 hours per day. It never sleeps. For them it was okay to take calls at 7 or 8 p.m. [NNS40]*
>
> *Sometimes you get requests from different organizations and have a different kind of project or different things, they are getting to have more evening calls and I do find a few times they are three or four times a week on the evening calls, really a bit disturbing to life. That's probably something if you're only in one virtual team, that's easy to handle but if you have different requests and it's getting a bit difficult to manage. I used to hear people complaining about spending four nights on the call and even Friday so I think that's getting better. People are starting to avoid*

Friday night at least for Asia. Even that's four or five nights on a call is really not good for the family. So that's probably the common challenge. For me, so far it's still manageable but I do hear some complaints before from top colleagues and this is probably the only one I commonly hear. [NNS45]

Finally, NNS participants also cited different social practices/greetings/ etiquette/politeness as cultural challenges in GVTs. The examples below point to some typical practices related to politeness, developing friendships, level of formality, and proxemics or personal space. Some of these differences may not result in serious misunderstandings, while others, as noted by Participant 43, may cross over into sensitive workplace policy territory.

Japanese people always say that we are sorry so even we have to say thank you very much to other people. First of all, we say are sorry, that is Japanese culture…Probably that is to avoid conflict with other people. [NNS30]

It is a typical Latin American thing that until you get really friends, or close friends, people don't talk so much. Once you become like friends, sometimes people talk too much. There is always a cultural button something. Until you press that button, you don't really understand what's going on…Because I worked in Brazil for a long time, I quickly figured out oh, okay, I must take this Latin American approach. Going out with them; they usually go out together; like going to drink or going to have dinner; to build up more personal communication. You really end up becoming friends. As a matter of fact, I still keep a part in our communication too, with the local team. [NNS31]

A typical difference I have noticed is that in the Southeast Asia the culture is less is because of the weather as well. People are very relaxed, and so if you interact with people in a very formal way, it will not land appropriately. While if in the North part of Asia, like Japan, Korea, or China, it is quite formal. People may feel offended if you approach them, especially at a very beginning phase, that you approach them in a very informal way. So even within Asia Pacific, the culture is still very different. We cannot generalize the culture in China because it is such a big country and it will be more difficult to generalize the culture for Asia. Of course the culture in Asia they share some of the similarity, but I would not say we

can group them together. It is like the different cultures in Europe. [NNS36]

Another big difference is that we have to be careful about following all the guidelines, like for example in Mexico, in our office, it is common that when you arrive and you say hello you usually give someone a kiss like saying hi or you can give a hug to say goodbye and things like that and it is not considered like harassment, is that the word? So it is just something that is natural for you. Sometimes, for example for me, when I go to the US office I have to be careful and be thinking all the time that I am not supposed to do that. It is difficult because it is something that you never thought was something bad but you have to keep in mind with every single people that you see and you just give them the hand and I feel uncomfortable giving them just a hand because for me my culture is just like I do not trust you and I am just going to give you the hand like we are cold people in business… I already did once and the reaction of the other person was just stand up really straight and I realized that I make him very uncomfortable. Then you feel the same way, it was something that was not bad at all from the beginning, like my approach was not anything bad. After I did it I felt so ashamed and so uncomfortable that you can feel like something bad just happened and it was not that I was going to say hey, you know what in Mexico it is normal. I just say like, I am happy to meet you and keep going but it is something I will never forget because it created an uncomfortable moment for both even when I was just trying to say hi and I am happy I finally meet you. [NNS43]

Tables 9 and 10 below show the remaining common and unique codes that emerged for NSs and NNSs from the thematic category, culture challenges.

Table 9: Culture Challenges Common to Both NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Directness/indirectness/outspokenness	4 (19%)	18 (62%)	43%
Time difference/time zones	20 (95%)	16 (55%)	40%
Silence/hesitant/wait for pause/name	12 (57%)	28 (97%)	40%
Exposure to/share cultural practices/interests	1 (5%)	13 (45%)	40%
Meaning of "yes" (no follow through)	1 (5%)	9 (39%)	34%
Social practices/greetings/etiquette/politeness	4 (19%)	14 (48%)	29%
Hierarchy/deference to authority, manager	10 (48%)	6 (21%)	27%
Understanding/respect/adapt to differences	2 (10%)	8 (28%)	18%
Lifestyle impact/balance (hours, peak mental)	7 (33%)	5 (17%)	16%
Functional/departmental cultures	4 (19%)	10 (34%)	15%

Personal sharing/relationships before tasks	5 (24%)	3 (10%)	14%
Resolving or avoiding conflict/disagreement	3 (14%)	8 (28%)	14%
Formality/informality	1 (5%)	5 (17%)	12%
Perceptions of time (punctuality)	4 (19%)	8 (28%)	9%
Attitudes (abrasive, pushy, harsh tone)	2 (10%)	1 (3%)	7%
Organizational culture/values/requirements	7 (33%)	11 (38%)	5%
None/not significant	4 (19%)	4 (14%)	5%
Fear of failure/losing face/nervousness	1 (5%)	3 (10%)	5%
Working habits/preferences/individual styles	13 (62%)	19 (66%)	4%
Overgeneralize/stereotype cultures/regions	3 (14%)	5 (17%)	3%
Different laws/ethics practices	2 (10%)	2 (7%)	3%
Delays/time to adapt	1 (5%)	2 (7%)	2%
Feeling like a token representative of a region	1 (5%)	1 (3%)	2%

Table 10: Culture Challenges Unique to NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Empathy/understanding/embarrassment	5 (24%)	0	24%
Level of detail/planning vs ambiguity comfort	4 (19%)	0	19%
Confidence/desire to learn and adapt	3 (14%)	0	14%
Right intentions need communication intent	2 (10%)	0	10%
Expressing disagreement/standing ground	2 (10%)	0	10%
Not admitting wrong or accepting responsibility	2 (10%)	0	10%
Distrust/suspicion	2 (10%)	0	10%
Degree of literal interpretation	2 (10%)	0	10%
Focus on work/results	1 (5%)	0	5%
Not fulfilling obligations (unresponsiveness)	1 (5%)	0	5%
Privacy practices	1 (5%)	0	5%
Work motivations	1 (5%)	0	5%
Naivete	1 (5%)	0	5%
Evidence/proof/fact-based vs. emotion-based	1 (5%)	0	5%
Clarifying expectations/roles	1 (5%)	0	5%
Creative connections fitting team/org culture	1 (5%)	0	5%
Openness	1 (5%)	0	5%
Impatient waiting for responses	1 (5%)	0	5%
Assumptions about optimal regional processes	1 (5%)	0	5%
Atypical experience not aligning with training	1 (5%)	0	5%
Ability to make high-level cultural observations	1 (5%)	0	5%
Cultural assumptions vs. addressing behaviors	1 (5%)	0	5%
Inclusion	1 (5%)	0	5%

Seeking confirmation/affirmation of right action	1 (5%)	0	5%
Virtual work as motivating privilege for balance	1 (5%)	0	5%
Difficulty gaining cooperation	1 (5%)	0	5%
Less transparency of actions/underestimation	1 (5%)	0	5%
Cultural nuances	1 (5%)	0	5%
Listen to understand before making decisions	1 (5%)	0	5%
Focus on sameness not difference	1 (5%)	0	5%
Innovation	1 (5%)	0	5%
Misinterpret or not understand humor/jokes	0	8 (28%)	28%
Dominating conversations	0	7 (24%)	24%
Making meaning assumptions	0	5 (17%)	17%
Significant cultural challenges/takes energy	0	4 (14%)	14%
Different business practices	0	4 (14%)	14%
Formatting communications differently	0	4 (14%)	14%
Regional cultural differences in one country	0	4 (14%)	14%
Questioning/challenging others	0	3 (10%)	10%
Valuing performance more than relationships	0	3 (10%)	10%
Negotiation/not taking advantage	0	3 (10%)	10%
Sharing and interpreting emotions/feelings	0	3 (10%)	10%
Gender issues	0	2 (7%)	7%
Having separate discussions on their own	0	2 (7%)	7%
Avoid offense/alert all the time for interactions	0	2 (7%)	7%
Feeling like an alien/out of place	0	2 (7%)	7%
Rudeness	0	2 (7%)	7%
Degree of logical explanation/context needed	0	2 (7%)	7%
No knowledge/interest in cultural topics	0	2 (7%)	7%
Show appreciation/recognition for employees	0	2 (7%)	3%
Know unwritten rules/way people operate	0	1 (3%)	3%
Synchronization of communication styles	0	1 (3%)	3%
Barriers to understanding others' POV	0	1 (3%)	3%
Reluctance to explain cultural differences	0	1 (3%)	3%
Boundaries for appropriateness	0	1 (3%)	3%
Leadership styles	0	1 (3%)	3%
Seriousness	0	1 (3%)	3%
Americans not speaking other languages	0	1 (3%)	3%
Thought process	0	1 (3%)	3%
Interacting with people	0	1 (3%)	3%
Coming together to problem solve	0	1 (3%)	3%
Separation based on demographics	0	1 (3%)	3%
Reliance on traditional tools/processes	0	1 (3%)	3%
How to bring across a message	0	1 (3%)	3%

Cultural acceptance of technology use	0	1 (3%)	3%
Accommodating/adapting to different cultures	0	1 (3%)	3%
Share POV outside meeting if not heard	0	1 (3%)	3%
Not engaged	0	1 (3%)	3%
Feeling uncomfortable/lasting memories	0	1 (3%)	3%
Redundant/talking in circles	0	1 (3%)	3%

Research question related to "virtual" component of GVTs: *What differences relate to technology?*

For the thematic category of technology challenges, NSs cited communicating with multiple people at once (10 participants, 48%), fewer nonverbals/impersonal/video is not F2F (7 participants, 33%), video set up/lost time/clumsy/expensive (7 participants, 33%), and connection issues/major tech disruptions (5 participants, 24%) as the main challenges that they experienced. The next top challenges cited by the participants that tied for number of responses included delays (time zones) (4 participants, 19%), uncomfortable/low level of communication (4 participants, 19%), difficulty picking up vibes/morale/feelings (4 participants, 19%), and confusion (4 participants, 19%).

Most of the participants cited communicating with multiple people at once as the main technological challenge experienced by NSs in GVTs. Participants 8, 15, and 16 shared their frustration over managing frequently cut-off discussions while waiting for responses, false starts and overlapping voices, room configurations for different size groups both present and virtual. Relevant descriptive terms describing these challenges included the following: not effective, unravel, confusion, messy, forgiving, and clumsiness. Interestingly,

Participant 15 noted the need for skill in listening and speaking and the influence of the team's existing relationship in overlooking such challenges.

> *I remember over the day and a half meeting that we had to go very systematically through this talent, we probably lost the connection 30 times and so people would be mid-sentence, people would be waiting for the other person to respond to a question that was posed and the whole conversation and talent review process was chopped into intervals and I think really not effective. [NS8]*
>
> *When you get really a good discussion going, sometimes two people will speak at once and then you have to sort of unravel that confusion and communication and you will quite often hear "no you go first" or "I'm sorry, I thought you finished." Trying to have a discussion without seeing the other people in your discussion group, takes some skill in listening and speaking. It's very messy and the better the relationship you have with the other people the more forgiving you are and they are when you trip one another up which happens anyway. [NS15]*
>
> *Generally, you have to go to book rooms, set up technology, get there early. Sometimes the video conferences can seat 2 people, but then you hear the voices of 6 others because they can't sit around. So there is a lot of clumsiness actually when it comes to technology. It can be very helpful, but it can be very clumsy at the same time, and can be so much so it is distracting and actually can waste a lot of time. [NS16]*

The second and third predominant themes for NSs were fewer nonverbals/impersonal/video is not F2F, and video set up/lost time/clumsy/ expensive. Participants 9 and 10 describe their resistance, even hatred, towards videoconferencing, noting that the anticipated benefit of nonverbal cue support do not always come to fruition in real-time, with extended set-up time, substantial delays, distractions, and multitasking.

> *Yes, we've used video conferencing for large team meetings. Personally I hate it. The only reason I hate it is normally it takes longer to set up and get working. Every experience I had we lost 30 minutes of the meeting trying to get the video conferencing working. And it lost the whole purpose of the meeting. So personally I don't see a huge value with it, but I know*

some teams like to use it. I think it actually can be a bit distracting, but maybe if the team has never met it's nice to put a face to people. The technology is not there. When we have some better bandwidth on network, then I think it will probably be a bit more effective. Maybe one-to-one we could do it, but not for a whole group. I think it's too distracting. [NS9]

On a web call I always wonder if people are doing what I am doing, which is a lot of times not what I am supposed to be doing. I am guessing that they are. So you're talking and at the same time you're flipping into your email once in a while just to see what's on your email. You see another call come through and you know you aren't needed right now so I will kind of just put them on hold real quick and take this one. You aren't as focused as when I sit in the room with people. [NS10]

Connection issues/major tech disruptions was also a common theme, as told by Participants 4 and 6, who noted "painful" experiences with dropped calls, unclear connections, and insufficient technology support. Participant 6 provides a reminder of the inconsistent technology infrastructure for the same organization's presence in different regions around the world and the lost time and participation when technical glitches occur within or outside of someone's control.

The initial call – I was ready to give up, the lines kept dropping out. I know many Indian colleagues but in a conference call environment and particularly where the subject matter was so detailed, it was incredibly difficult and I found myself saying "please talk slowly" and hearing something and then repeating what I thought I heard to validate only to be told "no, no, no, no" and off they go again. So it was painful during the first several calls and as I said, the subject matter was clearly not my area of expertise but having to connect all of those dots meant that I really needed to listen to what they were saying and the conference call technology made it very difficult. [NS4]

She always wanted to be in the call but if there was a monsoon, technology was gone...She would participate when she could, but a lot of times I would get an email like a day later saying "I fell off the call." Or "I haven't had email for this long." Like she handles it with humor. So she'd send me emails like elephants charging down the street, big bus blaring music painted with graffiti and then she'd talk about the monsoon last

night, chalk it all up to Thursday. So it's not like an event or anything, it was just like a normal day for her…There were times we'd lose everyone just because I hit a wrong button. And it's like well, there was the meeting for the month because people would try to call back in or they would send me an email saying no one is on and it's down. So it's just like well we'll do it next week or next time. That is a challenge. [NS6]

The next top four challenges cited by the participants – delays (time zones), uncomfortable/low level of communication, difficulty picking up vibes/morale/feelings, and confusion – tied for number of responses, and some sample quotations are grouped together below. In addition to considerations of technical connectivity such as media choice (the advantages and disadvantages of phone and email as well as remote in general versus face-to-face) and managing time zone issues, these experiences also represent personal connectivity by reiterating the value of collaboration through building relationships and emotional connections.

It's really hard to get anyone to open up on a call. It's hard to get folks to talk no matter where they're from. I think just being virtual adds a layer of uncomfortableness…I would use email to try to build that relationship on the side. With new people, I would try to build a relationship on the phone to like call them ahead of time…so that they're more likely to have your back and participate on the calls. Otherwise you just get silence. [NS6]

We ended up sending things in emails because it was easier than trying to figure out what time is it in Singapore and how can I connect with this person via voice and instead I will slam an email because I am working right now and they are sleeping. So we ended up with a lot of communication not being as collaborative as it could have been because it was more plopping. You know, I plopped my email and then you respond with your plop email, but then it is my tomorrow, which is now is not top of my mind, and so now I plop something. These emails, it was like ping pong going back and forth, and not really getting to a resolution because it took a conversation to have the resolution, not an email plopping. So we had to instill the 3 email rule. If it's gone back and forth 3 times, it no longer can go via email and you had to pick up the phone and call,

because everybody was comfortable with email and we ended up using it as a crutch when there were some tough conversations that had to be held instead. [NS10]

It is worth the extra effort on your part to have the face-to-face contact…You just pick up a whole lot more what's happening, vibes around the place, what to take from the team from maybe other functions or other external forces. These things you can't pick up remotely…picking up the morale, tell how people are feeling; it's hard to pick up all that remotely. [NS11]

During the telephone conversations, you usually learn three more things or four more things that you hadn't intended on learning when you started the discussion whereas the e-mails can be very precise but they are also limited in their scope. They also lack the emotional connection so it is easier to become gradually disconnected if you rely exclusively on e-mail. [NS14]

For NNSs, the top most cited challenges included multitasking/low energy and focus/distractions (16 participants, 55%), and preferences (trust, access, proficiency, time) (14 participants, 48%). Other top challenges cited by the participants included unavailability of tech/right equipment/support (11 participants, 38%), fewer nonverbals/impersonal/video is not F2F (9 participants, 31%), communicating with multiple people at once (7 participants, 24%), and connection issues/major tech disruptions (7 participants, 24%).

A majority of NNS participants cited multitasking/low energy and focus/distractions as a technology challenges. As noted in the earlier discussion on language challenges, the extra mental and physical energy and effort required by NNSs to process a different language is magnified in a virtual environment where calls can tend to run too long and these participants may be even more prone to distractions and multitasking. Where videoconferencing is a viable

option, as Participant 47 noted, it may provide one alternative to distractions and aid in enhancing focus.

> *One the challenges for, I think for any call, is if it's more than an hour, you can get a little low energy. So we are conscious of that and make sure that we are focused on the agenda. [NNS28]*

> *I need to confess, sometimes you're doing conference call; I'm doing conference calls and if the topic is too boring, I have a lot of things to do; I'll be multitasking. If you want the person to be paying attention one hundred percent to what you are saying, I go with a video conference. [NNS35]*

> *[Video conferencing] is more engaging because we are also displaying our faces and since the calls are quite long (two hours and sometimes exceed of the two hours), it was hard for us to be 100% concentrated on each words when it was over the phone. Sometimes we put the phone on the loudspeakers and we are continuing writing emails and etc. and now being on the video conference system, it is much more intense because it requires more presence and concentration and there is no opportunity to work. So you are more exposed and it's also more engaging to see the other team members in Paris and also look at their reactions, observe their reactions when we're speaking. [NNS47]*

Many NNSs noted their preferences (trust, access, proficiency, time) as relating to technology challenges. As noted earlier, NNSs showed a preference for writing over speaking. When it comes to technology preference, they may lean towards email or instant messaging for that reason. However, many NNSs also expressed a preference for WebEx or conference calls, depending on a given situation. Beyond access to different technology media, the following examples highlight that the need for accountability and documentation, clarification of understanding, desire for efficiency, level of formality or complexity, and time constraints are other factors that are considered in managing technology challenges.

If I perceive someone to be somebody who's not accountable for things I would rather have it on paper and rather have email or some sort of support that shows that something was requested or something was expressed. I'd rather have something in writing versus giving them a call and then having them brush it under the carpet and not knowing whether it will be done or not. If it's somebody that I know I can trust, going back to trust, I can call them up or I can… either communication that does not make a difference. If it is somebody that I know or I do not trust I do prefer using email so that it is in writing. [NNS22]

Using the Lync [IM], the communication is much better than e-mail or on the phone call. Why? Because of the Lync message, you can check your understanding, it is written, it is very clear, there is no language issue because most of the people can see and read right? Probably the oral part is weak but the reading part is strong. Also, on the Lync message you can share anything you want. For example, if you have a concern on a certain topic, you can say why and say "well sorry I don't know." It is kind of back and forth and back and forth. The next conversation communication is more efficient than just a single e-mail. The e-mail is not efficient actually. Probably the e-mail you have to be very careful to reply in it because some day you don't know where it will go to. [NNS32]

Ideally if the connection of the video conference is good, video conferencing is the best approach because you can see people. There is a lot of information there. If it is just a quick catchup or exchange of information, instant messaging can be very efficient. If there is sharing of the formal documentation, I think share point is effective. If you work out a proposal or work out a complex situation, e-mails will be very critical for you to put down what is discussed or needs to be discussed. I think it really depends on what is the objective of the virtual meeting or virtual communication. [NNS36]

Maybe another limitation of having a virtual team is your time. You are more focused on time as compared to your face to face, you tend to me more flexible. There is also a time limit as well. But you tend to be counting time so when you do the virtual meeting as compared to a face to face. Like if you said we do conference call, sometimes you are strictly one hour, but if you do face to face, sometimes you can extend depending on, as I mentioned, you would see the person's reactions, so there is an emotional feeling on the communication. [NNS41]

Unavailability of the technology/right equipment/support was also cited as technological challenges, even more so by NNSs. An organization's IT

infrastructure, technical support, and training resources may vary from location to location and therefore accessibility and competency in using these tools needs to be part of a GVT's initial planning process.

> *We did think about using video conference technology to help connect better, but in some of the locations they do not have it so they would just speak and that does not make sense, so we didn't do that. [NNS32]*
>
> *We tried to organize a video conference. We tried. I say we tried because on the technical point of view sometimes it is difficult to organize, but these technologies we have to talk about an important problem, it is very nice to use that tool but we do not use it very often. [NNS39]*
>
> *It's not available at home in the office to have video conference. We do have a camera on the laptop but we cannot use it so I thought that was a waste of technology available to the employees. [NNS45]*
>
> *Some people have some difficulties on the technology, so they don't know how to use the WebEx. It's not very easy because you have to install and you have to have a password and everything is in English and you have to have training on how to deal with WebEx and it's not very easy. It takes a while for you to get to know this better. I've never used video conferencing, so I think it will be very nice, but we don't have the infrastructure here. We only have one room with teleconference and it's very difficult to book that because a lot of people need it especially the Board here locally. Sharepoint is very interesting tool for you to communicate, but our team is not trained to use this tool. It's not very easy for us. I think the technology we don't have the infrastructure good enough and well developed enough for us to have the best way to develop some multicultural project. Telephone here in Brazil is very expensive. It is very expensive to call abroad, so you have to use the teleconference. We are implementing the, I don't know how to say it in English, but I think IT phone. [NNS48]*

NNS participants also mentioned fewer nonverbals/impersonal/video is not F2F as technology challenges on GVTs. Similar to NSs in valuing the ability to see nonverbal cues, NNSs also struggled with the promise of a substitute face-to-face experience and the reality of the sometimes perceived subpar video

experience (or, as Participant 38 likens it to, a live theater experience versus the movies).

> *We want to know how each other looks like so we talked about exploring video conferencing so that we cannot just see each other but also the nonverbal languages and signs, so I guess that will give us a clearer indication especially in the call when we cannot see each other and we have to guess how and what the person is feeling so it would be nice to be able to see each other. [NNS28]*

> *Just to spend time with the people and have this face-to-face interaction. I do believe, for me, it is a matter of at least, video does not replace that. And on the video you won't perceive, as well, the body language or when I am not feeling, perhaps, so well, or…Again, I didn't feel the video was appealing, to a big extent, because there is this kind of, I think the distance is there, you see that's my perception at least… Perhaps it's that I prefer to go to the theater than to go to the cinema, so for me it just the physical, because you have real human being you know and which is the case also, you can say, of course, in doing a call. [NNS38]*

Communicating with multiple people at once was noted as a technology challenge experienced by NNSs, one that reflects the need to recognize team operating norms and etiquette and also impacts full participation and engagement by participants.

> *Like conference calls, for me if you do not have best practice employees, remote people will be hard to participate and understand side conversations. So we need to have ground rules, like speak close to the phone, one at a time, listen when the person on the phone is speaking. [NNS37]*

> *Sometimes if it's a big group on the call, I have to admit that because it's not face-to-face and sometimes they start to discuss fast and that is pretty hard, and then sometimes it can be difficult for me to follow and really to understand 100% and also to give my opinion. [NNS45]*

Finally, as with their NS counterparts, NNS participants also cited connection issues/major tech disruptions as technology challenges. Technology

connections can be unpredictable even with advance planning and the best of infrastructure support. Other less reliable environments or situations may result in uncertainty, inefficiencies, and "chaos" (as noted by Participant 33).

> *We were in the best neighborhood in Caracas which is the capitol of Venezuela. However, the connection of internet or phone wasn't good at all. So we had a very hard time doing conference call or data exchange or data. We had a very hard time. Lots of communication failure in terms of this technology part. I couldn't understand; couldn't even hear; lots of noise. Every day when the call comes, no phone line. You have to do everything before. [NNS31]*

> *There is a phone lag. So for me it seems like you half finish a conversation, but it may not be because of that lag over the teleconferencing, so right. So when you have bigger meetings if that happens, can you imagine the chaos. [NNS33]*

Tables 11 and 12 below show the remaining common and unique codes that emerged for NSs and NNSs from the thematic category, technology challenges.

Table 11: Technology Challenges Common to Both NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Multitasking/low energy and focus/distractions	3 (14%)	16 (55%)	41%
Video set up/lost time/clumsy/expensive	7 (33%)	1 (3%)	30%
Unavailability of tech/right equipment/support	2 (10%)	11 (38%)	28%
Communicating with multiple people at once	10 (48%)	7 (24%)	24%
Participant inclination/willingness/ability to use	1 (5%)	5 (17%)	12%
Overreliance on emails (easy, ping-ponging)	1 (5%)	4 (14%)	9%
Lack of trust/difficult to build trust	2 (10%)	1 (3%)	7%
Email lack of emotion/disengaging/inefficient	1 (5%)	3 (10%)	5%
No response/silence/hard to keep engaged	3 (14%)	5 (17%)	3%
Fewer nonverbals/impersonal/video is not F2F	7 (33%)	9 (31%)	2%
None	1 (5%)	1 (3%)	2%
Connection issues/major tech disruptions	5 (24%)	7 (24%)	0%
Video/audio disappearance/delays	2 (10%)	3 (10%)	0%

Table 12: Technology Challenges Unique to NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Delays (time zones)	4 (19%)	0	19%
Uncomfortable/low level of communication	4 (19%)	0	19%
Difficulty picking up vibes, morale, feelings	4 (19%)	0	19%
Confusion	4 (19%)	0	19%
Volume of information exchanged	2 (10%)	0	10%
Lets us down in ability to communicate well	2 (10%)	0	10%
Who to include (email chains/responsibilities)	2 (10%)	0	10%
Documentation and visibility to work	2 (10%)	0	10%
Create virtual open door/coffee or hallway chat	2 (10%)	0	10%
Right for highly technical conversations	2 (10%)	0	10%
Tech bittersweet – helpful but in the way	2 (10%)	0	10%
Managing/coaching multiple people	1 (5%)	0	5%
Need multiple technologies running as backup	1 (5%)	0	5%
Cohesion	1 (5%)	0	5%
Not being able to use the preferred platform	1 (5%)	0	5%
Lack of traction in adopting technology	1 (5%)	0	5%
Strategic planning too complex for phone	1 (5%)	0	5%
Video problems hurt company brand image	1 (5%)	0	5%
One-way channel of communication	1 (5%)	0	5%
Avoid calls easier without physical presence	1 (5%)	0	5%
Email as crutch instead of tough conversations	1 (5%)	0	5%
Access to shared file/not storing on local drive	1 (5%)	0	5%
Email exchanges (precise/limited/not as rich)	1 (5%)	0	5%
IM can be disruptive	1 (5%)	0	5%
Phone longer to fully understand same thing	1 (5%)	0	5%
Preferences (trust, access, proficiency, time)	0	14 (48%)	48%
Cost	0	6 (21%)	21%
Unnatural/strange/awkward/less spontaneous	0	4 (14%)	14%
Lack of simultaneous dialogue/one-way	0	4 (14%)	14%
Lack of information/details/documentation	0	3 (10%)	10%
Time constraints	0	2 (7%)	7%
Too much organization/preparation/logging in	0	2 (7%)	7%
Difficult to follow side conversations	0	1 (3%)	3%
Flexibility/adjusting schedules for tech issues	0	1 (3%)	3%

Misconnections/wrong connections/uncertainty	0	1 (3%)	3%
Discomfort with visibility (video)	0	1 (3%)	3%
Different levels of efficiency	0	1 (3%)	3%
Risk of forwarding to others (email)	0	1 (3%)	3%
Too complicated (video)	0	1 (3%)	3%
Video is distancing (cinema vs. stage)	0	1 (3%)	3%
Phone misunderstanding harms relationship	0	1 (3%)	3%
Chaos	0	1 (3%)	3%
Layers of virtuality	0	1 (3%)	3%
Less dialogue	0	1 (3%)	3%
Conference calls too short to fully engage	0	1 (3%)	3%
Difficult to get candor in a virtual network	0	1 (3%)	3%
Risk of perception of micromanaging	0	1 (3%)	3%

Research question related to "team" component of GVTs: *What differences relate to collaboration?*

For the thematic category of collaboration challenges, most of the NSs cited personal sharing/making connections (15 participants, 78%), and F2F gatherings/kickoff as investment (12 participants, 57%) as the main challenges that they experienced. Other top challenges cited by the participants included humor (also self, explaining/asking meaning) (8 participants, 38%), F2F ongoing - visit other regions/offices/proxy (8 participants, 38%), F2F socialization - get together/meals (7 participants, 33%), leader encourages participation from all (names) (7 participants, 33%), and peer knowledge sharing/ community of practice (7 participants, 33%).

Most of the participants cited personal sharing/making connections as the main challenge of collaboration in GVTs. The examples below illustrate the value of drawing participants together through common experiences in order to minimize isolation, form networks, cement memories through stories, foster

creativity, and successfully onboard new team members. Such activities combined virtual and face-to-face experiences with new and existing members, some co-located and some completely remote and solitary. This suggests there are seemingly simple ways in which to jumpstart and then sustain personal connections at any stage of a GVT's lifecycle.

> *I am alone and so sometimes there are those feelings of isolation a little bit, and when I see people online or instant messaging, I always want to ping them. I am like hi how you doing? What are you doing? What is up? I refrain because in my mind I think I do not want to bug them, but I think the next time I go I am going to just ping them, because I think that that continues the personalization and the team feeling. So I think reaching out and establishing that network, not being afraid of being isolated but really being very cognizant to reach out to individuals and maintaining that team. [NS1]*

> *You create stories. I'm an adamant believer that story-telling is kind of the threads that weave us together. So you will have some conversation and you will go, oh yeah, remember when so and so did blah, blah, blah…It helps to bring a level of heart into the conversation instead of it just being a head conversation. So it created a whole repository of stories that the team didn't have before and allowed for people who typically, in these routine calls, maybe would not normally talk to certain people and allowed them to connect in ways that they typically would not within their business processes. [NS10]*

> *The most recent person to join the team, he actually did an excellent job of sort of integrating himself. What he did, which I think is not something I ever seen anybody else do, but I think it was a fantastic idea, he wrote a little one-page bio of himself, which was much more personal than a CV. Just as an example, one thing he put in there was his MBTI type, which he had from his previous company and then a link to Wikipedia that explains what the different types are and things and made the comment that I am a classic one of these. He did a whole lot of personal preferences and anecdotes that he used to introduce himself. He poked a little bit of fun at himself and immediately I guess set the others at ease a little bit. He invited others to respond with little things about themselves, so I think that was extremely well done, not something I have seen before, but I think it helps that individual to get integrated with the team very quickly. [NS20]*

Holding a face-to-face kickoff gathering was also cited as strategy in developing collaboration in GVTs. True to the GVT literature, the participants in this study noted the value of face-to-face meetings, particularly a kickoff, regardless of any time, distance, or resource constraints. Participant 5 recalled a lesson learned when his project had to "hit the restart button." A face-to-face meeting is an investment and can pay dividends later, as noted by Participants 5 and 13, when potential conflicts arise or energy is low from running on "audio level" and virtual cues without physical cues for 11 months of the year.

> *I would say that at the beginning there were a lot of communication issues and people on both sides just were not getting it until we went there and were on the ground. In the U.S. compared to in China, people's work motivations are just completely different. They didn't understand the objectives, the strategy, what their role and responsibility was, what the project plan was, what the next steps were. It just was people were talking past each other. There would be like presentations from the headquarters' side and then just silence on the China side and once in a while somebody would speak up. To even understand the cultural differences, you can't have a project like this kick off over the phone. You can't get everyone on the same page over the phone. It just purely doesn't work…We kind of hit the restart button. [NS5]*

> *We will go and visit them early on in the project and again sort of explain what we do and how we do it and have a discussion around some technical details depending on what's going on. Again, we've found that that's really useful because it's a lot harder to get into a slagging match on e-mail when you've met the person and you know that they're actually really a nice guy, it's just that they're stressed and it's 9:00 at night and they've been at the office for 12 hours. [NS13]*

> *When you are conducting business virtually in this way, you miss a lot of the cues, you miss the physical cue, you miss the visual cue, so you're really down to the audio cue and in order to operate fast and effectively, the better the trust is the less cues you can do without. It doesn't mean that I don't get these teams together once a year, I do, because I have to continually be recharging the physical and the visual cue so that for the other 11 months of the year, I can operate on just an audio level…. It is*

very important to keep that balancer in play. When you're all in a big room laughing together, there is more emotion attached to it and you connect with emotion as well as the facts. Virtually you tend to just connect with the facts so there is a deep richer set of cues you get when you're face-to-face which somehow builds relationships in a different way. [NS15]

The remaining top codes were within one response of each other. First, humor (also self, explaining/asking meaning), in a creative event designed by Participant 16 that also acknowledges time zone challenges and illustrates the earlier value of ongoing personal connection and sharing.

Because we were at Europe at the time, we set up the meeting so that Singaporeans were early evening and the Americans would come online early morning so that we could get everybody. One day our American colleagues said oh you know it is not fair we are always getting up early, having breakfast and you guys are lunch and you guys are just at bedtime, sort of tongue and cheek humor, and so the next time, it was a monthly call, our American colleagues came in. Although it was lunchtime for us and dinner for Singapore, the Singaporeans also had breakfast with them, so we had croissants and juice and jam and whatever. So it created a sense of theater but also a fun way to say we understand that you know it is not always easy that sometimes you have to accommodate. Communicating across the world, across such varied time zones, that it is a pain in the bum sometimes. From then on we called it the big breakfast meeting. By doing that, we're trying to create a sense of team. [NS16]

Next, another type of face-to-face contact (ongoing - visit other regions/offices/proxy), as described by Participant 20, looks beyond the initial kickoff meeting and seeks to sustain the momentum by creating opportunities for intentional physical presence.

I think one of the main ways of getting to that kind of comfort level and integration is you can't beat good old face-to-face contact. What is interesting is that, I can clearly think of cases where that has almost happened by proxy. For example, one of the team members based in Geneva has come to the U.S. and spent a couple of weeks with the team members in the U.S. That obviously helps to build trust and face to face contact on that level, but when they come back to Geneva they were sort

of almost able to bring that back with them. Because they then felt the increased contact with the guys in the U.S., that sort of rubbed off on the other Geneva team members around them. They were maybe able to share little anecdotes or things they had done or things they had seen or things that the guys in the U.S. were working on and that that then sort of rubbed off on the wider team as well. [NS20]

Following is a third type of face-to-face socialization (get together/meals) noted by NSs, as well as NNSs later. This is another example of an activity that can be overlooked or underestimated. As noted by Participants 10, 16, and 19 below, the value of these interactions comes from the absence of an agenda and the emphasis on informal gathering and sharing. Seemingly routine topics such as food, holiday, children, and travel can resurface later as connecting points in a number of ways. Again, a challenge here is finding ways to create and invest in these face-to-face opportunities.

If I could, I would always choose to be there because you miss nuances. Things like going out to lunch, which seems like no big deal, but when I am there I then get to have them show me where do they go for lunch. Normally the conversation at lunch is a lot different than the conversations in the conference rooms during the day. You see a lot body language-wise and you can feel a lot more of the energy in the room than you can on a web call. [NS10]

Every month we would have a coffee chat session, simple as that. Everyone would ring in; if you were there, you would have a coffee, and you would just chat. There wasn't an agenda. There wasn't a process. There wasn't anything. It was just being out to connect sometimes. It was about what the kids were doing at school or Christmas or whatever is happening, but oftentimes it is also about other stuff that was related to work. It was structured in a sense that every third Friday at such and such a time, no one would put anything on the diary, and you could just dial in and catch up, just connect, both on a professional level and social level. Yes it is somewhat contrived, but in fact is many things that a manager has to do in a remote and virtual way, you do have to structure it because you do not have the luxury or the benefit of the local environment behind you. At first people thought this was a bit weird, but after a while, it just

happened quite naturally. So I call it the virtual coffee chat. So I would sit at my desk and we would just chew the cud and catch up. Again, it is about connecting, it is about work, but it is also about creating a dynamic relationship between the team, which made them feel themselves not as distant from each other. [NS16]

So you have a dinner and I sit next to somebody and I find out that she lives in Tokyo, that it takes her this long to get work, that she goes on a train or whatever. You can do that without ever meeting face-to-face, because I've done that before, but you have to make the effort to talk to somebody a little bit different than work. I find that's especially true for other places outside the United States, it seems to me. I find that when I would get an email from any of those other places, so anybody outside of the U.S. would send me an email, it usually started with something polite and chit-chatty and then did business. Even in their emails. So it just was a little bit different and it did, it gave me a chance to know people, the California people and everybody, but to know them a little bit more intimately I think than it would have just been through emails or phone calls. When you are on a phone call with twenty people, you don't have the little conversations. [NS19]

Yet another collaboration challenge cited by NSs was the role of the leader (leader encourages participation from all (names)). The examples below highlight the responsibilities of team leaders in motivating employees and creating an environment where they are not only clear about expectations but committed to full participation. It can be challenge in order to build this type of team like any sports team, as noted by Participant 11, and leaders need to be equipped to manage it effectively. Chapter 6 discusses leadership development in more detail.

In order to come up with really good ideas, you basically need to hear everyone's voice. Half of the countries are pretty hierarchical. People aren't even going to speak up. Which is embarrassing for people to speak up; they are out of their place. So we think that every other country can just work like business does here and it totally doesn't at all. [NS5]

I think the key in all of this is people's willingness to participate. It's nice to have the tools, but it's another thing for people to have the inclination or the willingness to use those tools. This team, there's certain people that only participate occasionally. They sort of question their commitment to the team. For me I feel to be committed to a team, it's like playing a sport. If you are committed to the team you are going to come to training every night or when training schedule. You're going to look out for your body. You're going to be at the game when the coach tells you to be. I think there are a number of things that come into play. It's making sure you have the right tools or in this case, the communication avenues and then secondly, the people's attitude or willingness to participate. And I think when you talk about a virtual team or a remote team, in some cases it might be a little easier to skip a meeting here and there, because you don't have to look at somebody in the face the next day and explain why you weren't there. It's easier to avoid people I think when you are remotely located. [NS11]

When you have a group that is just not engaged, it's bloody hard work! No one responds to any questions you ask, no one gives any comment on anything you say, it's really quiet and lonely and you feel like you're on the call on your own but the participant list tells you that's not the case. [NS15]

Finally, peer knowledge sharing/community of practice was cited by several NSs, whether they addressed it specifically as Participant 3 did below, or whether they alluded to the meaning in discussing knowledge sharing as Participant 6 did. Regardless, these observations and experiences relate directly to the VCoP framework outlined in Chapter 2 and woven throughout this study. Specifically, there is mention below of newcomer progression and situated learning, two key concepts of the framework which cross over here into demonstrated application for meeting collaboration challenges on GVTs as proposed in Chapter 2 as well.

We changed the way that the groups were measured. They were being measured by a method that was a good method for starting the whole program up, but we're past that. So I modified that to what I call it; it's a health check. It's really about, do you have a healthy group? And so we do

a lot in talking about communities of practice…So two of our dimensions of the measurement is about your community. Who's a member of the group? How are the individual members progressing? How are they learning? What kind of learning is there? [NS3]

When you could match people up, somebody who knows something really good about something with somebody who wants to learn, when you can match them up, it was successful. [NS6]

For NNSs, the top most cited challenges included F2F ongoing - visit other regions/offices/proxy (23 participants, 79%) and building relationships/empathy/understanding (22 participants, 76%). Other top challenges cited by the participants included building trust/openness/goodwill/ respect/actions (20 participants, 69%), personal sharing/making connections (18 participants, 62%) and engaged members/matched with strengths (16 participants, 55%).

The majority of NNS participants noted F2F ongoing - visit other regions/offices/proxy as a collaboration challenge. Although NNSs also acknowledged the value of face-to-face kickoff meetings, they emphasized even more the ongoing opportunities beyond the first meeting. The experiences below highlight the importance of such contact for building relationships and respect, ongoing manager-employee development discussions, incorporating visual and emotional cues, and tremendously increasing efficiencies. These focused visits carry over into ongoing virtual calls, where participants can draw on connections made face-to-face. As mentioned earlier, face-to-face visits require resources; however, Participant 37 suggests that such collaboration is a necessity for both sides, not an option.

Over the years when I go to Vietnam or to Thailand or to Malaysia and I meet personally with the person, I feel more connected. In a way I understand them better and when we do teleconference there is always a sense of understanding basically, knowing the person, knowing their culture, their background, etc. There is better involvement in the communication and better respect…I think the biggest impact is to know them personally to really complete your mental picture and the way you know a person versus just the teleconference, the emails. [NNS34]

I think the manger needs to travel to the other locations and to be there to discuss about performance and reviews, needs to be face-to-face to discuss about career, discuss about opportunities, so people feel that they are important when your manager travels hours in a plane, and stay with you for a week and goes out, so they can understand your work environment, where are your challenges much more than be on the phone. The same way I think the team member needs to have an opportunity to global team meeting yearly in where, like it can be the headquarter, it can be one of the locations, and so that is a good thing to do, so everyone can know everyone in person and interact and have meetings out of the office, to engagement meetings and this kind of stuff. …I can name 4 or 5 people, my manager at that time and a few other team members; we are friends to today, so we keep in contact. When they came to Brazil they contacted me. When I lived in the U.S. they came to my home. So we are not on the same team now, but we still have contact, so it helps a lot. [NNS37]

We Asians are more, when we try to communicate, we also communicate with feelings. So we are more visible. For us the virtual team is good, but for Asian people like me, we're better to have a face to face meeting because we're awfully emotional people, so our thoughts, our actions, our planning, are sometimes influenced by emotions and having the face to face discussions for us is more productive as compared to using a virtual team opportunity for discussions. [NNS41]

I would say the most successful meetings are when we are face-to-face. Because in the virtual team the conference calls, those are basically all scheduled calls that can take an hour, or half an hour, but they are relatively formal. Compared to the face-to-face meeting, where you can see on the behavior of somebody if he or she does not understand so you can already instantly work on that. This is just my own experience and we can tend to be more understandable with face-to-face and get results much faster. I can have a face-to-face meeting one time and I need five conference calls for that. For example, I was recently in U.S. for about three weeks and I was able to a lot of face-to-face meetings with people I

normally have calls with and in those three weeks I could do much more than in three months of conference calls. [NNS42]

Not surprisingly, building relationships/empathy/understanding were also frequently mentioned by NNSs as key to addressing collaboration challenges. Two examples below from Participants 25 and 35 included humor and bonding over NNS status with their own native languages, as well as sharing relevant current events in a location on a deeper level and acknowledging the impact they might be having on a team member. From a language perspective, Participant 37 advised that team leaders be cognizant of listening without barriers so as to smoothly integrate remote members who may feel "like an alien" or "out of the boat." Similarly, Participant 39 stressed open communication between all parties.

To make a joke I start to speak in Portuguese and the person started to speak in Turkish, so it was very funny because we are talking… try to appear that we are understanding each other very well, but in fact we have no clue about which one of us was talking about. So was very funny at the moment, and now we truly know that we do speak differently because our local languages are very differently so we do respect each other accents because we do know how different our languages are. [NNS25]

I have a resource in Costa Rica and another one in Argentina; there is this new one coming in from Honduras and there are people from other groups that work indirectly to me; it's impossible for me to understand how these guys are doing day by day without creating a channel where they can approach me to say, you know what, I'm in a bad week this week. I might be able to deliver a couple of things…You have to understand there are a lot of things going on in their lives that is not part of your environment, you're not living that; we have to acknowledge somehow. The whole world was collapsing over in Latin America and everything was calm here in this country. You've got to give people that sense of what's going on with you. When I am managing a team here, I kind of try to get that sense of what's going on in your world today. What's going on in Argentina with the political situation? Is that something that's bothering you? Then you realize sometimes there is. It is different because if I were a manager in

Argentina, I would definitely know that. I could already take that into account when approaching my employee for something. Being an outsider, I need to keep always asking for those same questions although they look boring. To me, it's the way for me to understand what's going on. [NNS35]

The leader, the manager needs to be very vocal on how to integrate the remote team members, how to make sure that they do not feel like an alien, they do not feel out of the boat, and how to understand the cultural difference, listen carefully without barriers. Sometimes you say something that is not a common sentence in English, but if you think that it is a non-English native person speaking, you can retranslate for what really the person is trying to mean, and make sure voices are heard and the opportunities are equally for all is a big challenge. It is normal. It is not a bad thing to give you the opportunities or to choose a person that you see every day, it is easy for you to learn more about this person and their skill, their abilities to grow than a person that you see once a year or twice a year. [NNS37]

Communication is very important. Not only the words, but how you say the words. With a smile, without the smile, if I am very tough I can be very tough, but with a smile it is okay, even over the phone, because you hear the smile over the phone. In my job I am always, always in conflict with someone, always. That is my job, because I have to find a way to balance the risk with the revenue and the sales you want to do with the customer…The first year I told [new director] that, he said no, we won't be in conflict and I say, yes, yes, we will be. So the first conflict arrived and I said remember, I told you, but please keep the communication open. We have to talk together, to talk, to talk, to solve the issue. [NNS39]

Building trust/openness/goodwill/respect/actions were additional important challenges for collaboration mentioned by NNSs. As noted earlier, trust is one of the predominant factors in creating effective teams. It is also one of the most difficult elements to build. Key collaboration points mentioned in examples below include: transparent communication between co-located and remote team members, resisting micromanaging, watching for signals in individual communication, demonstrating two-way trust and openness, respecting individual

capabilities, and acknowledging the language and culture barriers elephant impeding candor.

> *Sitting with some people in a meeting room and somebody else was calling in and some of the team in the meeting room decided a bit bored and if you're in that meeting room getting the impression that they make jokes about the other one at the other side of the telephone, then you, of course, think what is next time if you are virtually on the phone. Do they do the same thing putting the telephone then on mute and then making a joke or saying "it's really good that he finished now." That's the reason I made them clear it's not fair what anybody is doing here in the meeting room and there was a lot of excuses, blah, blah, but the feeling or how you have seen it, is still there if you are later on calling in to perhaps the same group by telephones. I think the engagement of the team or the members of the – I would not call it team in that moment in time, of the group who were in the meeting room – it is not shared. If some people started making jokes, then other people might start to get into and think well it's not interesting or necessary to work on. [NNS26]*

> *You've got to trust a person and you've got to understand how results come. You definitely not able to micro manage a virtual team. It's very tough to do that. Basically, it is impossible. I believe that micro management type of managers will struggle more managing virtual teams. For some individuals in my team or some of the projects that I work, you can tell the difference by the time of interaction and how ideas flow into the conversations and you can also notice when the person really doesn't want to talk. In a virtual environment, that's so easy to do, so you basically just reply to everybody. For everything that is asked to you and that conversation feels kind of awkward because it is just one side kind of pushing for the dialogue to continue, then you can start to raise a flag or to kind of fine tune it and if there is something wrong going on. In the end, I think you've got to really push for that; you have to build that trust into the relationship, because without that, it's really pretty hard. [NNS35]*

> *The signals that I have [for engagement] is all that when people are very open to share with me all the points. When we have a very, how can I say, when I feel that they trust me they share with me everything. For me it is the most important signals. When I can talk about everything with the team, everything, very openly and a very friendly manner. Because I cannot see what they are doing all the day so I have to trust them for sure. At the contrary they also have to trust me. It is two ways. I am not with them so my support I have to tell them and to show them that they have my full support on everything and they have to know that I will be totally*

transparent and it is very important. I want to be totally transparent and when you have a remote team you have to tell them to show them that you will do everything to support them. [NNS39]

I find that in the virtual world it is very difficult to disagree…So it takes a very long time in a virtual mode. Sometimes it is impossible to get that level of candidness in a virtual network. Again, it depends on who is driving. If everybody is very experienced and quite savvy, then it is possible and very articulate, it might happen, but with all the language barriers and everything, culture barriers, etc., etc., you have this elephant. So you go a long way and then on the surface there is buy-in, but in reality nobody buys into it. Everybody knows about it, but you go ahead with it. [NNS50]

Personal sharing/making connections was yet another frequently cited collaboration challenge for NNS participants, as for NSs earlier. Participant 24 and others mentioned themes similar to NSs such as humor, hobbies, small talk, social conversations as contributing to personal connections. Participant 42 described how current events and other similar cultural topics serve as the "engine" or the "glue" to build a social contact. However, Participant 35 noted that different cultures approach making connections in different ways, such as the timing and degree of personal sharing with each other.

When we have the weekly meetings, there are jokes and we make comments to one who was on vacation so there is this small talk happening. It's more when we have more discussion like if one day we go for our outing, for example, with my colleague from UK, I had very difficulty to understand him, because he's talking about something else related to I don't know, some ski or he done something with his house or garden and I don't always understand. The small talk and the social conversation, they happen and this works because it is very high-level and it's more when we go in detail, it is less easy. But still we have a very good team spirit. It works. Again, it's more difficult than if we were all sitting together. [NNS24]

Sometimes your work and sometimes your personal life in a certain degree gets a little mixed up in Latin America. It is common to approach

people from work and sometimes share things from your personal life, your interests; sometimes what your struggles are. You can kind of build that friendship within the work environment; something that I noticed that here in North America is very segregated. I can work with people for a couple of years and never know anything in person or relates to them. The same thing would never happen in Latin America, I can tell you. That's another cultural aspect that you have to first respect. You've first got to understand and respect and be able to take the best of the environments you are at. [NNS35]

The cultural differences are basically more helpful or gives you an opportunity to share a bit within your team and have them understand what is happening or why we make certain decisions. It brings a little bit of the social contact in virtual teams, especially when you are never together then the cultural things are, let us say the engine to build a social contact. For me it is the glue to have the social contact with the people…You need to be a little bit aware of what is happening in certain countries and I use that kind of stuff at the start of a meeting, let's say the first 5-6 minutes of a meeting. If I know I have my colleague of Argentina on the call and there is a special thing going on in Argentina we start discussing that first. Also if it is in the Netherlands or Belgium or in North America. Those are little topics to start the meeting to please the people and to let them know what kinds of situation they or yourself are at that moment. I think for me it lowers the barrier to talk. Because with social talk you already invite the people who do not talk that much to start or to discuss in meetings more easily. And that will help them once you move into the formal part of the meeting then let us say the barrier has been taken. [NNS42]

NNS participants cited engaged team members/matched with strengths as challenges in developing collaboration on GVTs. Considering ways to offer development opportunities for team members that align with their strengths and interests is one way of engaging them. Participants 27 and 37 offered cautions about failing to address feedback and struggling team members that might risk a breakdown of collaboration. Regarding full participation, Participant 43 noted that eventually a team member can overcome language and culture barriers and use the technology to feel as connected to the team as any other employee in the

same building, regardless of location. And, as Participant 50 concluded, involvement is critical to collaboration and successful outcomes.

> *We do try to have people volunteer for what they are more passionate about and that will keep engagement and that will keep you interested and putting our best foot forward. Not that you wouldn't any other way, but we try to ensure that we are helping you develop and we are keeping in line what your strengths are. [NNS23]*
>
> *After a couple of months [the manager] was the only one talking on the meeting. I realize that the attendance of the meeting decreased a lot because people were not interested. The meetings were extremely long. There were days it was like three hours. I remember he had some feedback but he wasn't very happy with the feedback that we gave to him. He continued and then actually my coworker, we would talk, and she would say it is still the same…The idea of the meeting was very good at the beginning, but we thought that we would at least exchange information, experiences, lessons learned. There was nothing about that. It was just like how to deliver that. It was very, very poor. [NNS27]*
>
> *I knew that it was a joke because everyone on the call or in the video conference, but everyone had a smile, everyone had a life. So okay it is a joke. My first thing was okay maybe I didn't understand the English or maybe I didn't understand the joke, but I am 100% sure that I didn't understand!! It is fine, okay. I will not ask about it, but I do feel like an alien or out of the plate or out of the team, not engaged. It is not getting the full meaning of that… So it is easy to feel like an alien or to feel out of the boat when the majority of the team are in one place and you are in another place. [NNS37]*
>
> *I think it is just about feeling comfortable once you pass that time or yes, once you both understand the culture and the language and the ways to do the things will be different you can start working as any other employee that you have in your office. It does not feel like you are so far away from that. I would like to add, because I think it is really really important. In my experience, and I have been working with three different companies, in teams that are bilingual or different locations and different countries, I will say that after you pass that barrier and you feel comfortable like if you are talking to anyone else in your office you will forget that they are not in the same building that you are. Sometimes you just feel like if they are in the next floor or anything that just because you do not see them every single day, but you know that the group works as good as any other group that is together. That is something great about the technology. In my job, for*

example, I work more closely with the people that is in the U.S. and the people who are in my office. [NNS43]

So that at the end of the day I think there is so much domain expertise available that you get the technical piece but how do you make sure that everybody sort of is contributing and everybody sort of has been able to share their views and able to feel part of that process. That is the tricky piece. I think in my view involvement is critical. In virtual work, the more involvement you get, the more successful you will be. The less involvement, I think the more superficial the output will be. [NNS50]

Tables 13 and 14 below show the remaining common and unique codes that emerged for NSs and NNSs from the thematic category, collaboration challenges.

Table 13: Collaboration Challenges Common to Both NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Building relationships/empathy/understanding	6 (29%)	22 (76%)	47%
F2F ongoing - visit other regions/offices/proxy	8 (38%)	23 (79%)	41%
Building trust/openness/goodwill/respect/actions	6 (29%)	20 (69%)	40%
Recognized/valued for own contribution	1 (5%)	12 (41%)	36%
Feeling isolated if remote and alone	6 (29%)	2 (7%)	22%
Count on peers/shared purpose/on same page	2 (10%)	9 (31%)	21%
Peer knowledge sharing/community of practice	7 (33%)	15 (52%)	19%
Engage with activities/team-building/training	6 (29%)	3 (10%)	19%
Team norms (how to work together/ground rules)	4 (19%)	10 (38%)	19%
Know the individual behind the professional	5 (24%)	2 (7%)	17%
Leader awareness/motivation/coaching/1:1s	3 (14%)	9 (31%)	17%
Create stories/common experiences/memories	1 (5%)	6 (21%)	16%
Own expected contribution clear/critical to output	2 (10%)	7 (24%)	14%
F2F socialization - get together/meals	7 (33%)	6 (21%)	12%
Onboarding/bonding through experiences	1 (5%)	5 (17%)	12%
Create team identity/refer to “the team”/spirit	2 (10%)	6 (21%)	11%
Personal sharing/making connections	15 (71%)	18 (62%)	9%
Introductions (bio/interests/photos/visual)	1 (5%)	4 (14%)	9%
Humor (also self, explaining/asking meaning)	8 (38%)	9 (31%)	7%
Comfortable asking questions (language/culture)	5 (24%)	5 (31%)	7%
Learning NNS native language or culture	2 (10%)	1 (3%)	7%
Leader encourages participation from all (names)	7 (33%)	11 (38%)	5%
Listening for those trying to speak up	1 (5%)	3 (10%)	5%
F2F gatherings/kickoff as investment	12 (57%)	8 (28%)	4%

Commitment/right attitude/above and beyond	3 (14%)	5 (17%)	3%
Reduce barriers/open with roundtable/small talk	1 (5%)	1 (3%)	2%
Group size (small working/side groups)	1 (5%)	2 (7%)	2%
Team reaches out to new members	1 (5%)	1 (3%)	2%
All voices/regional views sincerely welcomed	3 (14%)	4 (14%)	0%
Acclimating to organizational/functional culture	2 (10%)	3 (10%)	0%

Table 14: Collaboration Challenges Unique to NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Increased motivation/ownership/dialogue	5 (24%)	0	24%
Fun	5 (24%)	0	24%
Pairing experts with learners/leader as liaison	4 (19%)	0	19%
Regular meetings/frequent communication	3 (14%)	0	14%
Noticing lack of participation or absence	2 (10%)	0	10%
Virtual socialization (activities/spotlights)	2 (10%)	0	10%
Level of productivity	2 (10%)	0	10%
Managing high turnover	1 (5%)	0	5%
None	1 (5%)	0	5%
Encouraging collaboration across countries	1 (5%)	0	5%
Lots of effort required to make connections	1 (5%)	0	5%
Impact of "energy shadow" (attitude, voice)	1 (5%)	0	5%
Increased engagement if you’re visible	1 (5%)	0	5%
Voting on decisions	1 (5%)	0	5%
Observing others	1 (5%)	0	5%
Ask what team should be doing/opportunities	1 (5%)	0	5%
Engaged members/matched with strengths	0	16 (55%)	55%
Follow-up/consistent communication	0	8 (28%)	28%
Socialization - gain acceptance/comfort level	0	6 (21%)	21%
Address conflict (healthy tension/constructive)	0	6 (21%)	21%
Friendly/open/inviting tone/natural interactions	0	8 (28%)	28%
Attention from/exposure to different leaders	0	5 (17%)	17%
Time and amount of interactions	0	4 (14%)	14%
Maintaining friendships after team disbands	0	4 (14%)	14%
Receiving feedback	0	3 (10%)	10%
Leader socializes/informed of local events	0	3 (10%)	10%
Overcoming discomfort	0	3 (10%)	10%
Know when to actively participate	0	3 (10%)	10%
Need for flexibility	0	3 (10%)	10%
Confirm and seek understanding/clarity	0	3 (10%)	10%
Constructive, quality discussions	0	2 (7%)	7%

Sharing culture as engine/social contact glue	0	1 (3%)	3%
Pride/sense of ownership/sensitivity	0	1 (3%)	3%
Initial cold/serious communication relaxes	0	1 (3%)	3%
Right mix of people	0	1 (3%)	3%
More experience	0	1 (3%)	3%
Enjoying the work	0	1 (3%)	3%
Earn 'credibility chips'	0	1 (3%)	3%
Evaluation at beginning (where you stand)	0	1 (3%)	3%
Patience and managing emotions	0	1 (3%)	3%
Fend for yourself	0	1 (3%)	3%
Conscious of hidden behaviors/impressions	0	1 (3%)	3%
Addressing negative contagious behavior	0	1 (3%)	3%
Not comfortable being called on	0	1 (3%)	3%
No magic formula to make team click	0	1 (3%)	3%
Meeting around family commitments	0	1 (3%)	3%
Not micromanaged	0	1 (3%)	3%
Self-awareness and awareness of others	0	1 (3%)	3%
Good use of time/not wasted	0	1 (3%)	3%
Showing up differently depending on audience	0	1 (3%)	3%
Tools/resources to transition into virtual space	0	1 (3%)	3%
Team energy/personal connections change	0	1 (3%)	3%
Takes time to adapt	0	1 (3%)	3%
Move past language barrier	0	1 (3%)	3%
Agree that some misunderstanding is ok	0	1 (3%)	3%
Accept that close connections not guaranteed	0	1 (3%)	3%
Comfort acting like majority culture members	0	1 (3%)	3%
Team works well/remoteness less of factor	0	1 (3%)	3%
Appreciation of others' consideration	0	1 (3%)	3%

Findings for the remaining categories of technology methods, team effectiveness evaluation and recommended strategies are presented in the six tables below. However, beyond this, these three categories will not be discussed further in detail since they were not challenges aligned with one of the four communication influences explained in Chapter 1 and throughout; nor were they included as original primary interview questions. The type of technology used by the team, an offshoot of the technology challenges question, is descriptive rather

than interpretive and resulted in very similar answers among participants. The other two categories of team effectiveness evaluation were essentially summary questions concluding each interview. However, participant strategies will be summarized at a high level in Chapter 6.

Technology methods. For the thematic category of technology methods, most of the NSs cited conference/phone calls (20 participants, 95%), email/mail groups (19 participants, 90%) and video conferences/Skype (19 participants, 90%) as the methods that they used. Other top methods cited by the participants included instant messaging/chat (13 participants, 62%) and meeting software (WebEx) (11 participants, 52%).

Most of the participants cited using video conference, phone calls, and email as the main communication tools in GVTs. Participant 7 described conference calls; Participant 10, WebEx; and Participant 14, Skype:

> *We have a team conference with the two leads, it is not with all the instructional designers in India but it is with the two leads and then my two leads over here and myself. We do an hour call every Monday to start off our week and to figure out what needs to get done and where we need to help each other out. [NS7]*
>
> *When I think about the teams that I am on now that are global in nature, WebEx is a huge part of us being able to, it is the next best thing to being there. We have even done WebEx in conjunction with video conferencing…and then we had a teleconference because the connections were so bad to China that if our web conference dropped and/or our video conference dropped, we still had an audio connection. So that is really bad when you end up with 3 different technologies running all at the same time to try to make a meeting happen, but the throughput is just not the same across the globe. [NS10]*
>
> *Skype is a great tool. You probably don't need to do it all the time, but if there is ever confusion that you can't resolve in a telephone call, if you're*

feeling tension, trust your feelings. If you're feeling tension, then do a video call, don't send an e-mail or another voice message, do a video conference. Not for monthly calls but we've done video conferences for things that require more intense feedback and gathering feedback on user interface for a product and the engineer who was doing it wanted to look into the eyes of the sales reps who were using it, European sales reps. [NS14]

Participant 17 described how some different communication platforms could be interchanged:

It could be email, it could be teleconferences, it could be instant messaging. But I see them working together to solve problems and answer business questions and fairly seamlessly at that. Like we only have two people who do R&D information work outside from the knowledge management bit but doing things like patent searching and searching of the external patent literature; one's in Belgium and one's here. It always used to be a bit of a struggle doing the whole vacation thing. Now they are just doing it. They are managing it. They communicate regularly and they pass work back and forth. [NS17]

Perhaps quite predictably, given the number of common forms of technology for team meetings, NNSs cited the same top technology methods in the same order. The frequency of their responses included conference/phone calls (28 participants, 97%), email/mail groups (28 participants, 97%), video conferences/Skype (22 participants, 76%), instant messaging/chat (20 participants, 69%) and meeting software (WebEx) (13 participants, 45%). Participant 33 described telephones, Participant 45, emails, Participant 44, Skype, Participant 23, instant messaging, and Participant 38, WebEx:

They use quite a lot mobile phones. Mobile phones and the SMS technology is very prevalent here in Asia. When I am traveling they might send me an SMS, especially for urgent issues, text messaging saying hey are you available for a call now or can we chat tomorrow. So I get that quite a bit from the team as well. [NNS33]

We use e-mail quite a lot and for me I do not see any problems using e-mail for communication. Sometimes I do agree that sometimes e-mail might be getting long because sometimes it is a conversation will be much more effective but e-mail is one option that can deal with the time differences or people have different meeting and agendas. We have to have every channel available. [NNS45]

Everybody is not normally in an office and the Skype gives people the chance to make conference very easy. Everybody has the chance to have a connection in the Skype. For example, I'm in Colombia one day and I need to make a conference so I make multiconference to Skype, to Germany, to Argentina and I'm in Colombia. We try to use the video conference through Skype. The other advantage for me for Skype is you can connect people through the free way or through the telephone saying something. So it is very easy for me to be the center of a conference and I connect people through their mobile phone or through a fixed line or through their Skype. [NNS44]

Typically if we are on a project we will do a WebEx, but at any point of time we have that trust so we can just IM each other and it would not be bothersome or annoying or it won't be micromanaging, purely just benefit of the doubt. [NNS23]

To have the WebEx is very important, especially again when we are discussing language for people who have, perhaps, less experience and just have the ability to make sure you captures the attention; this combination of voice with visual support from this makes…so I am using that extensively. [NNS38]

Tables 15 and 16 below show the remaining common and unique codes that emerged for NSs and NNSs from the thematic category, technology methods.

Table 15: Technology Methods Common to Both NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Video conferences/Skype	19 (90%)	22 (76%)	9%
Email/mail groups	19 (90%)	28 (97%)	7%
Instant messaging/chat	13 (62%)	20 (69%)	7%
Meeting software (WebEx)	11 (52%)	13 (45%)	7%
Documentation/portals/templates	9 (43%)	12 (41%)	3%

Face-to-face collaboration	7 (33%)	4 (14%)	3%
Collaboration software (SharePoint)	7 (33%)	4 (14%)	3%
Conference/phone calls	20 (95%)	28 (97%)	2%
Texting	1 (5%)	1 (3%)	2%
Discussion groups (Yammer)	1 (5%)	2 (7%)	2%
Voice over Internet Protocol (VoIP)	2 (10%)	2 (7%)	0%

Table 16: Technology Methods Unique to NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Preference for some tech forms over others	3 (14%)	0	14%
Multiple tools in use simultaneously	2 (10%)	0	10%
Webcam	1 (5%)	0	5%
Mobile phones/smartphones	0	4 (14%)	14%
Radios (Nextel)	0	1 (3%)	3%
Paper/notebooks	0	1 (3%)	3%
Virtual training	0	1 (3%)	3%

Team effectiveness evaluation. For the thematic category of team effectiveness evaluation, there were relatively few responses. The top responses cited by NSs included accomplishment of goals/ delivering value (9 participants, 43%) and trust (5 participants, 24%). Other top responses cited by the participants included strong, positive leadership (elicits participation) (3 participants, 14%), feedback for continuous improvement/evolution (3 participants, 14%), becomes settled and used to the process (3 participants, 14%) and ineffective/could be more effective (3 participants, 14%).

Listed below are a number of participant responses related to team effectiveness as summarized above:

> *So that put some kinks in it as well because they were able to hide very easily, and so we were forced to sort of go through the back door and try to find a different way to communicate with them. It really erodes the trust I*

think. When you have teams who are working virtually, or even face-to-face, it is very easy for us to look at our social norms and establish trust very easily because we are face-to-face. Because you do not have that on a virtual team, you have to rely on responsiveness, collaboration, communication, documenting. That is how you establish trust virtually, and when you do not have that, then that really does erode the trust, and it causes lots of questions and skepticism. [NS1]

I'd have to say it was because we never would have accomplished a deal of that size with the complexity that it carried in that time frame if we were not effective. We rallied the right resources and the right functions and the right geographies came together in a form that accommodated as best we could with time zones and the geographic spread. We knew the content we needed to focus on so we were very focused and deliberate around material risks and material value. We just couldn't have done what needed to be done if it was not effective. [NS4]

I think that we don't often times open the conduit for a two way channel of communication and I think that is very difficult to do on a global call because individuals on that call don't want to raise their very personal issues to this global audience and I think it works much better when we're working with one on one communication and we talk with them and we asked for their feedback and we listen and we pause to listen, which usually the Americans are very uncomfortable with the pause to listen. We assume that because they didn't answer in the first five seconds, we should move on. [NS8]

We're a very effective team because we are let alone to our work and we're trusted to collaborate with each other and because we are rewarded for the relationships that we build and the risks that we highlight. [NS21]

For NNSs, the top most cited responses were open communication (16 participants, 55%) and accomplishment of goals/delivering value (9 participants, 31%). Other top challenges cited by the participants included teamwork/unity/team spirit/cooperation (8 participants, 28%), ineffective/could be more effective (7 participants, 24%), and focused/engaged (4 participants, 14%).

Listed below are a number of NNS participant responses related to team effectiveness as summarized above:

I think it goes back to trust, I think it goes back to accountability, open communication. There was not one person or group or business unit that overpowered the other. We all understood that we needed each other and it was a win-win operation so everybody was happy with that. So yes, I think it was very effective. [NNS22]

Every day I can see people talk to each other and that we are able to build great solutions using, you know, different software as built within the team so that couldn't be possible without a good collaboration. [NNS29]
When we are setting goals and objectives, we achieve them. When we have common projects or missions to achieve together, we do that successfully. [NNS47]

From a communication I would say, probably, yes because there is no barrier, a lot of exchange where I am not involved. So this is where I see the health of the team you know. And I would say as the team has evolved, we have had a number of people going to the job in or out and I think, over time, we managed to keep that spirit and very informal and interest with people we have on the team. [NNS38]

We haven't gotten to the stage where we can leverage everyone's abilities at full potential. We are making good progress towards communication within our group and without partners, which is something that I believe is also important. [NNS35]

Definitely the small size helps a lot because we are very engaged in each other's activities and also the weekly call with an agenda definitely helps us to stay focused. So I will say my current team definitely there are limitations but considering that it is global, I would say that it is effective in my opinion because of a lot of deliberate actions and steps we take to make sure we are comfortable and to make sure that the teleconference timing works for all of us and also we prepare ourselves with information that we are going to share so that we also keep the call short and focused and we don't spend too much time talking about other things and get distracted. [NNS28]

Tables 17 and 18 below show the remaining common and unique codes that emerged for NSs and NNSs from the thematic category, team effectiveness evaluation.

Table 17: Team Effectiveness Evaluation Common to Both NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Open communication	2 (10%)	16 (55%)	45%
Teamwork/unity/team spirit/cooperation	1 (5%)	8 (28%)	23%
Trust	5 (24%)	3 (10%)	14%
Accomplishment of goals/delivering value	9 (43%)	9 (31%)	12%
Strong, positive leadership (elicits participation)	3 (14%)	1 (3%)	11%
Feedback for continuous improvement/evolution	3 (14%)	1 (3%)	11%
Ineffective/could be more effective	3 (14%)	7 (24%)	10%
Focused/engaged	1 (5%)	4 (14%)	9%
On time	1 (5%)	2 (7%)	2%

Table 18: Team Effectiveness Evaluation Unique to NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Becomes settled and used to the process	3 (14%)	0	14%
Raise concerns/risks/provide opinions	2 (10%)	0	10%
Continued existence	2 (10%)	0	10%
Sharing information/experiences/lessons	2 (10%)	0	10%
Less formal requests, more informal communication	2 (10%)	0	10%
Interaction/discussion/contributions	2 (10%)	0	10%
Changing team membership	2 (10%)	0	10%
Welcoming and supporting new members	1 (5%)	0	5%
Comfortable, understand others' styles	1 (5%)	0	5%
Delays	1 (5%)	0	5%
Common interest/shared purpose	1 (5%)	0	5%
Measuring community/efficiency/motivation	1 (5%)	0	5%
Seek out advice from leader	1 (5%)	0	5%
International experience	0	2 (7%)	7%
Impact of group size	0	2 (7%)	7%
Accountability	0	1 (3%)	3%
Leader misfocus and inattention	0	1 (3%)	3%
Too much leader direction	0	1 (3%)	3%
Maintaining relationships	0	1 (3%)	3%
Unprepared participants	0	1 (3%)	3%
Language issues	0	1 (3%)	3%

Recommended strategies. For the thematic category of recommended strategies, most of the NSs cited clear objectives/planning/process/timelines (13

participants, 62%) and asking questions or for clarification/repeating (10 participants, 38%) as the strategies or advice they would recommend to someone new to GVTs. Other top strategies cited by NSs included F2F interaction/kickoff meeting (8 participants, 48%), recognize/embrace wide range of differences (6 participants, 29%) and document and revisit (decisions, actions) (5 participant, 24%).

Most of the participants advised having clear objectives/planning/process/timelines to improve GVTs. Participants 9 advised:

> *What you need to take into account with a global virtual team is the fact that people aren't in the same office, so you need to make sure everybody's on the same page, up to speed, have clear roles and responsibilities, understand how to escalate when they have problems. [NS9]*

Face-to-face meetings and other interactions are recommended, as Participant 8 explained:

> *Plan for some face to face meetings. I don't think that you can have an effective, kind of a standing global team collaboration without some face to face meetings. I think that builds the trust that you leverage in subsequent discussions. I think without that, you keep asking for something but you don't really have the credibility to ask. I think it gives you more of a personal touch so you typically face to face would spend a bit more time exploring who that other person is and what's going on in their life in addition to their work life and I think additionally, you would have longer pauses in that face to face conversation where people can maybe come back to you later in the day with a response to something you brought up in the morning or people can come back to you the next day with something they thought about overnight. I think when we have these very capsulized conversations that are scheduled. [NS8]*

Another strategy noted by NSs, described below by Participant 4, was recognizing the individual diversity in the team membership in all its forms:

> *Recognize and embrace the differences. Don't try to fight them. Be very specific in your objective and expected participation and be creative to*

make sure you bring a person or personality to the team as well as being very purposeful; otherwise you risk it feeling too directive and not engaging. [NS4]

Participants also mentioned the need for documentation of decisions and actions:

Technology can let us down sometimes in our ability to communicate well. I will have them confirm back verbally or get them to write back to me an email what actions they are going to take. [NS9]

For NNSs, the top most cited responses were communicate simply, frequently, openly (11 participants, 38%) and clear objectives/planning/ process/timelines (9 participants, 31%). Other top challenges cited by the participants included spend more time 1:1 with participants (8 participants, 28%), learning/researching cultural differences (7 participants, 24%), recognize/embrace wide range of differences (5 participants, 17%), F2F interaction/kickoff meeting (5 participants, 17%) and seek expert advice/cultural training (5 participants, 17%).

Listed below are a number of NNS participant responses related to recommended strategies as summarized above:

The more open and truthful you are from the beginning, the less misunderstanding or confusion you can have also doing the project time. [NNS47]

Have some common projects for the team members to work together and towards the same goals we are working on how to build our team to increase the ownership of each other and to really have the use of our minds to work on this. That can help us actually and I believe after the project we are a better team than before. [NNS45]

At least once a week it can be a very good practice to have a one-to-one meeting where people can feel open to talk about everything and to have

questions and challenges and the concerns and the fears. It needs to be a mature manager because sometimes it is easy to listen to only good things, but it is hard to listen to challenges or not good observations by yourself…It is to be in the person's shoes. [NNS37]

I think you need to know the person. You need to know where the person is from or what is culture is, what the size of the city, what his activities, to understand them better, and have an open mind. If you do not have an open mind, you will never communicate to anybody…The person is not doing what you are asking because of the culture, not because he does not want to do it. It is important to understand how things go. [NNS40]

Be open to accept and embrace challenges and differences. To not feel like your way is the best and only way. To not come in thinking that you know it all because, more than likely, you will be very surprised. Just being humble and being accepting of differences because as much as the world is getting smaller with technology, the differences become greater and greater and greater. And we have to know that there are 100s, 1000s and millions of ways of doing things differently and if we want to be able to work and accomplish a common goal, then we have to accept the differences of others. [NNS22]

Create more face time, and in the face time to create activities for the team to work together. It is not necessarily to be a work-related activity, but if the activity is challenging and it needs their full participation of the team, by doing so I think it also can create the connection among the team members. [NNS36]

How do we invest to make sure that we get some professional, sort of experts who know their stuff, as an educational process or developing leaders into virtual working and problem-solving. Virtual work is not easy so we need to invest and equip these folks to develop them because you grow a lot in these kinds of how to, interact with people where you do not see them on a regular basis. How do you break the barriers around time zones and culture and how to address folks and everything? [NNS50]

Tables 19 and 20 below show the remaining common and unique codes that emerged for NSs and NNSs from the thematic category, recommended strategies.

Table 19: Recommended Strategies Common to Both NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Clear objectives/planning/process/timelines	13 (62%)	9 (31%)	31%
Communicate simply, frequently, openly	3 (14%)	11 (38%)	24%
F2F interaction/kickoff meeting	8 (38%)	5 (17%)	21%
Learning/researching cultural differences	1 (5%)	7 (24%)	19%
Document and revisit (decisions, actions)	5 (24%)	2 (7%)	17%
Institute team rules/principles	4 (19%)	1 (3%)	16%
Recognize/embrace wide range of differences	6 (29%)	5 (17%)	12%
Extra attention for building virtual teams	4 (19%)	3 (10%)	9%
Expect accountability	2 (10%)	1 (3%)	7%
Seek expert advice/cultural training	2 (10%)	5 (17%)	7%
Provide pre-reads/prepare for participation	4 (19%)	4 (14%)	5%
Small working groups/side groups	1 (5%)	1 (3%)	2%
Unity/team-building	1 (5%)	1 (3%)	2%
Provide overseas assignments	1 (5%)	1 (3%)	2%
Solicit feedback/reflect on what's working	1 (5%)	2 (7%)	2%
Foster creative/informal/relaxed interactions	1 (5%)	2 (7%)	2%
Listen actively/globally between the lines	1 (5%)	2 (7%)	2%
Pause conversations and invite feedback	2 (10%)	3 (10%)	0%

Table 20: Recommended Strategies Unique to NSs and NNSs

Codes	# (%) of NSs to offer this experience	# (%) of NNSs to offer this experience	% difference NS-NNS
Asking questions/clarification/repeating	10 (48%)	0	48%
Develop relationships outside of meetings	4 (19%)	0	19%
Give NNSs time to process	3 (14%)	0	14%
Patience regarding language problems	3 (14%)	0	14%
Check your cultural assumptions	3 (14%)		14%
Use multiple visual and audio cues	2 (10%)	0	10%
Adapt to language (speak slower, avoid slang)	2 (10%)	0	10%
Provide access to English classes	2 (10%)	0	10%
Help create personal connections	2 (10%)	0	10%
Know team well	2 (10%)	0	10%
Don't rely only on email chains for connecting	2 (10%)	0	10%
Document and revisit past lessons learned	2 (10%)	0	10%
Flip hours of meetings across time zones	2 (10%)	0	10%
Acknowledge the elephant in the room	2 (10%)	0	10%
Provide multiple channels for participation	2 (10%)	0	10%
Demonstrate value to earn a F2F meeting	1 (5%)	0	5%
Seek management support	1 (5%)	0	5%

Don't assume preferences (scheduling)	1 (5%)	0	5%
Improve technological equipment	1 (5%)	0	5%
Provide opportunities to practice presentations	1 (5%)	0	5%
Heightened level of professionalism	1 (5%)	0	5%
Put self in others' situation	1 (5%)	0	5%
Give praise regularly	1 (5%)	0	5%
Admit not understanding/be candid	1 (5%)	0	5%
Acknowledge challenges openly	1 (5%)	0	5%
Be transparent with cultural humor	1 (5%)	0	5%
Record meetings for review	1 (5%)	0	5%
Three email rule - then talk on phone	1 (5%)	0	5%
Trust your instincts on how to best interact	1 (5%)	0	5%
Request everyone turn on IM for availability	1 (5%)	0	5%
Consider separate regional meetings	1 (5%)	0	5%
Purposely select tech method (cost, need)	1 (5%)	0	5%
Keep your virtual goggles on at all times	1 (5%)	0	5%
Use technology as support not a crutch	1 (5%)	0	5%
Build in informal chitchat/break times	1 (5%)	0	5%
Build in think time/let people process	1 (5%)	0	5%
Discuss working well together/draw on past	1 (5%)	0	5%
Plan ahead for accommodations/changes	1 (5%)	0	5%
Ask for opinions/different perspectives	1 (5%)	0	5%
Focus on similarities instead of differences	1 (5%)	0	5%
Ask for follow-up confirmation of actions	1 (5%)	0	5%
Learn what each individual brings to the team	1 (5%)	0	5%
Spend more time 1:1 with participants	0	8 (28%)	28%
Encourage participation/names if appropriate	0	4 (14%)	14%
Choose right agenda topics/right attendees	0	3 (10%)	10%
Take opportunity to share your culture	0	3 (10%)	10%
Develop proficiency in English	0	3 (10%)	10%
Accept lack of clarity and guidelines/ be flexible	0	3 (10%)	10%
Don't assume competency with limited contact	0	3 (10%)	10%
Shorten meetings to keep focus/concentration	0	2 (7%)	7%
Come to decisions/gain team consensus	0	2 (7%)	7%
Advocate for value of global virtual teams	0	2 (7%)	7%
Newcomers connect with local setting/people	0	2 (7%)	7%
Introductions	0	2 (7%)	7%
Share background knowledge	0	2 (7%)	7%
Quick decisions/efficiency	0	2 (7%)	7%
Ask others for guidance/new participants	0	2 (7%)	7%
Openly share language challenges	0	2 (7%)	7%
Ask mentor to learn about your environment	0	2 (7%)	7%

Know and cater to learning/personality styles	0	2 (7%)	7%
Give someone fair chance/fair time to onboard	0	1 (3%)	3%
Regular meetings	0	1 (3%)	3%
Strong leadership	0	1 (3%)	3%
Don't take anything for granted	0	1 (3%)	3%
Be comfortable with silence and pauses	0	1 (3%)	3%
Don't always expect 100% comprehension	0	1 (3%)	3%
Be natural/be true/be yourself	0	1 (3%)	3%
Speak even if not perfect to develop fluency	0	1 (3%)	3%
Remember human beings, not machines	0	1 (3%)	3%
Ask people to share name before speaking	0	1 (3%)	3%
Identify team skills/abilities to develop	0	1 (3%)	3%
Learn another language to empathize	0	1 (3%)	3%
Create a checklist to train newcomers	0	1 (3%)	3%
Don't forget participants from other cultures	0	1 (3%)	3%
Learn technology and set-up	0	1 (3%)	3%

Summary Tables Discussion

As noted at the beginning of this chapter, because of the large amount of data presented in the previous 14 tables, four additional summary tables below provide alternative views and formats of the findings. The tables contain, for both NSs and NNSs, (1) a summary of top code descriptors, (2) a summary of the number of codes, (3) a summary of the number of responses, and (4) a summary ranking of the number of codes and responses.

Table 21 below serves as a brief summary of the findings for the first four influences of language, culture, technology, and collaboration. The first two columns of the table include the top codes (typically five, or more if there was a tie in number of responses) according to number of respondents each for both NS and NNS. The third column lists the codes with the largest percentage difference in responses between NS and NNS, in descending order along with a

parenthetical indicator of whether the percentage (larger results) is attributed to the NSs or to the NNSs. Not surprisingly, in several instances, there were recurring codes for both the response number and percentage comparison.

As noted earlier, not all findings will be interpreted at present due to the scope of this study. In Chapter 5, the challenges for language, culture and collaboration have surfaced as part of three designated key highlights and will be discussed in more detail there. As a result, I will comment on the remaining categories: technology challenges, technology methods, team effectiveness evaluation, and recommended strategies.

For technology challenges, the top codes cited by NSs (communicating with multiple people at once and fewer nonverbals with the impersonal nature of video) were also cited by NNSs to a lesser degree. NNSs on the other hand noted the prevalence of multitasking and its consequential low energy, focus, and distractions, which may lead to fatigue and disengagement. Two other challenges not cited by NSs that represent the largest percentage difference in responses between the two groups include preferences that relate to trust, access, proficiency and time, as well as the unavailability of technology as well as the right equipment and support. It may be that there is some concern about adoption of the technology. It is often true that not all regions, office or field locations may have access to the same level of technology and support as a corporate headquarters, for example. The one large difference for NSs is the mention of video challenges and frustrations, echoing some comments that the

attempt to recreate a face-to-face experience is often not worth the effort considering the results. On that note, there is little to report on the findings for technology methods, given that there are no differences between the priority methods chosen (conference calls, email, video, instant messaging, and meeting software) and that these methods are even ranked in the same order by number of responses. This may reflect that there are, in actuality, a limited number of typical tools and especially on GVTs at large companies, there may be certain standards or norms set in place as part of the organizational culture.

When asked to evaluate their GVT's effectiveness and suggest reasons for it, both groups cited accomplishment of goals and delivering value as a priority. Both also cited instances where teams were ineffective. In terms of differences, NNSs ranked highest the importance of open communication, which was not mentioned specifically by NSs but may certainly be related to their prioritizing trust. NSs also cited strong leadership and feedback, whereas NNSs cited strong teamwork incorporating unity, spirit and cooperation.

Finally, the thematic category of recommended strategies is noteworthy because, while it was a closing interview question, it did prompt participants to mention what was top of mind for them for sharing their advice and best practices for others. Responses may be influenced by what they had focused on during the discussion of their chosen memorable experiences, however it is still an opportunity for them to make an appeal. Perhaps not surprisingly, process was important for both groups, encouraging clear objectives, planning and timelines.

Both groups also recommended face-to-face interaction at kickoff meetings and beyond, as well as recognizing and embracing a wide range of differences among members. The largest differences appear with NSs advocating for asking questions, including for clarification or repetition, in addition to another process piece of documenting and revisiting decisions and actions of the team. While NNSs did also agree with clear objectives and planning, their recommendation for simple, frequent, and open communication outranked it. Perhaps it is a reminder of the need for a balance of relationship-based versus task-based focus and a preference for intentional adjustment of communication and socialization in line with the remainder of NNS top priorities here: spending more time 1:1 with participants, learning and researching cultural differences, and seeking expert advice and cultural training.

Language Challenges		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Slang/idioms/colloquialisms /word choice (15) • Miscommunication/ misunderstanding (13) • English as a second language issues (12) • Time/patience/energy/extra effort/empathy (11) • Accents (NNS/NS)/ pronunciation/avoidance (9)	• Miscommunication/ misunderstanding (23) • English as a second language issues (23) • Repetition/rephrasing/ clarification/frustration (23) • Slang/idioms/word choice/sentence structure (22) • Preferences for writing vs. speaking (22)	• Preferences for writing vs. speaking (NNS +76%) • English as common language for team (NNS +59%) • Different language difficult, natural barrier (NNS +55%) • Lack of confidence in conversational speaking (NNS +55%) • Repetition/rephrasing/clarific ation/frustration (NNS +46%) • Compare understanding/notes with others (NNS +43%)

		• Multiple communication inputs/reinforcements (NNS +38%) • NNS-NNS communication easier without NS (NNS +31%)
Culture Challenges		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Time difference/time zones (20) • Working habits/ preferences/individual styles (13) • Silence/hesitant/wait for pause/name (12) • Hierarchy/deference to authority, manager (10) • Organizational culture/values/requirements (7) • Lifestyle impact/balance (hours, peak mental) (7)	• Silence/hesitant/wait for pause/name (28) • Working habits/ preferences/individual styles (19) • Directness/indirectness/ outspokenness (18) • Time difference/time zones (16) • Social practices/greetings/ etiquette/politeness (14)	• Directness/indirectness/ outspokenness (NNS +43%) • Time differences/time zones (NS +40%) • Silence/hesitant/wait for pause/name (NNS +40%) • Exposure to/share cultural practices/interests (NNS +40%) • Social practices/greetings/etiquette/ politeness (NNS 29%) • Organizational culture/values/requirements (NNS +28%) • Misinterpret or not understand humor/jokes (NNS +28%) • Empathy/understanding/ embarrassment (NS +24%) • Dominating conversations (NNS +24%)
Technology Challenges		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Communicating with multiple people at once (10) • Fewer nonverbals/impersonal/ video is not F2F (7) • Video set up/lost time/clumsy/ expensive (7) • Connection issues/major tech disruptions (5) • Delays (time zones) (4)	• Multitasking/low energy and focus/distractions (16) • Preferences (trust, access, proficiency, time) (14) • Unavailability of tech/ right equipment/support (11) • Fewer nonverbals/impersonal/ video is not F2F (9) • Communicating with multiple people at once (7)	• Preferences (trust, access, proficiency, time) (NNS +48%) • Multitasking/low energy and focus/distractions (NNS +41%) • Video set up/lost time/clumsy/expensive (NS +30%)

• Uncomfortable/low level of communication (4) • Difficulty picking up vibes, morale, feelings (4) • Confusion (4)	• Connection issues/major tech disruptions (7)	• Unavailability of tech/right equipment/support (NNS +28%) • Communicating with multiple people at once (NS +24%) • Cost (NNS +21%) • Delays (time zones) (NS +19%) • Uncomfortable/low level of communication (NS +19%) • Difficulty picking up vibes/morale/feelings (NS +19%) • Confusion (NS +19%)
Collaboration Challenges		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Personal sharing/making connections (15) • F2F gatherings/kickoff as investment (12) • Humor (also self, explaining/asking meaning) (8) • F2F ongoing - visit other regions/offices/proxy (8) • F2F socialization - get together/meals (7) • Leader encourages participation from all (names) (7) • Peer knowledge sharing/ community of practice (7)	• F2F ongoing - visit other regions/offices/proxy (23) • Building relationships/empathy/ understanding (22) • Building trust/openness/goodwill/ respect/actions (20) • Personal sharing/making connections (18) • Engaged members/matched with strengths (16)	• Engaged members/matched with strengths (NNS +55%) • F2F ongoing – visit other regions/offices/proxy (NNS +47%) • Building relationships/empathy/ understanding (NNS +41%) • Building trust/openness/goodwill/ respect/actions (NNS +40%) • Recognized/valued for own contribution (NNS +36%) • Follow-up/consistent communication (NNS +28%) • Friendly/open/inviting tone/natural interactions (NNS +28%)
Technology Methods		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Conference/phone calls (20) • Email/mail groups (19) • Video conferences/Skype (19) • Instant messaging/chat (13)	• Conference/phone calls (28) • Email/mail groups (28) • Video conferences/Skype (22) • Instant messaging/chat (20)	• Preference for some tech forms over others (NS +14%) • Mobile phones/smartphones (NNS +14%) • Multiple tools in use simultaneously (NS +10%)

• Meeting software (WebEx) (11)	• Meeting software (WebEx) (13)	• Video conferences/Skype (NNS +9%)
Team Effectiveness Evaluation		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Accomplishment of goals/ delivering value (9) • Trust (5) • Strong, positive leadership (elicits participation) (3) • Feedback for continuous improvement/evolution (3) • Becomes settled and used to the process (3) • Ineffective/could be more effective (3)	• Open communication (16) • Accomplishment of goals/delivering value (9) • Teamwork/unity/team spirit/cooperation (8) • Ineffective/could be more effective (7) • Focused/engaged (4)	• Open communication (NNS +45%) • Teamwork/unity/team spirit/cooperation (NNS +23%) • Becomes settled and used to the process (NS +14%) • Trust (NS +14%)
Recommended Strategies		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Clear objectives/planning/ process/timelines (13) • Asking questions or for clarification/repeating (10) • F2F interaction/kickoff meeting (8) • Recognize/embrace wide range of differences (6) • Document and revisit (decisions, actions) (5)	• Communicate simply, frequently, openly (11) • Clear objectives/planning/ process/timelines (9) • Spend more time 1:1 with participants (8) • Learning/researching cultural differences (7) • Recognize/embrace wide range of differences (5) • F2F interaction/kickoff meeting (5) • Seek expert advice/cultural training (5)	• Asking questions or for clarification/ repeating (NS +48%) • Clear objectives/planning/ process/timelines (NS +32%) • Spend more time 1:1 with participants (NNS +28%) • Communicate simply, frequently, openly (NNS +24%) • F2F interaction/kickoff meeting (NS +21%) • Learning/researching cultural differences (NNS +19%) • Develop relationships outside of meetings (NS +19%)

Table 21: Summary of Top Codes and Largest Percentage Differences

The table above provided a summary of top code descriptors. Tables 22 and 23 that follow provide another high-level perspective of the data, in this instance through total numbers of codes and then total number of responses for

the four communication influences as separated by NSs and NNSs. The first table presents a summary of total numbers of common and unique codes for both NSs and NNSs, captured in several ways to compare them by total numbers overall and differences between the two participant groups, followed by an overall total number of codes. Table 23 that follows shows a similar breakdown but instead offers a summary of number of participant responses rather than the codes themselves. To supplement the immediately preceding companion table, it highlights the total number of responses to common and unique codes, the difference in response rates between NSs and NNSs, and an overall total of responses for both common and unique codes. This is an important distinction between the two tables, since tabulating only the number of codes may not provide a complete view of results if the number of respondents for certain codes is much higher than for others where there are only a few respondents. There is value in both approaches since, as noted earlier, it is important to see what interesting or unexpected challenges are emerging that might call for further inquiry even if their numbers are not large in this particular case. While figures are presented for all seven thematic categories for reference, as noted earlier, only the first four main influences (language, culture, technology and collaboration) will be discussed here. For each column in both tables, the highest number is shaded in light gray and the lowest number is shaded in dark gray

Starting with common codes, or those mentioned by both NSs and NNSs, collaboration (30 codes) were top of mind for participants, followed by culture

(23), language (18), and technology (13). Then breaking down the unique codes called out separately by either NSs or NNSs, NS observations ranked in order as culture (31), technology (25), collaboration (16) and language (12). For their unique codes, NNS results were language (46), collaboration (42), culture (39) and technology (22). Here, in the unique code count, NNSs had many more observations than NSs in categories other than technology. Rolling up the subtotaled common and unique codes into the total number of combined codes overall for both groups, NSs identified the most for culture (54), followed by collaboration (46), technology (38), and language (30), whereas NNSs identified codes in a different order, with the most for collaboration (72), followed by language (64), culture (62), and technology (35). In terms of the difference in total numbers of codes between NSs and NNSs, language (34) and collaboration (26) had the highest discrepancies and culture (8) and technology (3) were minimal. Finally, the grand total of codes combining both totals for NSs and NNSs shows that culture (93) had the top number, followed by collaboration (88), technology (60), and language (76).

In preparing to interpret the findings, it is interesting to note the discrepancies between NSs and NNSs in the language challenges category. The fact that this places low for NSs means a lower overall ranking. Perhaps NNSs are more sensitive to language issues and have more cognizance of the particulars of describing and attributing a communication experience to language barriers. Given that the boundaries between the two are indeed blurred, perhaps

NSs tend to fold some language issues into cultural issues – beyond the more common accents and vocabulary observations, they could be less aware of how complex second language proficiency is and less aware of the semantics around it. This was certainly a consideration in the coding process. Language actually comes in lowest for NSs in number of codes while culture comes in highest. This may be one area for further research. Culture and language will both be discussed in Chapter 5.

Category	# Common codes (both NS-NNS)	# Unique codes (NS vs. NNS)		Total # codes (common/ unique, NS vs. NNS)		Difference in total # of codes NS-NNS	Grand total # of codes (common/ unique)
		NS	NNS	NS	NNS		
Language Challenges	18	12	46	30	64	34	76
Culture Challenges	23	31	39	54	62	8	93
Technology Challenges	13	25	22	38	35	3	60
Collaboration Challenges	30	16	42	46	72	26	88
Other							
Technology Methods	11	3	4	14	15	1	18
Team Effectiveness Evaluation	9	13	8	22	17	5	30
Recommended Strategies	18	42	33	60	51	11	93

Table 22: Summary of Number of Codes for Each Category

As noted above, this next table provides similar data but instead focuses on the total number of *responses* for the codes, not just the numbers of codes themselves. Starting with number of responses to common codes, or those mentioned by both NSs and NNSs, NS responses totaled collaboration (129

responses), language (113), culture (112), and technology (45). For NNS, the order was the same but with more responses for each: collaboration (232), language (231), culture (199), and technology (73). Next, breaking down the responses to unique codes called out separately by either NSs or NNSs, NS responses ranked in order as culture (45), technology (44), collaboration (32) and language (19). For their responses to unique codes, NNS results were language (149), collaboration (105), culture (84) and technology (50). Here again, in the unique code response count, and to a much greater degree, NNSs had many more observations than NSs, even in technology. Rolling up the subtotaled responses to common and unique codes into the total number of responses to combined codes overall for both groups, NSs responded the most for collaboration (161), followed by culture (157), language (132) and technology (89), whereas NNSs responded in a different order, with the most for language (389), followed by collaboration (337), culture (283), and technology (123). In terms of the difference in total numbers of responses to codes between NSs and NNSs, language (248) and collaboration (176) had the highest discrepancies and culture (126) and technology (34) were still noteworthy, more so than for the number of codes. Finally, the grand total of response combining both totals for NSs and NNSs shows that language (512) had the top number, followed by collaboration (498), culture (440), and technology (212).

For responses to common codes, it is interesting that both NSs and NNSs are highest for collaboration, but language is all but tied for NNSs in differing by

only one response. Similarly for common code responses for NSs, language exceeds culture by only one. However, for responses to unique codes, NNSs pull ahead with language. As noted with the previous codes table, perhaps they have more to articulate in this category.

In summary, these two tables highlight that for the global component of GVTs (language and culture challenges), there are similarities in some rankings but differences in the numbers of unique codes and responses for NSs and NNSs. For the virtual component of GVTs, technology is somewhat surprisingly less of a challenge than the others. And, for the teams component of collaboration, there is a surprisingly overall large response for both NSs and NNSs but again more differences for NNSs in numbers and unique codes. These two tables align with the Table 23 code summary stemming from the 14 master tables that began this chapter.

Category	# Responses to common codes (NS vs. NNS)		# Responses to unique codes (NS vs. NNS)		Difference in total # of responses NS-NNS	Grand total # of responses (common/ unique)
	NS	NNS	NS	NNS		
Language Challenges	113	231	19	149	389 (NNS) - 132 (NS) = 248	512
Culture Challenges	112	199	45	84	283 (NNS) - 157 (NS) = 126	440
Technology Challenges	45	73	44	50	123 (NNS) - 89 (NS) = 34	212
Collaboration Challenges	129	232	32	105	337 (NNS) - 161 (NS) = 176	498

Other						
Technology Methods	109	136	6	7	143 (NNS) - 115 (NS) = 28	258
Team Effectiveness Evaluation	28	51	21	10	61 (NNS) - 49 (NS) = 12	110
Recommended Strategies	60	65	70	64	129 (NNS) - 130 (NS) = 1	259

Table 23: Summary of Number of Responses for Each Code

Finally, to capture some of these findings in the most succinct and easily viewable manner, below is another variation on a high-level summary view (Table 24) with the four key communication influences for NSs and NNSs listed in rank order. Total number of codes and total number of responses for participants are given in parentheses after the influence category.

Rank	**NSs**		**NNSs**	
	# Codes	# Responses	# Codes	# Responses
#1	Culture (54)	Collaboration (161)	Collaboration (72)	Language (389)
#2	Collaboration (46)	Culture (157)	Language (64)	Collaboration (337)
#3	Technology (38)	Language (132)	Culture (62)	Culture (283)
#4	Language (30)	Technology (89)	Technology (35)	Technology (123)

Table 24: Ranking of Number of Codes and Number of Responses for Each Communication Influence Category

In the first two rows for NSs, culture and collaboration ranked first and second. They reversed order for the number of codes column (where culture was highest) and the number of responses column (where collaboration was then the highest). Findings for NNSs showed the same pattern, but with a slight difference. Collaboration and language (not culture, in this case) were the two highest ranking influences. They also reversed order for the number of codes column (where collaboration was the highest) and the number of responses

column (where language was then the highest). In the last two rows, technology ranked fourth for NSs and NNSs in three of four cases. For number of codes cited by NSs, technology came in third above language. Reasons to consider for these differences, which will be discussed in the next chapter, include level of participant awareness and recognition of challenges as well as the focus of the particular experiences they were recalling in the interview.

To conclude, this chapter provided findings from the study comprised of 50 participants with experience on GVTs, including 21 NSs and 29 NNSs of advanced English proficiency. The participant responses from the individual semi-structured interviews were analyzed via content analysis. Seven themes emerged for each of the sample groups and findings from all coded interviews were presented in 14 tables here. The findings were then summarized further at a high level to identify both common and unique codes between NSs and NNSs, as well as those common codes with a large discrepancy in response frequency and their ranking of the four communication influences. In the next chapter, I will revisit the research questions and interpret these findings in greater detail.

Chapter 5: Key Highlights and Interpretation of Findings

Chapter 4 presented the findings of the 50 participant interviews in a variety of formats, summarizing the different responses and frequencies that compared NSs to NNSs. These data suggest a range of interpretations, the highlights of which will be discussed in this chapter. In essence, Chapter 4 provided the "what" view of the results and Chapter 5 follows with the "so what" analysis of the importance of these findings.

Research Questions Revisited

To reiterate, listed below are the research questions that I targeted to answer in this study:

- *What differences in communication exist among native and non-native English speakers (NSs and NNSs) on global virtual teams (GVTs) where English is the lingua franca, or common working language?*
    - *What differences relate to language?*
    - *What differences relate to culture?*
    - *What differences relate to technology?*
    - *What differences relate to collaboration?*

When crafting these research questions, I was unintentionally focused on differences in terms of content of specific codes more so than frequency of responses, something that did not originally come to mind before seeing the data. I also did not anticipate as many codes overall. Both aspects are important to the findings. Therefore the interpretation discussion in this chapter will

consider both the content as well as the number of occurrences by both NSs and NNSs.

To be sure, there are many communication differences overall as cited in the tables in Chapter 4 and many ways to dissect the data. It is clear that there are many more than could be adequately addressed within the scope of this study. Therefore, I selected the ones that are most relevant to answering the research questions above. As noted earlier, the focus readily moved to GVT communication challenges (as opposed to opportunities) since they were much more prevalent in in the data.

VCoP-Intercultural Communication Hybrid Framework Revisited

Supplementing the research questions, below is a reminder of the hybrid framework of VCoPs and intercultural communication developed in Chapter 2 which informed the research questions and will inform the interpretation of findings in this chapter. While it is not surprising to see these virtual, global and team influences appear in the data given the topic and the specific follow-up interview questions asked of participants, what is perhaps more unexpected are some of the occurrence rankings in addition to some unique descriptive comments.

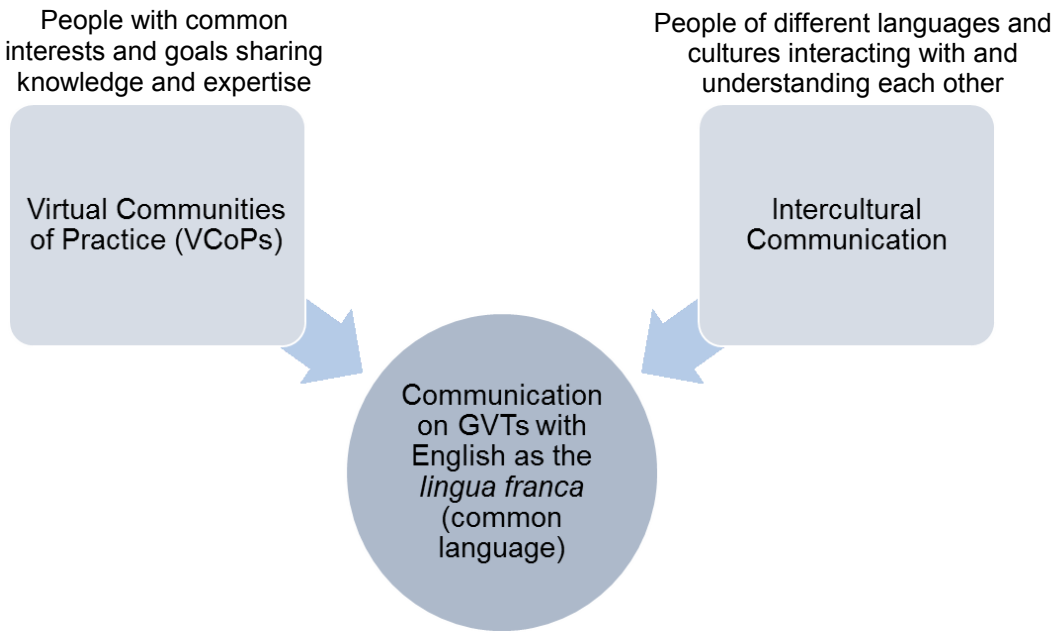


Figure 2 (Revisited): Hybrid Framework: Virtual Communities of Practice and Intercultural Communication

Key Highlights

After multiple detailed analyses of the data, three primary findings rose to the top and deserve additional interpretation below. These include: (1) the importance of the overall thematic and frequency differences experienced on GVTs by NSs as compared to NNSs, (2) the predominance of language as a communication influence requiring additional inquiry, and (3) the emergence of belongingness as a surprisingly strong theme within the collaboration category and also overall.

<u>Key Highlight #1</u>: While NSs and NNSs have many similar and different experiences on GVTs, NNSs had more challenges overall than

NSs in the four categories of language, culture, technology and collaboration (as measured by total number of codes and responses).

Although they do share some similar communication experiences and perceptions, NSs and NNSs also experience participation on GVTs in other different ways, as demonstrated by the findings in answering my research question. I will first summarize the numbers presented in Chapter 4 in a slightly different manner to align with interpretation. To start, my study showed that NNSs indicated more challenges than NSs overall on GVTs, but especially in the categories of language, culture, and collaboration. For overall number of codes cited, NNSs surpassed NSs with a total of 233 to 169, or 38% higher. Moreover, for overall total number of responses cited, NNSs again surpassed NSs with an even greater margin of 1132 to 539, or 110% higher.

For language and culture results among NSs and NNSs, there were similarities (in some rankings of the four influences) but also differences (in numbers of responses and unique codes). While language reached first (responses) and second (codes) for NNSs, it ranked third (responses) and fourth (codes) for NSs. Alternatively, culture ranked higher for NSs (first in codes, second in responses) than for NNSs (third for both codes and responses). The virtual component of GVTs (technology) was, somewhat surprisingly, less of a challenge than the global (language/culture) and team (collaboration) elements for both NSs and NNSs since technology was ranked either third or fourth for total codes or responses. Finally, collaboration had a surprisingly overall large

response for both NS and NNSs, especially focused on belongingness, While it did not rank first for the overall total responses or codes for the combined NS-= and NNS grouping, collaboration did come in itself for NSs at first (total responses) and second (total codes) and for NNSs at first (total codes) and second (total responses).

Interestingly, I would have predicted more ideas from NNSs for language and culture (however, perhaps not that many more) but I was not expecting the second biggest gap for collaboration. That result might suggest that language and culture have a strong influence on the degree of collaboration on GVTs – and that NNSs had more or different things to say about it (of which NSs might not have been aware). Collaboration will be discussed further as the third key highlight in this chapter.

While there are some slight differences in the numbers, the findings show an overall disparity between the reporting of language differences and culture differences by NSs and NNSs. The findings also show a much higher number of observations or responses overall by NNSs. The interpretation of these findings indicates an opportunity to further educate and engage GVT leaders to become aware of and seek solutions for these numerous vocalized challenges which are viewed by participants as disruptive to team communication. Awareness and learning and development implications will be discussed in Chapter 6.

To support the value of a qualitative study, it is helpful to provide some descriptive content in addition to the numbers above. In lieu of providing

supporting material for all four communication influences here, language and collaboration will be discussed separately in their own sections as the second and third key highlights. As noted, participants did not identify technology as a challenge and therefore this influence will not be discussed further here. Future studies could certainly discuss technology further, including the role of media choice. Instead, I will provide more interpretation of the culture findings.

While the culture category ranked higher for NSs than it did for NNSs, it is important to note the overall importance of culture challenges for NNSs. In fact, the average number of responses for culture challenges per participant is still higher for the 29 NNSs (10.1 responses) versus the 21 NS (7.5 responses). Therefore, consistent with this key highlight of total differences, it is worth examining which cultural challenges stood out for NNSs and tie them to the intercultural communication framework.

As summarized in Table 21 in Chapter 4, here is a reminder of the top culture challenges and largest differences in observances cited by NSs and NNSs.

Culture Challenges		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Time difference/time zones (20) • Working habits/ preferences/individual styles (13) • Silence/hesitant/wait for pause/name (12)	• Silence/hesitant/wait for pause/name (28) • Working habits/ preferences/individual styles (19) • Directness/indirectness/ outspokenness (18)	• Directness/indirectness/ outspokenness (NNS +43%) • Time differences/time zones (NS +40%) • Silence/hesitant/wait for pause/name (NNS +40%)

• Hierarchy/deference to authority, manager (10) • Organizational culture/values/requirements (7) • Lifestyle impact/balance (hours, peak mental) (7)	• Time difference/time zones (16) • Social practices/greetings/ etiquette/politeness (14)	• Exposure to/share cultural practices/interests (NNS +40%) • Social practices/greetings/etiquette/ politeness (NNS 29%) • Organizational culture/values/requirements (NNS +28%) • Misinterpret or not understand humor/jokes (NNS +28%) • Empathy/understanding/ embarrassment (NS +24%) • Dominating conversations (NNS +24%)

Table 21 Revisited: Summary of Top Codes and Largest Percentage Differences (Culture)

For cultural challenges, both NSs and NNSs cited three codes (time differences/time zones, working habits/preferences/individual styles, and silence/hesitant/wait for pause/name). Other top codes for NSs included hierarchy/deference to authority/manager, organizational culture/values/requirements and lifestyle impact/balance (hours, peak mental). Two additional top language experiences for NNSs included directness/indirectness/outspokenness and social practices/greetings/etiquette/politeness. Of the eight codes presented above as having the greatest differences in responses (ranging from a 24-43% gap between NSs and NNSs), two are attributable to NSs (time differences/time zones and empathy/understanding/embarrassment) and six are attributable to NNSs (directness/indirectness/outspokenness, silence/hesitant/wait for pause/name, exposure to/share cultural practices/interests, social practices/greetings/etiquette/politeness, organizational

culture/values/requirements, and misinterpret or not understand humor/jokes). Interestingly, three of these eight – exposure to/share cultural practices/interests, misinterpret or not understand humor/jokes, and empathy/understanding/embarrassment – were not on the top code lists, however there was still a large enough gap between NS and NNS responses to highlight them.

The appearance of empathy and understanding for NSs to a greater extent than for NNSs is interesting because it raises the question of whether NSs might be unsure or embarrassed to address cultural differences. In fact, embarrassment is included as part of the code. Perhaps this is why it is a challenge, if NSs are sometimes aware of difficulties related to culture but do not acknowledge them. This is a similar code to one for NNSs that appears in the collaboration challenges category and will be discussed later in this chapter. In other words, NSs link empathy to culture and NNSs link it to collaboration and a sense of belongingness, perhaps to answer the question of how to create team inclusiveness from a participation standpoint. This suggests a connection to the VCoP framework in Chapter 2. There are also a larger number of responses for NNSs on social practices/greetings/etiquette/politeness, which is similarly connected to building relationships and connections in VCoPs.

Even more so than VCoPs, the intercultural communication portion of the framework provides connections for interpreting some key codes. First, revisiting the overview of 16 key cultural differences in Table 3 weaves in the legacies of

both Hofstede and Hall, among other researchers. Three relevant differences according to this depiction are Concept of Self (individualism vs. collectivism), Productivity (harmony and relationship vs. results and process orientation), and Communication (high- vs. low-context).

First, Concept of Self here addresses Hofstede's dimension of individualism versus collectivism. In other words, the extent to which it is believed that the success of a team depends on the success of the individual or rather that of the group. It also considers the concept of face, or ways that pride, ego and image are built up or damaged. Second, the differentiator of Productivity considers the value of harmony (the importance of getting along well with others and minimizing conflict) as part of a relationship-based focus, versus a predilection for results (the importance of completing the task) and process (the belief that process improvement will ensure success). Third, the general label Communication in this case refers to high-context (where meaning is implicit in the context) vs. low context (where meaning is explicit in the words) based on Hall's research. Examples of these differences surfaced throughout participant recollections and Hofstede's and Hall's models are illustrated further below.

Overview of Key Cultural Differences			
Concept of Self • Individualism • Collectivism • Face	**Sense of Responsibility** • Particularism • Universalism • Personal • Societal	**Beliefs about Productivity** • Harmony • Results • Process	**Motivational Approach** • Association • Accomplishment

Response to Ambiguity • Uncertainty Avoidance • Risk Tolerance	**Decision Making** • Hierarchical • Egalitarian	**Assumptions about Status** • Ascription • Achievement	**Gender Roles** • Differentiation • Unity
Language • Language • Fluency	**Communication Style** • Verbal • Body Language • Space • Volume • Touch • Tone • Pace • Turn-taking	**Communication** • High Context • Low Context • Media	**Trust** • Protective • Open
Holding of Beliefs • Tight • Flexible	**Control Orientation** • Fate • Effort	**Spirituality** • Holism • Compartment-alization	**Orientation to Time** • Monochronic • Polychronic • Simultaneous • Sequential • Past • Present • Future

Table 3 (Revisited): Overview of Key Cultural Differences
*Source: Saphiere, D.H., 1998-2008, www.*culturaldetective.com/diffsmap.
(Based on the work of Abdulah, A., Condon, J., DeVries, B.I., Fukuyama, F., Hampden-Turner, C., Hofstede, G., Kappler, B., Rokeach, W., Saphiere, D.H., Storti, C., Ting-Toomey, S., Triandis, H., Trompenaars, F.)

For Hofstede's dimensions of national culture, Table 25 below lists the 17 countries represented in my study with the relative ranking of their associated cultural dimension designations from 0 to 100+ according to Hofstede's research when available (otherwise a dash signifies that the country was not one of those represented in Hofstede's study)(Hofstede et al., 2010). A few key comparisons are notable here, particularly Individualism vs. Collectivism, with the extremes in rankings between the English-speaking countries with high individualistic

tendencies and the Asian countries with more collectivist culture indications. Interestingly, for the Power Distance dimension, which expresses the degree to which a culture accepts inequalities and a hierarchical order, some of the highest individualistic countries show the lowest power distance and vice versa. The inverse results for these two dimensions are not all too surprising, perhaps, given the potential relationship between individualism, rights and equality. At the same time, an initial look at the Asia-Pacific group demonstrates that not all countries in a region will be the same, with Uncertainty Avoidance scores ranging broadly from a low of 8 in Singapore to a high of 92 in Japan, confirming the caution against overgeneralizations.

This national culture dimension approach can be applied back to the top codes above, such as the NS observed challenge of valuing hierarchy and deference to authority. Collectivist societies tend to “forge a consensus” representing the group by subduing differences and dissent, whereas individualistic countries will pursue debate and persuasion in support of their own individual principles to settle disagreements (Hardin et al., 2007, p. 136). This may be an instance where the NSs, most of whom are from high individualistic and low power distance countries, notice this cultural difference on GVTs more readily and perceive it as a challenge to their preferred work style.

Country of Origin	Power Distance (High vs. low)	Individualism (high score) vs. Collectivism (low score)	Masculinity (high score) vs. Femininity (low score)	Uncertainty Avoidance (High vs. low)	Long-Term Orientation (high score) vs. Short-Term (low score)
Native English Speakers					
Australia	36	90	61	51	31
Canada	39	80	52	48	23
Liberia	--	--	--	--	--
U.K.	35	89	66	35	25
U.S.	40	91	62	46	29
Non-Native English Speakers					
Asia-Pacific					
China	80	20	66	40	118
Laos	--	--	--	--	--
Japan	54	46	95	92	80
Pakistan	55	14	50	70	0
Philippines	94	32	64	44	19
Singapore	74	20	48	8	48
Europe					
France	68	71	43	86	--
Germany	35	67	66	65	31
Netherlands	38	80	14	53	44
Switzerland	34	68	70	58	--
Latin America					
Brazil	69	38	49	76	65
Mexico	81	30	69	82	--

Table 25: Hofstede's Dimensions of Culture for Participants' Countries of Origin
Source: Hofstede et al., 2010

Similarly, revisiting Chapter 2's introduction to Halls' work, Figure 26 below shows the relative positioning approximations of High/Low-Context Communication and Polychronic/Monochronic Time Orientation for the different national cultures represented by the 17 countries in my study. Unlike Hofstede's

dimensions, Hall did not assign scores to each country (Tamas, 2007). While not absolute and instead contextually-based, they nevertheless show some generalities that may be observable. For example, countries tend to appear on the same end of the dimension for each orientation – the U.S., the U.K., Australia, Germany and Switzerland are on the low-context communication end and monochronic time orientation ends of the spectrums.

While differences related to time did appear in the codes, patterns related to high- and low-context are even more prevalent. As a reminder, characteristics of communication found in high-context cultures include: indirect and understated, cyclical not logical order, attention to nonverbal cues, meaning found in context (gestures, shared knowledge & assumptions) and relationships (saving face). In contrast, characteristics of communication found in low-context cultures include: direct and to the point, logical and sequenced, clearly spelled-out information, meaning found in the message, and exchange of information. To apply this concept back to the top code results, NNSs cited directness/indirectness/outspokenness and this appeared as the cultural challenge code with the largest spread between NS and NNS responses. In other words, NNSs, mostly representing higher-context communication cultures in this study, highlighted this cultural phenomenon as an issue for them. This perhaps reflected a discomfort with the directness of their NS counterparts on GVTs. While it may not be true for all NSs they interact with, the ones in this study

conversely represented low-context communication countries where directness and outspokenness tends to be a favorable cultural characteristic.

High-Context Communication	Polychronic Time Orientation
Japan	Liberia
China	Brazil
France	Mexico
Brazil	China
Mexico	Laos
Liberia	Pakistan
Laos	Philippines
Pakistan	Singapore
Philippines	France
Singapore	Netherlands
Netherlands	Japan
Australia	Australia
U.K.	Canada
Canada	U.K.
U.S.	U.S.
Germany	Germany
Switzerland	Switzerland
Low-Context Communication	Monochronic Time Orientation

Table 26: Approximations of Hall's High- and Low-Context Cultures and Time Orientation for Participants' Countries of Origin
Source: Based on Edward T. Hall, in Van Everdingen. & Waarts, 2003

In short, the literature reviewed in Chapters 1 and 2 foreshadowed relevant concepts of culture and their importance as also observed in this study: social and situational contexts, pragmatics, implied meaning, politeness and etiquette conventions, time factors, level of directness, approach to conflict and disagreement, silence, trust, functional/organizational/national culture variations,

value systems, and behavior expectations, among many others. These examples are part of the triad aligning precedent studies to the intercultural communication framework and the participant interview outcomes. Together, they support culture's designation as an important communication influence on GVTs.

<u>Key Highlight #2:</u> Language is a critical factor overwhelmingly noted by NNSs, as compared to NSs, that deserves additional attention beyond its link to and potential confusion with cultural differences in general.

Across all categories, language challenges for NNSs ranked first (number of responses) and second (number of codes) at a rate of almost 3:1 and 2:1 over NSs, for whom they ranked third (number of responses) and fourth (number of codes) respectively. While it might seem likely that NNSs would prioritize language challenges and consider them more frequently given their non-English native language status, the ratio is still surprisingly large. One explanation for this discrepancy may lie in unstated beliefs, norms, and assumptions about language use.

Topics concerning language can be more complex than they might appear on the surface. Most English speakers in the world today learned the language to communicate with other NNSs and, therefore, the concept of language boundaries stretches beyond the traditional scope of national culture designations (Kassis Henderson, 2010, p. 366). In fact, more international business is arguably done today between NNSs rather than NSs (Charles, 2007, p. 262). Two parties speaking the same language, English in this study, does not

imply the same understanding or interpretation between them, given the different connotations for variations of the language and for different groups. As supported by the data in this study, there may be a key misassumption that because GVT participants are speaking English, they will all understand each other. Paradoxically, NSs on a team may actually be perceived as the out-group if solid trust is assumed based on the *lingua franca* when its presence may, in fact, be an illusion (Kassis Henderson, 2010, p. 370). NSs may also suffer from reduced credibility in terms of their experience or ability to communicate effectively with NNSs, which puts them at risk of possibly alienating their multilingual colleagues or inhibiting the building of trust (Kassis Henderson, 2010, p. 372).

Consequently, a perceived shared cultural identity through a shared language such as English, designated by organization policy or otherwise as the *lingua franca,* or common language of use for business, can in reality be a source of resistance and communication problems (Chen & Jackson, n.d., p.12; Kassis Henderson, 2005, p. 75). This dynamic poses two challenges in that "members continue to use diverse expressive and interpretive mechanisms derived from their respective language systems…and mutual adjustment to each other's ways of interaction is required to enable them to negotiate strategies in order to work together successfully" (Kassis Henderson, 2005, p. 75). English-sharing can present a false impression since team participants are not always sharing the same context and interpretation of certain words and expressions, and may espouse false confidence. On the surface, such a team appears to be

monolingual, using a common language but, in actuality, there is a definite multilingual context operating across many languages that may not be obvious to all present (Kassis Henderson, 2005, pp. 75, 77). From a practical standpoint, a lingua franca can be critical to collaboration in GVTs (Hung & Nguyen, 2008, p. 2). However, this is a topic of debate and one that is further discussed in Chapter 6 under Limitations and Further Research.

What is clear from the data is that technical knowledge of English is not sufficient for effective communication; the gap between theory and practice must be narrowed. Multilingual team members in an unfamiliar environment may encounter misinterpreted deviations from linguistic patterns or norms, which can lead to negative social consequences that impact collaboration and trust on the team (Kassis Henderson, 2010, p. 364). After all, language, like culture, is also a very personal attribute in many instances, sometimes holding deep emotional ties that can be expressed in terms of frustration, sensitivity, lack of confidence, avoidance, disengagement and other unproductive behaviors.

Again, as summarized in Table 21 in Chapter 4, here is a reminder of the top language challenges and largest differences in observances cited by NSs and NNSs.

Language Challenges		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Slang/idioms/colloquialisms /word choice (15)	• Miscommunication/ misunderstanding (23)	• Preferences for writing vs. speaking (NNS +76%)

• Miscommunication/ misunderstanding (13) • English as a second language issues (12) • Time/patience/energy/extra effort/empathy (11) • Accents (NNS/NS)/ pronunciation/avoidance (9)	• English as a second language issues (23) • Repetition/rephrasing/ clarification/frustration (23) • Slang/idioms/word choice/sentence structure (22) • Preferences for writing vs. speaking (22)	• English as common language for team (NNS +59%) • Different language difficult, natural barrier (NNS +55%) • Lack of confidence in conversational speaking (NNS +55%) • Repetition/rephrasing/clarification/frustration (NNS +46%) • Compare understanding/notes with others (NNS +43%) • Multiple communication inputs/reinforcements (NNS +38%) • NNS-NNS communication easier without NS (NNS +31%)

Table 21 (Revisited): Summary of Top Codes and Largest Percentage Differences (Language)

Within the category of language challenges, both NSs and NNSs cited miscommunication/misunderstanding, slang/idioms/colloquialisms/word choice, and English as a second language issues as top codes. Other top codes for NSs included time/patience/energy/extra effort/empathy and accents/pronunciation/avoidance. Two additional top language experiences for NNSs included repetition/rephrasing/clarification/frustration and preferences for writing vs. speaking. Notably, all eight of the codes with the greatest differences in responses above were attributable to NNSs and had relatively high percentage rates in the 31-76% range, representing the gap between NNS-NS responses. Interestingly, only two of these eight – the highest ranked one of preferences for writing vs. speaking, and repetition/rephrasing/clarification/frustration – were on the NNS top code list, while the other six were not but there was still a large

enough gap between NS and NNSs responses to highlight them. These six in the third column relate to English as a common language, different language as a natural barrier, lack of confidence in conversation, comparing understanding with others, multiple communication inputs, and NNS-NNS communication easier without NSs. Even more meaningful is that not one of the four top differentiated codes in column three was mentioned by a single NS and the next four were still much more frequently mentioned among NNSs, hence the large percentage gap and appearance of these eight codes on this list.

Perhaps not surprisingly, the common top codes are general and obvious ones (e.g., miscommunication) that might appear when asking someone about language challenges. Where it noticeably goes deeper is with the NNSs who have a different way of articulating their specific language skill comparisons, personal feelings, and compensatory strategies here in ways that did not occur to NSs. As noted earlier, this could very well be a result of lack of awareness on the part of NSs, particularly by those who are monolingual and may not have experienced these personal challenges as a producer of language in their non-native tongue. While many language characteristics are more apparent than others (note the frequent mention of accents which often serves as a blanket description of challenges for some), they may not be reflecting the whole picture. As such, the fact that the number of NNS respondents is so much greater across the board for this category reiterates the importance of looking more closely at

language and bringing some of the hidden and not-so-hidden challenges to light for both groups.

Regarding the hybrid framework, while Hofstede does not directly address language connections in his cultural dimensions, as discussed throughout this study, language and culture are inextricably linked. It is possible to extrapolate where individualism vs. collectivism, high-low power distance, or gender roles, for example, would influence expression of communication style. However, here I will instead refer again to the overview of 16 key cultural differences in Table 3, which weaves in both Hofstede and Hall, among other researchers. Three relevant differences according to this depiction are Language, Communication Style and Communication.

First, Language here is highlighted as playing a role in determining what can be seen and how it can be talked about. It also considers the effect of language fluency. A cursory review of the limited literature on language manifestations in GVTs from Chapter 1 reminds us of the varied concepts that have been noted previously and their importance confirmed in this study: context, connotation, details, meaning, accuracy, ambiguity, time and effort, word choice, media choice, form and structure, adjustments, negotiations, assumptions, level of confidence and trust, implied messages, styles, proficiency, preferences, among many others. This short list reiterates the need for continued research into this valuable and complicated communication influence. Second, Communication Skills incorporates verbal and nonverbal (body language), space,

volume, touch, tone, pace, turn-taking – most of which appear throughout the findings of this study. Similar to culture, the general label Communication in this case refers to high-context (where meaning is implicit in the context) vs. low-context (where meaning is explicit in the words) based on Hall's research, as well as media (the mode of communication used and its efficacy). Again, both of these concepts appeared throughout participant recollections.

Despite their far-reaching impact, language issues in organizational contexts such as GVTs have, until recently, been viewed as too simplistic or, at the same time, too complex to warrant significant research attention, either viewed as a minor selection issue or alternatively diminished as operational or technical matters (Maclean, 2006, p. 1378). While the language barrier is all too familiar and visible in many global organizations, "it is so well known that its implications are often overlooked" (Kassis Henderson, 2010, p. 358). Therefore, it may not receive the acknowledgement from which it could benefit. In fact, language may be a more challenging issue potentially than cultural differences. For example, language's role in building trust and relationships, with its inherent risks and vulnerabilities, is not frequently addressed in the literature on teams. In reality, language boundaries can both hinder and foster the building of trust in multicultural teams (Kassis Henderson, 2010, pp. 359-360, 377; Kassis Henderson & Louhiala-Salminen, 2011, p. 28; Tenzer et al., 2014; p. 509). So while cultural diversity on GVTs has been recognized for its positive (as well as sometimes negative) impact on GVTs, as mentioned in Chapter 2, language has

not. Such a distinction implies that language “needs to be taken out of the ‘culture box’” (Welch & Welch, 2008, p. 341; as cited in Tanzer et al., 2014, p. 510), or taken out from under the culture umbrella where scholars have hidden it (Kassis Henderson, as cited in Tanzer et al., 2014, p. 508), and analyzed on its own merits.

The above perceptions are changing with the growing reach of global organizations, giving language a new strategic importance. And while some factors of diversity on GVTs are addressed more consistently in the literature, the role of language is less commonly so, perhaps overlooked when a common language such as English is assumed. Nevertheless, in terms that speak to leadership, the risks and costs around language barriers suggest that linguistic competency should be managed as a global asset for organizations, one that can be measured in damaged relationships (Kassis Henderson, 2010, pp. 361-362) or, ideally, in added value. This study and its findings have sought to bolster this argument.

<u>Key Highlight #3:</u> Belongingness is a critical factor noted by both NSs and NNSs that should be leveraged for greater collaboration in GVTs.

As noted above, belongingness emerged as a key concern impacting team collaboration, especially with increasingly changing team dynamics in organizations. Building on the literature in Chapters 1 and 2 as well as participant interviews in Chapters 4 and 5, a focus on this telling outcome has the potential

to make important and visible strides in team collaboration and eventually better communication on GVTs.

Belongingness, in basic terms, can be described as the sense a team member has of fitting in and feeling accepted as a full member by the group. This state may be characterized by a strong trust in others' technological and business capabilities as well as social connections (Henttonen & Blomqvist, 2005, p. 111). In the even more challenging unfamiliar intercultural situations, new team members need to manage the uncertainties and anxiety they may encounter in order to effectively connect and communicate (Gudykunst, 1998; as cited in Brandl & Neyer, 2009, p. 343). This cognitive adjustment process, by which participants are able to understand others' perspectives, is "the prerequisite for feeling comfortable, for developing social contacts, and for being able to contribute to the team" (Brandl & Neyer, 2009, p. 342). Wenger (1998) describes three distinct modes of belonging in terms of engagement (actively negotiating meaning), imagination (creating connections between our own experiences and those of the larger world), and alignment (coordinating our own energies and actions to fit with larger scale efforts) (pp. 173-174). Through this sense of belonging, team members "may be more likely to internalize the social norm of the [virtual community] into their own thoughts and take other members' thoughts seriously" (Zhao, Lu, Wang, Chau, & Zhang, 2012, p. 577). Factors that are positively related to belongingness include familiarity, perceived similarity,

and trust in other members (Zhao et al., 2012, p. 585). These and other factors appear in this study's codes assigned to collaboration challenges.

Once again, as summarized in Table 21 in Chapter 4, here is a reminder of the top collaboration challenges and largest differences in observances cited by NSs and NNSs.

Collaboration Challenges		
Top NS Codes (# Responses)	Top NNS Codes (# Responses)	Largest % Differences between NSs and NNSs
• Personal sharing/making connections (15) • F2F gatherings/kickoff as investment (12) • Humor (also self, explaining/asking meaning) (8) • F2F ongoing - visit other regions/offices/proxy (8) • F2F socialization - get together/meals (7) • Leader encourages participation from all (names) (7) • Peer knowledge sharing/ community of practice (7)	• F2F ongoing - visit other regions/offices/proxy (23) • Building relationships/empathy/ understanding (22) • Building trust/openness/goodwill/ respect/actions (20) • Personal sharing/making connections (18) • Engaged members/matched with strengths (16)	• Engaged members/matched with strengths (NNS +55%) • F2F ongoing – visit other regions/offices/proxy (NNS +47%) • Building relationships/empathy/ understanding (NNS +41%) • Building trust/openness/goodwill/ respect/actions (NNS +40%) • Recognized/valued for own contribution (NNS +36%) • Follow-up/consistent communication (NNS +28%) • Friendly/open/inviting tone/natural interactions (NNS +28%)

Table 21 (Revisited): Summary of Top Codes and Largest Percentage Differences (Collaboration)

Both NSs and NNSs cited personal sharing/making connections and ongoing face-to-face meetings (visit other regions/offices/proxy) as top codes. NSs also had additional face-to-face gatherings such as kickoffs as investments and socialization with get-togethers/meals. Other top codes for NSs included humor (also self, explaining/asking meaning), leader encouraging participation

from all (names), and peer knowledge sharing/community of practice. Three additional top collaboration experiences for NNSs included building relationships/empathy/understanding, building trust/openness/goodwill/respect/actions and engaged members/matched with strengths. The codes with the greatest differences in responses above were all attributable to NNSs and had fairly high percentage rates in the 28-55% range. The top four were on the NNS top code list (engaged members, F2F ongoing, building relationships, building trust), while the other three were not on the top code list but there was still a large enough gap between NS and NNSs responses to highlight them (recognition for own contribution, follow-up communication, and friendly and open interactions).

As noted earlier in this section, these codes directly mirror some of the factors of belongingness such as familiarity, similarity, trust, and feeling comfortable. In Chapter 1, collaboration was established as both a cognitive and social aspect leading to team identification. Participants in this study expressed these experiences as personal sharing, making connections, gathering face-to-face, sharing knowledge with peers, building relationships, showing empathy and understanding, leaders creating a participatory environment, and engaging members by matching to their strengths. Team trust and respect, a key element of collaboration and partnership, is garnered by developing deep understanding, personal connections, and sharing humor and empathy when applicable, all noted by the study participants.

Related to the VCoP framework, clearly the social aspect is evident in the connections and relationship-building mentioned frequently but so, too, is the cognitive aspect with the sharing of knowledge. The term community of practice is even articulated by more than one participant. Many elements of LPP and Wenger's (2002) coalescing or orientation phase (to be discussed below) may be present in the desire of a newcomer to make connections, develop a sense of belongingness, and then feel engaged in the role and leverage one's own strengths in full participation.

Although the VCoP dichotomy of the hybrid framework obviously connects well here with belongingness, some elements of intercultural communication also fit nicely, including three from Table 3, Overview of Key Cultural Differences. For example, Concept of Self refers to Hofstede's Individualism vs. Collectivism dimension which places a large emphasis on the importance of group and saving face. VCoPs by definition are focused on learning from the community. Research has shown that GVT members representing collectivistic teams tend to favor communication promoting team relationships and harmony (Hung & Nguyen, 2008, p. 3). One might think that there could be some tension from individualistic cultures like the U.S., but the reality is that workplaces have now become very team-centered. Nevertheless, the U.S. still generally tends to approach collaboration on GVTs (and any teams or communities for that matter) as more goal- or outcome-focused rather than leveraging the relationships and how they

can benefit the group in moving forward towards the goal or outcome. The two are not, of course, mutually exclusive.

Another relevant intercultural communication difference to consider with these findings is Productivity, which again concerns a task-based versus relationship-based orientation where harmony is most important such as building relations, avoiding conflict). However, given the focus in VCoPs on knowledge sharing, perhaps it is possible to balance the people aspect with the process aspect and still use the knowledge sharing to enhance both. Finally, the element of Trust as mentioned above by participants is integral to VCoPs where members earn the trust of their community, especially while moving from the periphery from outsider to insider core member, and being open to sharing knowledge and asking and learning what they don't know from other experts. In GVTs, an individual may be an official member of the team but there are clear roles and positioning in teams until one becomes established and demonstrates value, which may even be slightly more challenging in a virtual environment.

While this discussion prioritizes the top codes for each group and there are additional ones that could be studied from the master tables, the findings here clearly connect to the sense of belonging that participants feel is key to collaboration and good participation on a GVT. It is worth, then, spending adequate time and resources on fostering this belongingness and acknowledging it openly in the team-building process. One opportunity presents itself with new members who are onboarding during what Wenger, et al. (2002) term the

coalescing stage (p. 89). After all, enabling effective participation and team collaboration requires skill sets that are more complex to ensure success in a virtual environment than those required for face-to-face effectiveness (Berry, 2011, p. 202). As has been noted, the many competing pressures of time, reorganizations, shifting priorities and others may cause leaders to neglect the importance of onboarding in general for all members, and this is especially the case for NNSs with language and culture challenges and virtual environment challenges.

A practical outcome from this finding may be a formalized, consistent orientation process at the organizational level with enough flexibility for customization at the local level by the team leader. To facilitate effective team forming and norming stages early on, certain strategies can be employed to provide common ground and structure: clarity of value of team member collaboration, clarity on role and purpose for each member known to each individual as well as the full group, emphasis on shared process accountability, understanding technology use, and intentional focus on creating a friendly virtual environment to balance the task orientation (Berry, 2011, pp. 197, 201). Attention to a “rapid integration” would align with the speed and agility required in changing environments (Tannenbaum et al., 2012, p. 9). This orientation process may offer formal and informal guidance around kickoff meetings, norms, activities, coaching and mentoring, and other best practices, Such an approach addresses many of the collaboration and belongingness challenges experienced by

participants and also leverages some of the advice they provided for others following in the same GVT steps. This idea and other professional development opportunities will be discussed next in Chapter 6.

In summary, this chapter has synthesized the voluminous findings from Chapter 4 down to three of the most accessible key highlights that support answering the research questions – the higher overall communication challenges voiced by NNSs and the emergence of both language and belongingness as two priority thematic categories of importance. While interpretation of all of the findings in all of the potential ways is simply beyond the scope of this study, they will remain a rich source of data for future analysis. The final chapter will discuss these key implications and related future research opportunities in further contribution to communication theory and practice.

Chapter 6: Key Implications, Limitations and Future Research, and Conclusion

There is no doubt that communication challenges on GVTs is an intriguing yet wide-reaching topic that is ripe for exploration from many different angles. My intent with this study was to delve into an overview of some of the complexities of GVTs and provide a rationale for the value of researching them, to investigate which factors have the most influence on effective communication on GVTs, and to provide some initial findings on differences for NS and NNS to inspire future research opportunities in this expanding multidisciplinary field of inquiry.

The outcomes of my research may have positive implications for a wide range of GVT stakeholders in organizations, including both NS and NNS participants, and indirectly their managers, fellow virtual team members, HR talent development managers and other colleagues. These implications can provide the stakeholders with insight into potential barriers related to intercultural communication and virtual collaboration that impact the effectiveness of their teams and their own individual development. This inquiry also provided a potential set of strategies for mitigating the risks posed by these communication barriers.

Previous chapters provided the “what” and the “so what” aspects of findings and interpretation. This final chapter will discuss the equally important “now what” variable of impact with four key implications (including significance for

three communication disciplines) as well as limitations of the study design, future research opportunities and an overall conclusion.

Key Implications

In response to my research questions, and as discussed in the Chapter 5 interpretation, there are many similar perspectives and some surprising differences for NS and NNS experiences on GVTs. Each demonstrates an awareness of some key facets yet a large gap in the awareness of other differences that can impact communication. These results could provide team leaders and both NS and NNS participants with insight into some of the especially unseen challenges of communication on GVTs.

In this next section, I will discuss three key implications from this study which demonstrate its contribution to three communication disciplines in particular – technical and professional communication and business communication. These implications emerged from the literature review, study design, and data analysis. They include: (1) a call for increased awareness of GVT dynamics; (2) recommended professional learning and development opportunities; and (3) proposed contributions to communication scholarship related to GVTs, including an evaluation of the hybrid framework;

<u>Key Implication #1:</u> Encouraging and creating wider awareness of the nature and dynamics of GVTs will promote effective team collaboration through understanding communication challenges for NSs and NNSs.

My research outcomes provide both NSs and NNSs, and indirectly their managers and fellow virtual team leaders and members, with baseline insights into potential roadblocks related to intercultural communication and collaboration that impact the effectiveness of their GVTs. Awareness at a high-level includes the definition of GVTs, the advantages and challenges of operating them, a self-reflection of one's own participation on GVTs, and assessment instrument results.

The design of my study sets the foundation for this awareness by focusing on the following priorities. In Chapter 1, I provided an in-depth look into the components of GVTs, defining them as technology-mediated, globally-dispersed work groups, often representing different native languages and cultures. In the case of this study, English was used as the *lingua franca*, or common working language of the global organizations and teams. Potential advantages for operating on GVTs to be aware of include flexibility, gained efficiencies, collaborative relationships, diversity of thought and talent management. In contrast, challenges to be aware of include disruptions, difficulties building trust and relationships, culture and language diversity issues, team leadership deficiencies and technology mishaps. Next, I explored the multi-dimensional meaning of the single-word term, "culture," and narrowed the scope to national culture for this study, while acknowledging the importance of organizational and departmental/functional cultures as well as the expanded definition of diversity and its many layers that also influence our values, beliefs, and behaviors. I then

isolated four main communication influences on GVTs: language, culture, technology, and collaboration. In Chapter 2, I tied these influences to a hybrid framework encompassing VCoPs and intercultural communication as a different way of identifying GVT communication challenges more broadly than merely focusing on one of them. I argued that today's teams share many characteristics of VCoPs and can be analyzed in much the same way to increase collaboration and belongingness. Finally, I chose to conduct this study in a workplace setting, targeting professionals who have been underrepresented in this important area of communication research in the past. Ideally, workplace-related research is best conducted in workplace settings if possible to capture "real-life" data and observations. Discussions arising from all of these insights can prompt self-reflection for employees that they can relate to about how they are connected globally and what GVTs they have been on (without perhaps even realizing that their team has such a name and these dynamics).

One example illustrating a possible gap in awareness is that during the interview process, some participants (both NS and NNS) said that they experienced no challenges related to a certain influence (e.g., language or culture) but then proceeded to share some, perhaps at that point in the conversation or later as a response to a different question. Both responses were coded. This result could arise from the fact that language and culture are intricately tied together and therefore participants didn't make a distinction. Yet, it could also be interpreted as a lack of awareness of self and/or others and

possibly of the components of intercultural communication and community. In addition, some NSs were aware of language challenges and specifically called them out; others did not. Several of the NSs talked about past experiences or interests in learning about intercultural communication and it is possible that their responses were a result of that consciousness from their backgrounds. Some of them may already be aware and able to articulate what accommodation strategies are possible (Rogerson-Revell, 2010; Sweeney & Hua, 2010). Recent research suggests that top management at large global companies may not be fully aware of language-related issues at other levels of the organization (Ehrenreich, 2010, p. 412).

This study has argued for the growing importance of GVT communication, including the awareness of the many interpretations of collaboration and culture. For example, awareness of collaboration is “more than awareness of some technically constructed environment where individuals work together…how participants manage the content of the problem and the social relations between individuals is critical to the outcome of collaboration” (Leinonen et al., 2005, pp. 316-317). How a team does, or does not, collaborate may provide valuable insights for its members in how to work more effectively in social networked contexts. Some researchers predict that current digital technologies and other trends will drive us towards a more uniform, homogenized global management culture with fewer boundaries. Yet, others disagree, believing that the subtle and not-so-subtle national cultural and linguistic touch points will continue to emerge

as the importance of GVTs grows (Gillam & Oppenheim, 2006, p. 167). After all, intercultural miscommunication has ethical, cultural, economic and even environmental implications for the workplace and beyond (Thatcher, 2010, p. 195). Despite the increasing importance of the role of technology, it is "the human component in the virtual environment and the interactive relational bonds that facilitate or hinder the development of a shared knowledge culture and organizational learning" (Zakaria et al., 2004, p. 15). In other words, the tools are only as good as the individuals using them and the strength of their own interpersonal and intercultural communication capabilities and self-awareness.

Intercultural communication competence or an employee's personal initiative to prioritize it as a development opportunity likely do not top a GVT team leader's list of desired participant characteristics. However, "*who* is selected for the team may be as important as *what* technical expertise they bring to the group" (Zakaria et al., 2004, p. 23). Such careful selection is paramount for raising cultural awareness and empathy (Lee-Kelley & Sankey, 2008, p. 61).

Intercultural communication competence, then, is as important a consideration as technical competence. As introduced in Chapter 2, intercultural competence is "the capability to shift cultural perspective and appropriately adapt behavior to cultural differences and commonalities," a competency that can be learned and assessed by a number of validated instruments, such as the widely-known Intercultural Development Inventory ("The Roadmap to Intercultural Competence," n.d.). Another perspective on self-awareness and competency is

the concept of cultural intelligence, or “the capability to function effectively across a variety of cultural contexts, such as ethnic, generational, and organizational cultures.” Cultural intelligence (or CQ) considers four factors: action (motivation), knowledge (cognition), strategy (meta-cognition), and drive (behavior) (Livermore, 2011).

There are additional instruments that are not focused on intercultural communication but also very relevant to the broader definition of culture and diversity in the context of effective team communication as noted in Chapter 1. These include ones such as personality style, emotional intelligence, and leadership capability. Self-assessments and 360-degree (or, multi-rater) assessments that include feedback from other individuals align well with other professional development opportunities discussed in the next section, which are another avenue for creating awareness of GVT challenges.

Key Implication #2: Designing a foundational blueprint for professional learning and development opportunities will help workplace practitioners increase knowledge and build competencies for successful participation on GVTs.

Virtual communication is daunting because of the physical distance and the “out of sight, out of mind syndrome.” Demonstrating to GVT members the importance and significance of their virtual work may be a critical role for team leaders (Berry, 2011, p. 200). To that end, a secondary outcome of this research should be robust, integrated professional learning and development opportunities

for practitioners in workplace settings around creating effective communication on GVTs. Dubé & Robey (2008) call for guidance on embracing and “surviving the paradoxes of virtual teamwork” (p. 3). Many communication proponents agree with this need to provide support in a number of ways (Berry, 2011; Brandl & Neyer, 2009; Daim et al, 2012; Kassis Henderson & Louhiala-Salminen, 2011; Rice-Bailey, 2014; Ruppel et al., 2013; Starke-Meyerring, 2005). With the movement towards ever-complicated global virtual environments, the level and sophistication of development opportunities will need to be elevated as well.

There are a number of formal and informal learning designs, or blueprints, which can achieve this result. One ubiquitous organizational learning and development model is known colloquially in the field as 70/20/10, or the high-impact learning model. This model provides a breakdown of targeted types of formal, social and experiential learning as depicted in Figure 9 that follows.

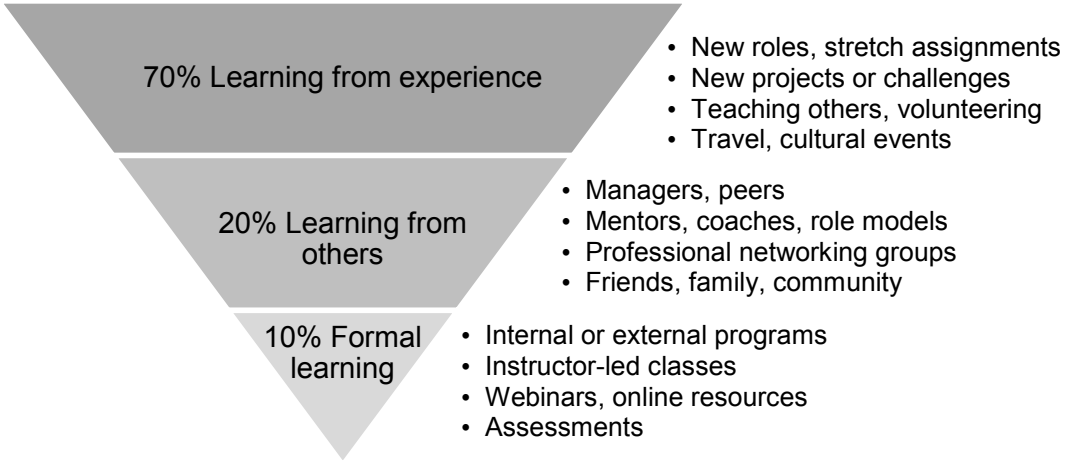


Figure 9: 70/20/10 High-Impact Learning Model
Source: Jennings (2013)

The model illustrates that 70% of learning typically takes place as a part of informal learning, or what might be termed on-the-job, experiences. This entails managers identifying potential opportunities for team leaders and members to gain more experience in taking on new roles in GVTs, creating development plans, and initiating conversations with managers across the organization to tap into interested talent and available skillsets in different areas. It may also include considering international expatriate assignments to offer unique first-hand cultural experiences. One example in this discussion could be a new manager volunteering to take a co-leader role on a GVT in order to learn more about how to best facilitate communication virtually while at the same time becoming oriented to his or her new team and the regional businesses. The next level of this model suggests that 20% of learning comes from others in our various circles and that may include coaching and mentoring opportunities to increase

connections and trade advice in addition to online communities to share best practices across the organization and/or with peer companies. One relevant example in this scenario could be a VCoP created to discuss how to build a better GVT. Finally, and running counter to the beliefs of some when they think of learning and development, 10% of our learning typically comes from formal initiatives, or what is still often known to many as training. The percentage doesn't deem formal learning any less important. In fact, it is critical for foundational knowledge and consistency across the organization, among other benefits. However, it acknowledges such constraints as access, time, high relative cost, and limited opportunities to transfer knowledge into behavior change. This learning may include all forms of instructor-led or online training; receiving a development toolkit with resources, templates, and learning application recommendations; and an orientation program for new members to facilitate onboarding and set expectations.

The design of any credible learning intervention should be modeled after the classic core principles of andragogy – or, adult learning – shaped by Malcolm Knowles, including the learner's need to know, self-concept, prior experience, readiness to learn, orientation to learning and intrinsic motivation (Knowles, Holton, & Swanson, 2005, p. 4). It will also include best instructional design principles such as the ADDIE (Analyze, Design, Develop, Implement and Evaluate) model as well as blended learning components that leverage technological methods, media, and delivery modalities, given that competence in

virtual environments is at the center of the learning objectives (Hodell, 2011; Van Dam, 2012).

While team leaders and other participants alike could benefit from such a combined awareness and skill development initiative, I have selected a leadership development scenario to illustrate this learning opportunity. After all, good leadership is essential to any team and those who lack “global thinking” due to a lack of familiarity and experience with language, culture and other differences, will struggle to effectively delegate and lead a successful GVT (Daim et al., 2012, p. 205). A sample session in leading GVTs, representing primarily the 10% formal learning but also incorporating components for the 20% learning from others and the 70% learning from experience approaches, is outlined in greater detail in the modified design document in Table 27.

Title: Leading Effective Global Virtual Teams

Delivery: Facilitator-led (classroom or live webinar with collaboration tools)

Duration: One day including breaks (may be conducted in one classroom session or modularized)

Learning Objectives:

- ❑ Analyze and apply key issues of intercultural communication, including:
  - Awareness
  - Self-reflection
  - Cultural assumptions
  - Cultural intelligence and competencies
- ❑ Evaluate solutions for leading effective communication on global virtual teams that address the challenges of:
  - Language and culture
  - Technology
  - Trust
  - Collaboration
- ❑ Identify and implement practical strategies to improve your team's communication on global virtual teams

Pre-work: Facilitator contacts group via email survey to determine focus of session and major issues for group; participants meet with their manager to discuss their personal objectives for the class; participants take self-assessment and come prepared with GVT scenarios they are facing and would like feedback on.

Module	Objective	Activities
Welcome, Warm-Up, Agenda, Learning Objectives	Become acquainted, understand purpose of class	Introductions, sharing GVT experiences
Tackling Culture: Context, Definitions, Types and Layers of Influence	Understand the wide spectrum of culture and diversity	Define culture and diversity in groups
Behaviors: Observation, Description, and Interpretation	Clarify the importance of identifying and interpreting behaviors effectively	Complete exercises
Self-Assessment: Cultural Intelligence and Critical Intercultural Competencies	Increase self-awareness	Complete assessment in class or review report from pre-work assessment
Principles of Communication: Creating Shared Meaning and Collaboration	Review the foundations of effective team communication, including verbal and non-verbal styles	Participate in interactive quizzes and activities
Intercultural Communication: Personal Challenges, Opportunities and Strategies	Identify current state of intercultural communication	Share personal challenges, opportunities and potential strategies for addressing
One Approach: Looking at National Cultures	Learn different approaches to investigating culture	Review culture dimensions, their value and limitations
Global Virtual Teams: Stages, Types, and Complexities	Analyze key factors comprising GVTs with a focus on collaboration	Participate in activities

Leader's Role: Strategies for Improving Communication on Global Virtual Teams	Identify and prioritize strategies for leading successful GVTs	Complete a strategies checklist to assess readiness and options for building team effectiveness
Staying Connected: Communication Technologies	Evaluate options and criteria for selecting technologies for team use	Participate in technology demo and identify desired training
Application: Processing Critical GVT Incidents	Learn steps for analyzing a critical GVT communication incident	Discuss sample scenarios
Putting It into Play: Skill Practice Scenarios	Practice strategic responses to scenarios and gain feedback	Role-play difficult personal GVT communication scenarios with a partner
Stages of Learning: Consciousness and Competence	Understand that building cultural competence is a multi-staged process	Identify and discuss current stage of learning and next steps
Expand Your Learning and Development Opportunities	Learn the 70/20/10 approach and identify opportunities	Review options and additional resources for individualized learning experiences
Now What: Personal Action Planning	Prepare steps for applying learning back on the job	Share 1-2 steps to seek out additional knowledge. Choose accountability partner for weekly progress check-ins
Wrap-Up: Reflection, Evaluation and Next Steps	Close out the session	Share a top takeaway from the class
Post-session: Participants keep a written log over 6 months to capture progress and questions to discuss on an online community (if available) or when the whole group reconvenes in 3 months for a follow-up session. Participants will continue to check in with their accountability partner as well as their own manager. Participants' strategies for mitigating communication risks could be shared and built on throughout the organization to create some consistency and best practices.		

Table 27: Sample GVTs Leadership Development Session

Moreover, taking into account the differences in language experiences, possible solutions may include coaching, mentoring or other professional development to build self-awareness of language issues and open communication among team members. Language issues go beyond individuals as commonly thought and do affect organizational communication as a whole, thereby requiring additional managerial attention. In other words, "language issues concern everyone" (Charles, 2007, p. 261). Team leaders should consider ways to mitigate team reactions to language barriers, such as initiating

conversations about their experiences (i.e., metacommunication, or talking about the team communication process), especially after establishing an open, collaborative environment that recognizes diversity (Tenzer et al., 2014, p. 529). From an individual team member perspective, certain NNSs may request higher business English communication skills learning opportunities. Such skills fall within the second language studies discipline of English for Specific Purposes (ESP) – an important related area but beyond the scope of this study. One important guideline here is offering optional resources and development opportunities without singling out language proficiency or assessment unless driven by the employee. A learning VCoP approach may appeal to some participants' styles (Ehrenreich, 2010, p. 419). There is significant potential here to facilitate improvements – perhaps jointly addressing language, culture and belongingness – that impact all aspects of team communication given their interconnectedness, as noted throughout this study.

Looking to future workplaces and the demand for talent, some believe that successful employees possessing advanced communication and leadership skills and performing "symbolic-analytic" work will be viewed by their organizations as "strategic contributors" rather than "commodity workers" (Dicks, 2010, p. 54), with their efforts reflecting the values and mission of the organizational culture. These diversely skilled contributors analyze, synthesize, and design, together in collaborative teams (Dicks, 2010, p. 54). Yet, the reality remains that there is an ever-present emphasis in organizations today on tangible, measurable results

and less cognizance of the additive role of strong communication skills. Team members and their leaders need to clearly see the benefits of effective communication in a global virtual space and especially how it contributes to best outcomes. To justify professional learning and development initiatives and gain essential support from influential stakeholders, voices in technical and professional communication, business communication and related disciplines should partner with industry to advocate for further research and feedback to document the strategic impact (or, in corporate-speak, the ROI, or return on investment) of successful communication on GVTs.

In much the same way as I asked participants to conclude their interviews by sharing recommended strategies for successful communication on GVTs, I will close this discussion with a reminder to leverage their voices and experiences, as summarized in Chapter 4, in any development opportunities. This practical advice from the front lines, that mirrors themes from the rest of their interview responses, may shed light on some lessons learned for the interested parties discussed above and support the call for additional awareness and development by demonstrating identified needs for facilitating effective communication on GVTs.

<u>Key Implication #3:</u> Building on this study's findings will spur future contributions in GVT scholarship for communication disciplines. In particular, integrating a hybrid framework of VCoPs and intercultural

communication will serve as a valuable mechanism through which to view communication differences on GVTs.

Finally, following on the previous related implications, these findings will contribute to the body of knowledge in the focus areas of technical and professional communication and business communication. In this way, knowledge and competencies will grow to meet the demands of reaching across time, space, disciplines, fields, organizations, stakeholders and communication technologies (Spinuzzi, 2007, p. 272). Applying the findings from this global study of virtual workplace team communication supports and extends Starke-Meyerring's (2005) call for professional communication researchers and educators to broaden their local perspective from a fixation on "the local situatedness of communication practices" and for professional communicators as well to become "literate in the context of globalization" and "consider the ways in which local discursive practices can become global and vice versa" (p. 482).

Rice-Bailey (2014) in her study of virtual technical communicators supports the aforementioned blueprint of continuing professional development for communication practitioners: "In today's digital and dispersed workplace, [technical communicators] will also have to work to acquaint themselves with potential challenges of working on a remote team and to create a toolbox of skills with which to meet those challenges" (p. 105). Our two studies have similar methods and conclusions related to virtual teaming and I have extended this by adding the global diversity element and by also presenting some possible

development opportunities and events which would be easily adaptable for a non-global virtual team audience as well. Similarly, Ruppel et al. (2013) note that "the concept of a workplace has evolved from that of merely a physical setting into more of a mindset." This evolution also calls for organizations to provide awareness training for their employees, including appropriate boundary-management strategies, which take this new mindset into consideration (p. 462).

Fraiberg (2013) agrees that shifting the technical and professional communication field to a more global focus in the 21st century calls for the traversing of borders within and across different disciplines, geographies and languages:

> Central to this call is a shift away from reified, static and bounded conceptualizations of language and toward one as fluid, dynamic, changing, emergent and co-constitutive. Fundamental to this move is a situated framework that (a) traces multilingual, multimodal literacy practices across material, symbolic spaces beyond the bounded walls of an institution or company and (b) links activity to wider institutional, social and global contexts. This work is key as technical communication moves into cross-cultural, multilingual, and global contexts. (pp. 24-25)

Recurring themes in my study and subsequent discussion that begin to address some of these new ways of conceptualizing myriad GVT issues include the following: an expanded VCoP and intercultural communication hybrid framework

that acknowledges the need for a more flexible and broader approach; a focus on key multilingual, multicultural and multimodal communication influences; and a workplace setting “beyond the bounded walls” of at least one single organization to gain many perspectives.

From a business communication perspective, Tenzer et al. (2014) support the call for new knowledge reaching across a variety of fields, including psychology, sociology, and linguistics, to provide more insights into language challenges on global teams and particularly the influence on trust formation (p. 531). My study provides direct support for Tenzer et al.’s in that it similarly calls for increased attention to the often-neglected language component of GVTs and also delves into many different aspects related to language. Perhaps most importantly, my study contributes a robust collection of data documenting business professionals’ first-hand experiences with language challenges. Interestingly, Tenzer et al.’s study was not yet published when I began my literature review and interviewing process. Published this year, it provides encouragement to those of us with similar viewpoints along with an acknowledgement of the topic’s relevance for the field of international business.

Ideas for building on some of these studies are presented later in the section on future research opportunities. Next, however, is an evaluation of the hybrid framework approach and (a) its expansion of research on the comparison of team and VCoP structures, as well as (b) an expansion beyond solely national cultures as means for GVT communication analysis.

Value of a hybrid VCoP-intercultural communication framework. As I argued in Chapter 2, teams in today's evolving organizations share many characteristics similar to VCoPs and therefore it is an appropriate and relevant framework through which to analyze a top (in this study) participant call-out for creating a sense of belongingness. As Tannenbaum et al. (2012) note, "Not only do the new team dynamics create new challenges for the study and application of teamwork, but the new dynamics strain many of the long-established keys to team effectiveness" (pp. 19-20). While there is usually a distinction made between teams and VCoPs in terms of structure and purpose, there are some similarities to be noted. In fact, the VCoP framework for online environments illustrates how teams can look beyond purely project goals and incorporate legitimate peripheral participation (LPP) and other facets to build a solid communication foundation for the team. As Garavan and McCarthy (2008) state, "[V]CoPs offer organizations the opportunity to leverage talent and strengthen team building through their unique composition of individuals with collective knowledge, specialized skills, and passion for the work. As team building represents the cultivation of unity and a joint sense of belonging, [V]CoPs reflect a distinct mechanism to optimize success within organizations" (as cited in Kerno & Mace, 2010, p. 89). What makes a GVT unique from other teams (virtual or co-located) is the diverse representation of languages and/or cultures. Therefore, my approach layers a VCoP lens with an intercultural communication lens to

create a unique hybrid framework through which to view factors influencing communication on GVTs.

Regarding intercultural communication, as also discussed in Chapters 2 and 3, my framework and study as a whole extend research by Hofstede (1983 and 2010) and Dekker (2008) beyond national cultures by integrating CoPs and also touches briefly on organizational and functional cultures. This approach provides an enhanced way to dissect GVT communication that may not be satisfactory with some of the potential limitations of national cultures, as noted in Chapter 2 (Gillam & Oppenheim, 2006; Hofstede et al., 2010; Huang & Trauth, 2007; Starke-Meyerring, 2005). In addition, I drew on Kassis Henderson's (2005 and 2010) language-focused designs and extended them into a virtual environment.

In retrospect, the hybrid framework was valuable in drawing out the differences in communication between NSs and NNSs in key categories of intercultural communication and VCoPs. It sought to synthesize these complex phenomena, thereby drawing attention to the interrelationships between these two lenses which are more commonly interpreted separately within the GVT literature. For example, many of the codes for language, culture and even technology spoke to the importance of feeling full participation and belongingness on a team, a state of being that could be impacted by comfort levels, knowledge, and skills crossing between the categories.

It is clear that these two components of VCoPs and intercultural communication on their own are large and complex enough to attempt to manage. Combining them in this way requires more investigation into how to isolate and identify, if possible, the influencing factors contributing to the quality of communication on a GVT. This framework is, therefore, not a comprehensive answer to these big questions and, in fact, uncovers additional questions and ideas as noted in the following section on limitations and future research opportunities. However, it does complement and extend previous work while addressing concerns over a limited, singled-faceted approach. As a result, through the hybrid framework, this study contributes to a deeper, multifaceted look at GVTs.

In summary, this study contributes to the conversation and data pool in the disciplines of technical and professional communication and business communication around participant experiences on GVTs and sets up many opportunities for further research as enumerated in the next section. As Starke-Meyerring (2005) foreshadows, professional communicators will find themselves reflecting on what globalization means for them; that is, “a world characterized by digital networks, blurred boundaries, pluralized workplaces, hybrid identities, and highly contested ideological agendas driving complex interactions between diverse local and global discourses” (p. 495).

Limitations and Future Research

Any study of this nature should acknowledge limitations but also provide opportunities for future related research. I will describe six such reflections below.

First, in this study, the 50 participants were not members of the same teams. They represented many different organizations, functions and projects. This decision provided a unique glimpse into a variety of experiences and supported the idea of GVTs as a growing, pervasive global workplace trend. Yet, the lack of interactions between the participants prevented an analysis of dialogue and different interpretations of the same experiences from the same team. One future opportunity would be to follow one or more intact teams to document interactions between members on the same team, especially in a workplace setting (which is represented less in the literature than those in educational settings). Interactions could also be analyzed from a leadership perspective by noting if and how observations by team leaders vary from those members serving in a non-leadership role on the team.

Second, Chapter 3 described the rationale for this qualitative design, with an intentional decision to conduct interviews to tap into personal GVT experiences and allow for follow-up questions for NNSs and NSs alike as needed. This study had a generous, dispersed but still limited sample population that cannot be generalized to all GVTs. While wider acceptance of qualitative research is gaining more ground, the fact that interest in GVTs crosses many disciplines suggests that a mixed-method approach would follow best research

practices and provide additional credibility and validity. One recommendation for subsequent research is the design of a quantitative study, either with the same research questions or complementary ones.

Third, as noted often, this study was framed within an intercultural communication model in order to focus on specific observations of language and culture. Yet there are many underlying issues related to language identity, proficiency, policy and power issues (for example, the choice of English as the corporate *lingua franca* in these organizations) that would fit within a critical cultural studies approach. As some contend, intercultural professional communication will “benefit from moving away from its narrow focuses on industrial needs and towards serious engagement with underexamined issues such as power politics, access and exclusion, ethics and equity, and social justice” (Ding & Savage, 2013, p. 1). In this way, further research related to these decisions could be analyzed from a different perspective and supplement the body of GVT knowledge.

Fourth, this study had a rather broad design scope here, covering a large theoretical landscape and a multi-faceted phenomenon (GVTs). Such a design provides an opportunity to discover many different angles, but risks leaving the analysis at a higher, less generalizable level. A future study could pursue a deeper inquiry into each of the four communication influences and their corresponding themes and codes, especially more into technology challenges (since my focus ended up more on language, culture and collaboration).

Fifth, in Chapter 2, this study addressed three types of culture important in workplace research – functional, organizational and national culture. While functional and organizational culture observations were noted by a few participants, this study and particularly the hybrid framework of intercultural communication centered on Hofstede's, Hall's and others' depictions of national culture. Chapter 2 and 5 touched on some key, high-level dimensions findings. Follow-up research using this same data could pursue additional analysis of the country dimensions and comparative rankings. Additionally, while national culture has been the predominant model in cultural research, there is an opportunity for a more holistic approach that also wraps in the weighty dynamics of organizational and job functional cultures.

Finally, this study highlighted the importance and often-overlooked influence of language on GVTs. It also introduced sociolinguistics but noted the limits of this study in pursuing this path to any great depth. Since intercultural communication is at the heart of both language and culture, I concur with the call for a deeper linguistic-centered focus that "enables us to go beyond broad-brushed analyses of cross-cultural differences to specific aspects of behavior between individuals that may affect the performance of global teams" (Chen et al., 2006, p. 691). As has been duly noted, language typically receives less attention than culture and has "a significant impact on socialization processes and team building, influencing both communication acts and mutual perceptions" (Kassis Henderson, 2005, p. 66). There is a case for "separating the language

factor from the all-encompassing cultural factor" and employing interactional sociolinguistics to inform GVTs (Kassis Henderson, 2005, pp. 80). Ultimately, language and its potential barriers are as complex a concept as culture and "not a simple issue of 'knowing' vs. 'not knowing'" (Huang & Trauth, 2007, p. 39). The discipline of ESP, as mentioned earlier with its targeted emphasis on areas such as business communication, has much to add to this discussion. Similarly, the professional development opportunities noted in Chapter 5 align themselves with this awareness and skill-building in the form of individualized advanced English development and planning. There is ample opportunity for additional sociolinguistic analyses and application insights in this present study and similar intercultural communication studies related to GVTs.

Conclusion

The movement towards more interaction through GVTs is now a reality for many organizations as the global workplace becomes smaller and more closely tied together with technological innovations. The already complicated human process of communication is further entangled by the multiple challenges streaming from language, culture, technology, and collaboration.

As this study has shown, a team member's native language designation as compared to the *lingua franca*, or common language, of the organization can result in important and varied differences in achieving full participation. Awareness of the different experiences that NSs and NNSs have on GVTs, another contribution of these findings, is an important first step for all parties

involved in leading or participating on teams. Subsequent guidance includes attention to professional development and coaching opportunities in creating intercultural competence, proficiency in selecting and using virtual technologies to mitigate potential barriers, fostering collaboration and belongingness, and increased leadership skills in managing diverse teams.

While technology challenges may often be more visible, it is imperative to consider the other sometimes complementary, conflicting or invisible influences of language, culture and collaboration, particularly belongingness. As noted by the overwhelming predominance of experiences cited by both NSs and NNSs around these influences, this is an opportunity for team leaders and team participants alike to focus their energies on intercultural and community-building that will facilitate more effective communication on their teams. Leaders in particular should heed the advice provided by participants and not hesitate to engage all team members and carefully, candidly or even humorously address what several of the study participants alluded to as the communicative “elephant” in the room.

This study of communication influences on GVTs through the voices of both NSs and NNSs calls for a greater awareness of the evolving definition and structure of GVTs that mirrors the changing global workplace. As the nature of teams continues to shift, their similarities to CoPs provide us with a new lens from which to evaluate their effectiveness in addition to an intercultural communication perspective. In this study, 50 GVT participants from 16 global

organizations identified a multitude of challenges, most notably in number from NNSs and particularly related to language (NNSs) and belongingness (both NSs and NNSs). As the findings show, GVTs are not a trend; rather, they are increasingly prevalent and transforming at a faster rate than they have in recent years. They will most certainly continue to form, morph, and dissolve in response to dynamic market pressures (Daim et al., 2012, p. 202). While it is essential to acquire foundational knowledge of GVTs, such as that presented in Chapter 1, such surface awareness is no longer sufficient to foster an environment of optimally effective communication. As Tannenbaum et al. (2012) advise, “Times have changed, and the science and practice of team effectiveness must continue to evolve to remain relevant and meaningful” (p. 22). These evolving teams and workplaces call for robust research and professional development opportunities for global communicators at all levels of involvement in GVTs in an organization.

This continuing evolution in globalized communication dynamics highlights the need for both practitioners and researchers (as well as classroom educators) to create partnerships and prioritize the roles of intercultural communication and collaboration in building teams that optimize best practices and more closely resemble effective, fully-engaged virtual communities. As Ehrenreich (2010) observes, while speaking of intercultural environments in general and not specifically virtual ones, the CoP dimensions of mutual engagement, a joint enterprise, and a shared repertoire (also noted in Chapter 2) illustrate the need to close the gap between business communicators and their academic

counterparts: “Bringing the two perspectives together – the practitioner’s lived communicative realities and the scholar’s analyses thereof – in a productive way is probably one of the most challenging tasks of the field(s)” (p. 428). Certainly both parties have something to contribute and gain. Researchers and educators will be able to gain more insight from obtaining direct connections and access to study populations and workplace settings, possibly embedding themselves as inside researchers, and share results from rigorous, empirical research. Educators will also be able to use this knowledge to equip students with targeted skills and competencies needed for the global workplace. Likewise, communication practitioners have much to contribute to the GVT arena, first as valuable sources of data for researchers and, second, in serving as a knowledge conduit for other professionals in this domain to identify team challenges, grow strengths, and create the right connections in workplace endeavors.

Therefore, subject matter experts in academia and industry would do well to create ongoing partnerships to meet critical goals for communication. Individual researchers and practitioners – and at a higher level, their larger academic administrations and organizational management – need to realize the value in partnering through advisory councils and research initiatives to join their respective expertise and create breakthroughs in the communication fields. With the support of all involved, insights into new communication best practices can reach those GVT members who will benefit most.

References

Ardichvili, A. (2008). Learning and knowledge sharing in virtual communities of practice: Motivators, barriers, and enablers. *Advances in Developing Human Resources, 10*(4), 541-554.

Ardichvili, A., Maurer, M., Li, W., Wentling, T., & Stuedemann, R. (2006).Cultural influences on knowledge sharing through online communities of practice. *Journal of Knowledge Management, 10*(1), 94-107.

Baym, N. (2003). History of online communities. In K. Christiansen & D. Levinson (Eds.), *Encyclopedia of community, Vol. 3* (pp. 1015-1017). Thousand Oaks, CA: Sage.

Beamer, L. (2004). Learning intercultural communication competence. (pp. 372-391). In J. Dubinsky (Ed.), *Teaching technical communication: Critical issues for the classroom* (pp. 372-391). Boston, MA: Bedford/St. Martin's.

Bergiel, B., Bergiel, E., & Balsmeier, P. (2008). Nature of virtual teams: A summary of their advantages and disadvantages. *Management Research News, 2*(31), 99-110.

Berry, G. (2011). Enhancing effectiveness on virtual teams: Understanding why traditional team skills are insufficient. *Journal of Business Communication, 48*, 186-206.

Beyene, T., Hinds, P., & Cramton, C. (2009). Walking through jelly: Language proficiency, emotions, and disrupted collaboration in global work. *Harvard Business School Working Paper* (09-138), 1-37.

Borzillo, S., Aznar, S., & Schmitt, A. (2011). A journey through communities of practice: How and why members move from the periphery to the core. *European Management Journal*, *29*(1), 25-42.

Bourhis, A., & Dubé, L. (2010). 'Structuring spontaneity': Investigating the impact of management practices on the success of virtual communities of practice. *Journal of Information Science*, *36*(2), 175-193.

Brandl, J. & Neyer, A. (2009). Applying cognitive adjustment theory to cross-cultural training for global virtual teams. *Human Resource Management*, *48*(3), 341– 353.

Breuch, L. K., Olson, A., & Frantz, A. (2002). Considering ethical issues in technical communication research. In L. Gurak & M. Lay (Eds.), *Research in Technical Communication* (pp. 1-22). Westport, CT: Praeger.

Brewer, P. (2010). Miscommunication in international virtual workplaces: A report on a multicase study. *IEEE Transactions on Professional Communication, 53*(4), 329-345.

Charles, M. (2007). Language matters in global communication: Article based on ORA lecture, October 2006. *Journal of Business communication*, *44*(3), 260-282.

Chen, C. J., & Hung, S. W. (2010). To give or to receive? Factors influencing members' knowledge sharing and community promotion in professional virtual communities. *Information & Management*, *47*(4), 226-236.

Chen, C., & Jackson, P. (n.d.). *Lingua franca, communication and knowledge transfer in MNEs.* Manchester Business School, The University of Manchester, 1-40.

Chen, F., Zhang, L., & Latimer, J. (2014). How much has my co-worker contributed? The impact of anonymity and feedback on social loafing in asynchronous virtual collaboration. *International Journal of Information Management, 34*(5), 652–659.

Chen, S., Geluykens, R., & Choi, C. (2006). The importance of language in global teams: A linguistic perspective. *Management International Review*, 2006/6(46), 679-695.

Coggio, G. (2010). *Agency, socio-cultural context, and the role of the technical communicator during IT adoption: A case study in innovation diffusion across cultures.* (Unpublished doctoral dissertation). University of Minnesota, Minneapolis, MN.

Coghlan, D. (2001). Insider action research projects: Implications for practising managers. *Management Learning, 32*, 49-60.

Coghlan, D. (2007). Insider action research doctorates: Generating actionable knowledge. *Higher Education*, *54*, 293-306.

Coghlan, D. & Holian, R. (2007). Editorial: Insider action research. *Action Research*, *5*, 5-10.

Cummings, J. N., & Haas, M. R. (2012). So many teams, so little time: Time allocation matters in geographically dispersed teams. *Journal of Organizational Behavior*, *33*(3), 316-341.

Daim, T. U., Ha, A., Reutiman, S., Hughes, B., Pathak, U., Bynum, W., & Bhatla, A. (2012). Exploring the communication breakdown in global virtual teams. *International Journal of Project Management, 30*(2), 199-212.

Dani, S. S., Burns, N. D., Backhouse, C. J., & Kochhar, A. K. (2006). The implications of organizational culture and trust in the working of virtual teams. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, *220*(6), 951-960.

Dekker, D. (2008). *Global virtual teams: Enhancing effectiveness*. (Unpublished doctoral dissertation). Eindhoven University of Technology, The Netherlands.

Dekker, D., Rutte, C., & Van den Berg, P. (2008). Cultural differences in the perception of critical interaction behaviors in global virtual teams. *International Journal of Intercultural Relations, 32*(2008), 441-452.

Dicks, R. (2010). The effects of digital literacy on the nature of technical communication work. In R. Spilka (Ed.), *Digital literacy for technical communication: 21st century theory and practice* (pp. 51-81). New York, NY: Routledge.

Ding, H., & Savage, G. (2013). New directions in intercultural professional communication. *Technical Communication Quarterly, 22,* 1–9.

Dubé, L., Bourhis, A., & Jacob, R. (2006). Towards a typology of virtual communities of practice. *Interdisciplinary Journal of Information, Knowledge, and Management, 1*, 69-93.

Dubé, L., & Robey, D. (2009). Surviving the paradoxes of virtual teamwork. *Information Systems Journal*, *19*(1), 3-30.

Ehrenreich, S. (2010). English as a business lingua franca in a German multinational corporation: Meeting the challenge. *Journal of Business Communication*, *47*(4), 408-431.

Fiol, C. M., & O'Connor, E. J. (2005). Identification in face-to-face, hybrid, and pure virtual teams: Untangling the contradictions. *Organization Science*, *16*(1), 19-32.

Flanagan, J. (1954). The critical incident technique. *Psychological Bulletin, 54*(4), 327-358.

Fraiberg, S. (2013). Reassembling Technical Communication: A framework for studying multilingual and multimodal practices in global contexts. *Technical Communication Quarterly, 22*, 10-27.

Garavan, T. N., & McCarthy, A. (2008). Collective learning process and human resource development. *Advances in Developing Human Resources, 10*, 451-471.

Gardenswartz, L., & Rowe, A. (1994). *Diverse teams at work*. Burr Ridge, IL: Irwin. (Internal & External Dimensions adapted from Loden, M. & Rosener, J. (1991). *Workforce America*. Irwin.

Gillam, C., & Oppenheim, C. (2006). Review article: Reviewing the impact of virtual teams in the information age. *Journal of Information Science, 32(*2), 160-175.

Grosse, C. (2002). Managing communication within virtual intercultural teams. *Business Communication Quarterly, 65*, 22-38.

Hardin, A. M., Fuller, M. A., & Davison, R. M. (2007). I know I can, but can we? Culture and efficacy beliefs in global virtual teams. *Small Group Research*, *38*(1), 130-155.

Hays, J. M. (2010). High-performance teams and communities of practice. *Oxford Journal: An International Journal of Business & Economics*, *5*(1), 101-112.

Henttonen, K., & Blomqvist, K. (2005). Managing distance in a global virtual team: The evolution of trust through technology-mediated relational communication. *Strategic Change, 14*(2), 107-119.

Herring, S. C. (2004). Computer-mediated discourse analysis: An approach to researching online behavior. In S. A. Barab, R. Kling, & J. H. Gray (Eds.), *Designing for virtual communities in the service of learning* (pp. 338-376). New York, NY: Cambridge University Press.

Hildreth, P., Kimble, C., & Wright, P. (2000). Communities of practice in the distributed international environment. *Journal of Knowledge Management, 1*(4), 27-38.

Hodell, C. (2011). *ISD from the ground up: A no-nonsense approach to instructional design* (3rd Ed.). Alexandria, VA: ASTD Press.

Hofstede, G. (1983). The cultural relativity of organizational practices and theories. *Journal of International Business Studies (pre-1986), 14*(0000002*),* 75-89*.*

Hofstede, G., Hofstede, G., & Minkov, M. (2010). *Cultures and organizations, software of the mind* (3rd Ed.). New York: McGraw Hill.

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture, 2*(1). http://dx.doi.org/10/9707/237-0919.1014

Huang, H., & Trauth, E. (2007). Cultural influences and globally distributed information systems development: Experiences from Chinese IT professionals. *ACM SIGMIS-CPR '07,* 36-45.

Hung, Y., & Nguyen, M. (2008). The impact of cultural diversity on global virtual team collaboration – A social identity perspective. *Proceedings of the 41st Hawaii International Conference on System Sciences – 2008,* 1-10.

Hunsinger, R. (2006). Culture and cultural identity in intercultural technical communication. *Technical Communication Quarterly, 15*(1), 31–48

Jarvenpaa, S. L., & Leidner, D. E. (1998). Communication and trust in global virtual teams. *Journal of Computer-Mediated Communication*, *3*(4), 0-0.

Jennings, C. (2013). *70:20:10 framework explained: Creating high performance cultures.* Surrey Hills, Victoria, Australia: 70:20:10 Forum Pty Ltd.

Johns, T., & Gratton, L. (2013). The third wave of virtual work. *Harvard Business Review*, *91*(1), 66-73.

Karoui, M, Gurkan, A., & Dudezert, A. (2010). Virtual team collaboration: A review of literature and perspectives. *Proceedings of the Sixteenth Americas Conference on Information Systems, Lima Peru, August 12-15, 2010*, 1-12.

Kassis Henderson, J. (2005). Language diversity in international management teams. *International Studies of Management and Organization, 35*(1), 66-82.

Kassis Henderson, J. (2010). The implications of language boundaries on the development of trust in international management teams. In M. Saunders, D. Skinner, G. Dietz, N. Gillespie, R. Lewicki (Eds.), *Organizational trust: A cultural perspective* (pp. 358-382). New York, NY: Cambridge University Press.

Kassis Henderson, J., & Louhiala-Salminen, L. (2011). Does language affect trust in global professional contexts? Perceptions of international business professionals. *Rhetoric, Professional Communication and Globalization*, *2*(1), 15-33.

Kauppila, O., Rajala, R., & Jyrämä, A. (2011). Knowledge sharing through virtual teams across borders and boundaries. *Management Learning, 42*(4), 395-418.

Kerno, S. J., & Mace, S. L. (2010). Communities of practice: Beyond teams. *Advances in Developing Human Resources*, *12*(1), 78-92.

Kimble, C. (2011). Building effective virtual teams: How to overcome the problems of trust and identity in virtual teams. *Global Business and Organizational Excellence*, *30*(2), 6-15.

Kimble, C., Li, F., & Barlow, A. (Research Paper 2000/9). Effective virtual teams through communities of practice. *Management Science.* Glasgow, Scotland: University of Strathclyde, 1-15.

Kirby, L., Kendall, E., & Barger, N. (2007). *Type and culture: Using the MBTI® instrument in international applications*. Mountain View, CA: CPP, Inc.

Knowles, M. S., Holton III, E. F., Swanson, R. A. (2005). *The adult learner* (6th Ed.). San Diego, CA: Elsevier Inc.

Krippendorff, K. (2012). *Content analysis: An introduction to its methodology* (3rd Ed.). Thousand Oaks, CA: Sage Publications, Inc.

Lauring, J. (2011). Intercultural organizational communication: The social organizing of interaction in international encounters. *Journal of Business Communication, 48*, 231-255.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* New York, NY: Cambridge University Press.

Lee-Kelley, L., & Sankey, T. (2008). Global virtual teams for value creation and project success: A case study. *International Journal of Project Management*, *26*(1), 51-62.

Lentz, P. (2007). *Positioning and identity in the small-story narratives of RN-to-BSN students in an online BSN management and leadership course.* (Unpublished doctoral dissertation). University of Minnesota, Minneapolis, MN.

Leinonen, P., Jarvela, S. & Hakkinen, P. (2005). Conceptualizing the awareness of collaboration: A qualitative study of a global virtual team. *Computer Supported Cooperative Work, 14,* 301-322.

Li, W. (2010). Virtual knowledge sharing in a cross-cultural context. *Journal of Knowledge Management*, *14*(1), 38-50.

Livermore, D. (2011). *The cultural intelligence difference*. New York: American Management Association.

Longo, B. (2010). Human + machine culture: Where we work. In R. Spilka (Ed.), *Digital literacy for technical communication: 21st century theory and practice* (pp. 148-168). New York, NY: Routledge.

Longo, B. (2000). *Spurious coin.* Albany, NY: State University of New York Press.

Maclean, D. (2006). Beyond English: Transnational corporations and the strategic management of language in a complex multilingual business environment. *Management Decision*, *44*(10), 1377-1390.

MacNealy, M. (1999). *Strategies for empirical research in writing.* Boston, MA: Allyn & Bacon.

Marshall, C., & Rossman, G. (2006). *Designing qualitative research* (4th Ed.). Thousand Oaks, CA: Sage Publication.

Maynard, M. T., Mathieu, J. E., Rapp, T. L., & Gilson, L. L. (2012). Something (s) old and something (s) new: Modeling drivers of global virtual team effectiveness. *Journal of Organizational Behavior*, *33*(3), 342-365.

Merriam, S. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Miller, A. J. (2014). Social informatics and virtual communities: A literature review. *Learning and Performance Quarterly*, *2*(2), 28-36.

Moore, B. (2007). Original sin and insider research. *Action Research, 5*, 27-39.

Moser, K. S., & Axtell, C. M. (2013). The role of norms in virtual work. *Journal of Personnel Psychology*, *12*(1), 1-6.

Nataatmadja, I., & Dyson, L. (n.d.). ICT and its impact on managing global virtual teams. *Internet & Information Systems in the Digital Age: Challenges & Solutions,* 498-504.

Nauman, S., & Iqbal, S. (2005). Challenges of virtual project management in developing countries. *Engineering Management Conference IEEE International,* 2, 579-583.

Norton, B. (2006). Identity as a sociocultural construct in second language education. In K. Cadman & K. O'Regan (Eds.), *TESOL in Context* [Special Issue], 22-33.

Norton, B., & Toohey, K. (2011). Identity, language learning, and social change. *Language Teaching, 44*(4), 412-446.

Oetzel, J., McDermott, V., Torres, A., & Sanchez, C. (2012). The impact of individual differences and group diversity on group interaction climate and satisfaction: A test of the effective intercultural workgroup communication theory. *Journal of International and Intercultural Communication, 5*(2), 144-167.

Panteli, N., & Tucker, R. (2009). Power and trust in global virtual teams. *Communications of the ACM*, *52*(12), 113-115.

Park, G. (2012). “I am never afraid of being recognized as an NNES”: One teacher’s journey in claiming and embracing her nonnative-speaker identity. *TESOL Quarterly, 46*(1), 127-151.

Pusch, M. D. (n.d.). *The development of the field of intercultural communication.* Institute for Intercultural Communication. Retrieved from www.intercultural.org.

Rice-Bailey, T. (2014). Remote technical communicators: Accessing audiences and working on project teams. *Technical Communication, 61*(2), 95-109.

Roadmap to Intercultural Competence. (n.d.). IDI, LLC. Retrieved from http://idiinventory.com/.

Roberts, J. (2006). Limits to communities of practice. *Journal of Management Studies, 43*(3), 623-639.

Robey, D., Koo, H., & Powers, C. (2004). Situated learning in cross-functional virtual teams. In J. Dubinsky (Ed.), *Teaching technical communication: Critical issues for the classroom* (pp. 541-565). Boston, MA: Bedford/St. Martin's.

Rogerson-Revell, P. (2010). "Can you spell that for us nonnative speakers?" Accommodation strategies in international business meetings. *Journal of Business Communication*, *47*(4), 432-454.

Ruppel, C. P., Gong, B., & Tworoger, L. C. (2013). Using communication choices as a boundary-management strategy: How choices of communication media affect the work–life balance of teleworkers in a global virtual team. *Journal of Business and Technical Communication*, *27*(4), 436-471.

Saphiere, D. H. (1998-2008). *Overview of key cultural differences.* Nipporica Associates, LLC. Retrieved from http://culturaldetective.com/diffsmap.

Sarker, S., Ahuja, M., Sarker, S., & Kirkeby, S. (2011). The role of communication and trust in global virtual teams: A social network perspective. *Journal of Information Management Systems, 28*(1), 274-309.

Shachaf, P. (2005). Bridging cultural diversity through email. *Journal of Global Information Technology Management, 8*(2), 46-60.

Shachaf, P. (2008). Cultural diversity and information and communication technology impacts on global virtual teams: An exploratory study. *Information and Management, 45*(2), 131-142.

Sivunen, A. (2006). Strengthening identification with the team in virtual teams: The leaders' perspective. *Group Decision and Negotiation, 15*, 345–366.

Smith, P., & Blanck, E. (2002). From experience: Leading dispersed teams. *The Journal of Product Innovation Management, 19*(4), 292-304.

Spilka, R. (2004). Communicating across organizational boundaries: A challenge for workplace professionals. (pp. 399-413). In J. Dubinsky (Ed.). *Teaching technical communication: Critical issues for the classroom*. Boston, MA: Bedford/St. Martin's.

Spinuzzi, C. (2007). Technical communication in the age of distributed work. *Technical Communication Quarterly, 16*(3), 265–277.

St. Amant, K. (2013). Culture and rhetorical expectations: A perspective for technical communicators. *Communication & Language at Work, 2*, 33-40.

Staples, D. S., & Zhao, L. (2006). The effects of cultural diversity in virtual teams versus face-to-face teams. *Group Decision and Negotiation*, *15*(4), 389-406.

Starke-Meyerring, D. (2005). Meeting the challenges of globalization: A framework for global literacies in professional communication programs. *Journal of Business and Technical Communication, 19,* 468-499.

Sweeney, E., & Hua, Z. (2010). Accommodating toward your audience. Do native speakers of English know how to accommodate their communication strategies toward nonnative speakers of English? *Journal of Business Communication, 47*(4), 477-504.

Tamas, A. (2007). *An intercultural organization development tool.* Tamas Consultants, Inc. Retrieved from www.tamas.com.

Tannenbaum, S. I., Mathieu, J. E., Salas, E., & Cohen, D. (2012). Teams are changing: Are research and practice evolving fast enough? *Industrial and Organizational Psychology*, *5*(1), 2-24.

Tenzer, H., Pudelko, M., & Harzing, A. (2014). The impact of language barriers on trust formation in multinational teams. *Journal of International Business Studies, 45,* 508-535.

Thatcher, B. (2010). Understanding digital literacy across cultures. In R. Spilka (Ed.), *Digital literacy for technical communication: 21st century theory and practice* (pp. 169-198). New York, NY: Routledge.

Van Dam, N. (2012). *Designing learning for a 21st century workforce.* Retrieved from http://www.astd.org/Publications/Magazines/TD/TD-Archive/2012/04/Designing-Learning-for-a-21St-Century-Workforce.

Van Everdingen, Y. M., & Waarts, E. (2003). The effect of national culture on the adoption of innovations. *Marketing Letters, 14*(3), 217–232.

Wageman, R., Gardner, H., & Mortensen, M. (2012). The changing ecology of teams: New directions for teams research. *Journal of Organizational Behavior, 33*, 301–315.

Webster, J., & Wong, W. K. P. (2008). Comparing traditional and virtual group forms: identity, communication and trust in naturally occurring project

teams. *The International Journal of Human Resource Management*, *19*(1), 41-62.

Wenger, E. (1998).*Communities of practice: Learning, meaning and identity.* New York, NY: Cambridge University Press.

Wenger, E., McDermott, R., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Boston, MA: Harvard Business School Press.

Williams, R. (1983). C*ulture and society.* New York: Columbia University Press.

Workman, M. (2005). Virtual team culture and the amplification of team boundary permeability on performance. *Human Resource Development Quarterly*, *16*(4), 435-458.

Zakaria, N., Amelinckx, A., & Wilemon, D. (2004). Working together apart? Building a knowledge-sharing culture for global virtual teams. *Creativity and Innovation Management*, *13*(1), 15-29.

Zakaria, N., & Talib, A. N. A. (2011). What did you say? A cross-cultural analysis of the distributive communicative behaviors of global virtual teams. In *Computational Aspects of Social Networks (CASoN), 2011 International Conference on* (pp. 7-12). IEEE.

Zhao, L., Lu, Y., Wang, B., Chau, P., & Zhong, L. (2012). Cultivating the sense of belonging and motivating user participation in virtual communities: A social capital perspective. *International Journal of Information Management, 32*(6), 574-588.

Appendices

Appendix 1: IRB-Approved Documentation

The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #2 SURVEYS/INTERVIEWS; STANDARDIZED EDUCATIONAL TESTS; OBSERVATION OF PUBLIC BEHAVIOR.

Study Number: 1208E19545

Principal Investigator: Karin Goettsch

Title(s):
Language Diversity and Participation on Global Virtual Teams

This e-mail confirmation is your official University of Minnesota HRPP notification of exemption from full committee review. You will not receive a hard copy or letter.

This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

Research that involves observation can be approved under this category without obtaining consent.

SURVEY OR INTERVIEW RESEARCH APPROVED AS EXEMPT UNDER THIS CATEGORY IS LIMITED TO ADULT SUBJECTS.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study's expiration date.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office.

IRB-Approved Recruitment Communication

Hello: I am conducting a communications research study as a graduate student at the University of Minnesota. The study is looking at language diversity and participation on global virtual teams in the workplace. By way of definition, a global virtual team is defined as a work group with members representing different languages and cultures in various locations around the world that communicates through different technologies (e.g., webinars, videoconferencing, telephone, email, instant messaging, intranet web sites).

I am looking to find approximately 20 employees at this organization, both non-native and some native speakers of English, who are interested in volunteering to be interviewed about their experiences working on global virtual teams. All of these interviews will be recorded but participant identities and experiences will remain anonymous and confidential. I can provide you with more details on the consent process. There is no risk to the employees of not participating or changing their mind at any point, but the benefit to them and the organization is a potential increased understanding of how to create more effective global virtual teams.

I would appreciate an opportunity to discuss this further with you, including the possibility of attending your group's next meeting to present this study and seek out potential volunteers for an interview. Please let me know what questions you have. Thank you.

IRB-Approved Information Sheet for Research

Information Sheet for Research
Language Diversity and Participation on Global Virtual Teams

You are invited to be in a research study of language diversity and participation on global virtual teams. You were selected as a possible participant because you are a professional employee who has participated on a global virtual team at work. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by: Karin Goettsch, University of Minnesota.

Procedures:
If you agree to be in this study, we would ask you to do the following things: Participate in a recorded interview (approximately 45-60 minutes) either by phone or in-person and share your experiences participating on global virtual teams in your workplace.

Confidentiality:
The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. The recordings will not be used for any other purpose and will be locked up until they are destroyed within one year of the date of the interview.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:
The researcher conducting this study is: Karin Goettsch. You may ask any questions you have now. If you have questions later, you are encouraged to contact her at *[contact information provided].* The researcher's advisor is *[name and contact information provided].*

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Research Subjects' Advocate Line *[contact information provided].*

You will be given a copy of this information to keep for your records

IRB-Approved Participant Consent Communication

Thank you for agreeing to participate in this interview for a research study about languages and participation on global virtual teams. As a reminder, a global virtual team is defined as a work group with members representing different languages and cultures in various locations around the world that communicates through different technologies (e.g., webinars, videoconferencing, telephone, email, instant messaging, intranet web sites). In the interview, I will be asking you to tell me about a global virtual team that you are on (or were recently on) and to describe a memorable experience on that team.

As we previously discussed in the Information Sheet for Research, your participation in this interview is voluntary and you may change your mind at any time. There are no risks or benefits for your participation. The recording of this interview will be stored in a locked place and any identifiable information about you will be removed so your participation will be anonymous and confidential, including in any publications about the results of this study.

This interview will last approximately one hour. Do you have any questions before we begin?

IRB-Approved Interview Questions

Definition used to screen potential interviewees to make sure they have experience on a GVT. Can also be included as a reminder in the invitation and at the beginning of the interview:

A global virtual team is a work group with members representing different languages and cultures in various locations around the world that communicates through different technologies (e.g., webinars, videoconferencing, telephone, email, instant messaging, intranet web sites).

Question:
Tell me about a global virtual team that you are on (or were recently on). Describe a memorable experience on that team.

Follow-up questions:

1. What challenges/opportunities with language/culture did you experience?
2. What challenges/opportunities with technologies did you experience?
3. What challenges/opportunities with collaboration did you experience?

Appendix 2: Initial NS and NNS Coding Tables

Category 1: Language Challenges

Table 28: Language Challenges among NSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Miscommunication/misunderstanding	13	62%
Slang/idioms/colloquialisms/word choice	13	62%
English as a second language issues	12	57%
Accents (NNS and NS)	9	43%
Written vs. spoken proficiency	8	38%
Subtle concepts/nuances	7	33%
Confusion asking for repetition/clarification	6	29%
Speed/slowing down/altering cadence	6	29%
Lack of non-verbal cues	5	24%
Extra efforts	5	19%
Time needed for processing, converting	4	19%
Assumptions of proficiency	4	14%
Technical vocabulary	3	14%
Uncertainty - accuracy, comprehension	3	14%
Compensation/adjustments	3	14%
Need for clarity/precision/no extra words	3	14%
Need for patience	3	14%
None/not much	3	10%
Mixing of two languages	2	10%
Grammar/sentence structure	2	10%
Level of detail/specificity in messaging	2	10%
Asking questions to check tracking	2	10%
Voice - tone/pitch/volume	2	10%
F2F meeting - read people/voices easier	2	5%
Lack of exposure/ear tuning	1	5%
Language context	1	5%
Translation/language preference	1	5%
Frustration	1	5%
Unclear level of comprehension (“yes”)	1	5%
Giving latitude for improper use of language	1	5%
Using different type of language with NNS	1	5%
Listening/speaking skills / turn-taking	1	5%
No filter ability challenge for NNS-NNS	1	5%
Shared responsibility for understanding	1	5%
Compare understanding with others	1	5%
Choosing English or native language	1	5%
NS unaware of second language challenge	1	5%
Overestimation of proficiency	1	5%

Table 29: Language Challenges among NNSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Miscommunication/misunderstanding	23	79%
English as a second language issues	23	79%
Word choice/idioms/sentence structure	22	76%
Preferences for writing vs. speaking	22	76%
English as common language for team	17	59%
Different language difficult, natural barrier	16	55%
Lack of confidence in conversational speaking	16	55%
Questions/asking for clarification	16	55%
Translation/interpretation (locals, L1-L2)	14	48%
Follow-up confirmation/compare notes	14	48%
Accents/pronunciation/avoidance	13	45%
Different levels of fluency/proficiency	12	41%
Multiple communication inputs/reinforcements	11	38%
Speed/trying to keep up	11	38%
Body language/visual cues	10	34%
Technical or business jargon/terminology	10	34%
NNS-NNS communication easier without NS	9	31%
Improving/practicing language skills	8	28%
Choice of language or switching/mixing	7	24%
Slang/idioms/expressions	7	24%
Time/patience/effort needed to express views	7	24%
Extra effort/energy/concentration	6	21%
Rephrasing/repeating, frustration	6	21%
None/not significant	5	17%
Subtle concepts/nuances/ unspoken context	5	17%
Different message rhetorical structure	5	17%
Lack of confidence in writing without support	4	14%
NS empathy towards language challenges	4	14%
NS assumptions of NNS fluency	4	14%
Combining two languages	3	10%
Discipline for processing time/participation	3	10%
Formal language training and resources	3	10%
Fear/exposure/making mistakes	3	10%
Shyness/caution using English	3	10%
Laughed at/embarrassed	2	7%
Discomfort in interrupting/jumping in to speak	2	7%
Providing enough context	2	7%
Volume/speaking quietly	2	7%
Hiring (weighing English over job skills)	2	7%
Using Google as dictionary	2	7%
Giving up/acquiescing if no time to respond	2	7%

Comprehension better than productive skills	1	3%
Informal language/chat/small talk	1	3%
Feeling disrespectful (choice of language)	1	3%
Social attitude toward language choice (snob)	1	3%
Language issues vs. personality in jumping in	1	3%
Being offended	1	3%
Uncomfortable asking large group questions	1	3%
Lack of awareness of language differences	1	3%
High-level conversations easier than detailed	1	3%
Emotions can escalate with misunderstanding	1	3%
Imperfect English acceptable as business tool	1	3%
Not convincing	1	3%
Knowing business well offsets language	1	3%
Understanding basic meaning	1	3%
Unwillingness to improve English skills	1	3%
F2F better for opinions, constructive, practical	1	3%
Speaking local language creates opening	1	3%
Draw NNS into conversations or lose them	1	3%
Overdoing it/trying too hard	1	3%
Adjust to language over time with exposure	1	3%
Multilingualism not recognized as skill/asset	1	3%
NNS always disadvantaged if good English	1	3%
Misinterpret technical weakness as language	1	3%
Two-way learning opportunity for NS and NNS	1	3%
Difficulty expressing true meaning	1	3%
Same sentence different meanings	1	3%
Needing to clarify half the time	1	3%
Reminding English is not your first language	1	3%
Timing/content as important as language	1	3%
Missing window of opportunity to share	1	3%
Difficult to keep up so lose attention/focus	1	3%

Category 2: Culture Challenges

Table 30: Culture Challenges among NSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Time difference/time zones	20	95%
Working habits/preferences/individual styles	13	62%
Hierarchy/deference to authority	10	48%
Lack of response/silence - unclear meaning	8	38%
Lifestyle impact/balance (hours, peak mental)	6	29%
Personal sharing/relationships before tasks	5	24%
Empathy/understanding/embarrassment	5	24%

Perceptions of time (punctuality)	4	19%
None/not significant	4	19%
Speaking up/participating	4	19%
Social practices/greetings/etiquette/politeness	4	19%
Directness/indirectness	4	19%
Functional/departmental cultures	4	19%
Level of detail/planning vs ambiguity comfort	4	19%
Confidence/desire to learn and adapt	3	14%
Conflict/disagreement	3	14%
Overgeneralizing/stereotyping cultures/regions	3	14%
Lack of respect for other cultures	2	10%
Offering feedback or waiting for invitation	2	10%
Not asking for help or clarification/ discomfort	2	10%
Different laws/ethics practices	2	10%
Organizational culture - inattention/indifference	2	10%
Organizational culture - restructuring, matrixed	2	10%
Organizational cultures - internal and external	2	10%
Attitudes (abrasive, pushy, harsh tone)	2	10%
Right intentions need communication intent	2	10%
Expressing disagreement/standing ground	2	10%
Not admitting wrong or accepting responsibility	2	10%
Distrust/suspicion	2	10%
Degree of literal interpretation	2	10%
Focus on work/results	1	5%
Sharing non-work cultural practices	1	5%
Working on second shifts	1	5%
Not fulfilling obligations (unresponsiveness)	1	5%
Privacy practices	1	5%
Work motivations	1	5%
Naivete	1	5%
Evidence/proof/fact-based vs. emotion-based	1	5%
Clarifying expectations/roles	1	5%
Formality/informality	1	5%
Organizational culture - English expectations	1	5%
Creative connections fitting team/org culture	1	5%
Openness	1	5%
Meaning of "yes" (no follow through)	1	5%
Delays	1	5%
Uncomfortable with pauses	1	5%
Impatient waiting for responses	1	5%
Assumptions about optimal regional processes	1	5%
Feeling like a token representative of a region	1	5%
Atypical experience not aligning with training	1	5%
Ability to make high-level cultural observations	1	5%
Cultural assumptions vs. addressing behaviors	1	5%
Inclusion	1	5%
Seeking confirmation/affirmation of right action	1	5%

Virtual work as motivating privilege for balance	1	5%
Difficulty gaining cooperation	1	5%
Less transparency of actions, underestimation	1	5%
Fear of failure/losing face/nervousness	1	5%
Cultural nuances	1	5%
Listen to understand before making decisions	1	5%
Focus on sameness not difference	1	5%
Innovation	1	5%

Table 31: Culture Challenges among NNSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Working habits/personal style/generations	19	66%
Outspokenness/directness/openness/strong	18	62%
Time differences/time zones	16	55%
Social practices (greetings, gifts)	14	48%
Silence/not speaking up/no responses	12	41%
Organizational culture/values/requirements	11	38%
Functional culture	10	34%
Meaning of "yes" and "no"	9	31%
Perceptions of time	8	28%
Humor/jokes, risk of misinterpretation	8	28%
Dominating conversations	7	24%
Resolving or avoiding conflict/apologies	7	24%
Awareness/exposure to other cultures	7	24%
Hierarchy/authority/relationship with manager	6	21%
Separating work and personal life/balance	5	17%
Informality vs. formality	5	17%
Overgeneralization of countries in a region	5	17%
Making meaning assumptions	5	17%
Connecting over topics of culture interest	5	17%
Understand/respect/adapt to differences	5	17%
None/not significant	4	14%
Significant differences/challenging/energy	4	14%
Not asking questions/clarifying	4	14%
Hesitating to speak up	4	14%
Business practice	4	14%
Formatting communications differently	4	14%
Regional cultural differences in one country	4	14%
Politeness/gratitude/kindness	4	14%
Knowing when to interject/finding pauses	4	14%
Questioning/challenging others	3	10%
Valuing performance more than relationships	3	10%
Build relations/start with personal over goals	3	10%
Negotiation/not taking advantage	3	10%

Save face/avoid embarrassment and shame	3	10%
Sharing and interpreting emotions/feelings	3	10%
Wait to be called on by name to share ideas	3	10%
Gender issues	2	7%
Having separate discussions on their own	2	7%
Government laws/processes	2	7%
Avoid offense/alert all the time for interactions	2	7%
Feeling like an alien/out of place	2	7%
Rudeness	2	7%
Degree of logical explanation/context needed	2	7%
No knowledge/interest in cultural topics	2	7%
Seeking cultural advice from others	2	7%
Takes time to adapt	2	7%
Know unwritten rules/way people operate	1	3%
Synchronization of communication styles	1	3%
Barriers to understanding others' POV	1	3%
Reluctance to explain cultural differences	1	3%
Boundaries for appropriateness	1	3%
Leadership styles	1	3%
Seriousness	1	3%
Americans not speaking other languages	1	3%
Thought process	1	3%
Interacting with people	1	3%
Reaffirmation of agreement	1	3%
Coming together to problem solve	1	3%
Separation based on demographics	1	3%
Reliance on traditional tools/processes	1	3%
Lack of respect	1	3%
How to bring across a message	1	3%
Holding off sharing at start of conversation	1	3%
Show appreciation	1	3%
Recognition for employees	1	3%
Willingness to take another culture's approach	1	3%
Cultural acceptance of technology use	1	3%
Having to represent a region yourself	1	3%
Accommodating/adapting to different cultures	1	3%
Share POV outside meeting if not heard	1	3%
Attitudes	1	3%
Not engaged	1	3%
Feeling uncomfortable/lasting memories	1	3%
Redundant/talking in circles	1	3%

Category 3: Technology Challenges

Table 32: Technology Challenges among NSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Communicating with multiple people at once	10	48%
No F2F interaction/few nonverbals/impersonal	7	33%
Connection issues/major tech disruptions	4	19%
Delays (especially time zones)	4	19%
Clarity of calls unclear phone line	4	19%
Uncomfortable/low level of communication	4	19%
Difficulty picking up vibes, morale, feelings	4	19%
Confusion	4	19%
Video more trouble than it's worth	4	19%
No response/silence/hard to keep engaged	3	14%
Video – Set up/lost time, clumsy, expensive	3	14%
Video/audio disappearance	2	10%
Unavailability of technology/right equipment	2	10%
Lack of trust/difficult to build trust	2	10%
Volume of information exchanged	2	10%
Lets us down in ability to communicate well	2	10%
Who to include (email chains/responsibilities)	2	10%
Participant multitasking/lack of focus	2	10%
Documentation and visibility to work	2	10%
Create virtual open door/coffee or hallway chat	2	10%
Right for highly technical conversations	2	10%
Tech bittersweet – helpful but in the way	2	10%
Managing/coaching multiple people	1	5%
Need multiple technologies running as backup	1	5%
Bandwidth issues	1	5%
Cohesion	1	5%
None	1	5%
Not being able to use the preferred platform	1	5%
Lack of traction in adopting technology	1	5%
Strategy planning too complicated for phone	1	5%
Video problems hurt company brand image	1	5%
One-way channel of communication	1	5%
Participant inclination/willingness to use	1	5%
Avoid calls easier without physical presence	1	5%
Email as crutch instead of tough conversations	1	5%
Overreliance on emails (easy, ping-ponging)	1	5%
Access to shared file/not storing on local drive	1	5%
Email exchanges (precise/limited/not as rich)	1	5%
Email lack of emotion/gradual disengagement	1	5%
IM – disruption	1	5%

Phone – longer to fully understand same thing	1	5%
Background noise	1	5%

Table 33: Technology Challenges among NNSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Preferences (trust, access, proficiency, time)	14	48%
Unavailability of tech and support/resources	11	38%
Lack of visual cues/body language	8	28%
Multiple people talking at once/size of group	7	24%
Cost	6	21%
Poor connection/quality	6	21%
Source of distraction/annoyance/awkwardness	6	21%
Multitasking (boredom/feedback/interruptions)	6	21%
Lack of knowledge/training or disinterest	5	17%
No response	4	14%
Email – delay, ping-ponging/inefficient	4	14%
Not natural/strange/less spontaneous	4	14%
Lack of simultaneous dialogue/ one-way	4	14%
Low energy, lost focus/concentration (length)	4	14%
Audio/video delay	3	10%
Formal/cold vs. informal	3	10%
Lack of information/details/documentation	3	10%
None	2	7%
Time constraints	2	7%
Too much organization/preparation/logging in	2	7%
Overusing (IM, email)	2	7%
Difficult to follow side conversations	1	3%
System breakdown	1	3%
Flexibility/adjusting schedules for tech issues	1	3%
Misconnections/wrong connections/uncertainty	1	3%
Discomfort with visibility (video)	1	3%
Email destructive for trust and spirit of team	1	3%
Different levels of efficiency	1	3%
Risk of forwarding to others (email)	1	3%
Silence from participants	1	3%
Too complicated (video)	1	3%
Video doesn't replace F2F body language	1	3%
Video is distancing (cinema vs. stage)	1	3%
Phone misunderstanding harms relationship	1	3%
Chaos	1	3%
Layers of virtuality	1	3%
Less dialogue	1	3%
Conference calls too short to fully engage	1	3%
Difficult to get candidness in a virtual network	1	3%

Risk of perception of micromanaging	1	3%

Category 4: Collaboration Challenges

Table 34: Collaboration Challenges among NSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Personal sharing/making connections	14	67%
Kickoff gathering/F2F	12	57%
Humor (including self)	8	38%
F2F socialization - get together/meals	7	33%
F2F ongoing - visiting other regions, offices	7	33%
Building relationships/empathy/understanding	6	29%
Encourage participation early from all (names)	6	29%
Engage with activities/team-building/training	6	29%
Isolation for those remote and alone	6	29%
Building trust/openness/goodwill/respect	6	29%
Confidence/comfort asking questions (culture)	5	24%
Increased motivation/ownership/dialogue	5	24%
Fun	5	24%
Spending time learning about individual	5	24%
Norming - how to work together/ground rules	4	19%
Knowledge sharing/community of practice	4	19%
Pairing experts with learners/leader as liaison	4	19%
Regular meetings/frequent communication	3	14%
Noticing lack of participation or absence	2	10%
Expected contribution/driving agenda	2	10%
Organizational culture/functional culture	2	10%
Virtual socialization – activities/spotlights	2	10%
Level of productivity	2	10%
Learning (knowledge, process, sharing)	2	10%
Learning NNS native language or culture	2	10%
Making regions feel comfortable not excluded	2	10%
Create team identify/refer to us as “the team”	2	10%
Leaders recognizing members joining later	2	10%
Start with roundtable/close with wrap-up	1	5%
Listening for those trying to speak up	1	5%
Managing high turnover	1	5%
Mindset - participants want to be successful	1	5%
Create stories/common experiences/memories	1	5%
None	1	5%
Energetic mirroring from the manager	1	5%
Desire to go above and beyond	1	5%
Small working groups/side groups	1	5%

Encouraging collaboration across countries	1	5%
Willingness to commit/right attitude	1	5%
F2F by proxy – traveler shares knowledge	1	5%
Team members reach out to new members	1	5%
Making connections to follow-up later	1	5%
Acknowledgement - leader greets individuals	1	5%
Fun but lots of effort to make connections	1	5%
Impact of "energy shadow" (attitude, voice)	1	5%
Photos (visual reminder/personalization)	1	5%
Increased engagement if know you’re visible	1	5%
Peer recognition at meetings	1	5%
Voting on decisions	1	5%
Observing others	1	5%
New member self-introduction (bio, personal)	1	5%
Count on peers/shared purpose/responsibility	1	5%
Ask what team should be doing/opportunities	1	5%
Sincerity in meaningful conversations	1	5%
No onboarding/bonding through experiences	1	5%

Table 35: Collaboration Challenges among NNSs

Codes	# of participants to offer this experience	% of participants to offer this experience
F2F interactions including travel	23	79%
Personal sharing/building connections	18	62%
Engaged members/matched with strengths	16	55%
Trust/confidence (actions/relaxed setting)	13	45%
Empathy (times/language/culture/demands)	11	38%
Know team rules/norms/working styles	10	34%
Interacting with/learning from peers	9	31%
Humor/jokes, willingness to explain/ask	9	31%
Follow-up/consistent communication	8	28%
F2F kickoff gathering as investment	8	28%
Feel validated for own contribution, expertise	8	28%
Leader encouraging during 1:1s	7	24%
Socialization - gain acceptance/comfort level	6	21%
Socialization - meals/breaks to learn more	6	21%
Sharing expertise/knowledge as a community	6	21%
Address conflict (healthy tension/constructive)	6	21%
Friendly/open/inviting tone/natural interactions	6	21%
Bonding through common experiences/interest	6	21%
Openness/transparency (not hiding concerns)	5	17%
Identifying as one team/team spirit	5	17%
Attention from/exposure to leaders	5	17%
Asking questions to stay informed and curious	5	17%
New team formation/onboarding training	5	17%
Being valued and encouraged to participate	4	14%
Everyone on the same page/cooperation	4	14%
Time and amount of interactions	4	14%
Hold others accountable/partner in goals	4	14%
Know own contribution to overall team goals	4	14%
All voices are heard/all views welcome	4	14%
Leader encourages participation from all	4	14%
Maintaining friendships after team disbands	4	14%
Comfort talking openly about culture/language	4	14%
Introductions (informal/formal)	3	10%
Team-building exercises	3	10%
Onboarding into organizational culture	3	10%
Showing interest in making things go well	3	10%
Receiving feedback	3	10%
Leader socializes/informed of local events	3	10%
Use participant names	3	10%
Listen to others	3	10%
Overcoming discomfort	3	10%
Know when to actively participate	3	10%

Contributions/involvement critical to output	3	10%
Need for flexibility	3	10%
Committed to team goal most important	2	7%
Receiving focused attention from leader	2	7%
Cope with isolation with regular contact	2	7%
Putting in extra effort	2	7%
Willingness to be open	2	7%
Leader as coach and supporter	2	7%
Confirm understanding/any clarification	2	7%
Constructive, quality discussions	2	7%
Connecting through learning local language	2	7%
Respect for each other	2	7%
Sharing culture as engine/social contact glue	1	3%
Reduce barrier starting with small talk	1	3%
Pride/sense of ownership/sensitivity	1	3%
Initial cold/serious communication relaxes	1	3%
Creative team spirit	1	3%
Right mix of people	1	3%
More experience	1	3%
Enjoying the work	1	3%
Earn 'credibility chips'	1	3%
Evaluation at beginning (where you stand)	1	3%
Patience and managing emotions	1	3%
Fend for yourself	1	3%
Welcome new members (video or F2F)	1	3%
Conscious of hidden behaviors/impressions	1	3%
Leader not aware of poor communication	1	3%
See individual personality/not just professional	1	3%
Addressing negative contagious behavior	1	3%
Not comfortable being called on	1	3%
Not a magic formula to make team click	1	3%
Leader wants to bring outliers into core team	1	3%
Leader motivates collaboration in urgent case	1	3%
Meeting around family commitments	1	3%
Not micromanaged	1	3%
Smaller groups better	1	3%
Self-awareness and awareness of others	1	3%
Good use of time/not wasted	1	3%
Showing up differently depending on audience	1	3%
Tools/resources to transition into virtual space	1	3%
Team energy/personal connections change	1	3%
Seeks understanding and clarity	1	3%
Takes time to adapt	1	3%
Move past language barrier	1	3%
Agreeing that some misunderstanding is ok	1	3%
Accept that close connections not guaranteed	1	3%
Comfort acting like majority culture members	1	3%

Team works well/remoteness less of factor	1	3%
Appreciation of others' consideration	1	3%
Sub-groups work on improving collaboration	1	3%
Willingness to be available to help others	1	3%

Category 5: Technology Methods

Table 36: Technology Methods among NSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Conference/phone calls	20	95%
Email/mail groups	19	90%
Video conferences/Skype	19	90%
Instant messaging/chat	13	62%
Meeting software (WebEx)	11	52%
Documentation/portals/templates	9	43%
Face-to-face collaboration	7	33%
Collaboration software (SharePoint)	7	33%
Preference for some tech forms over others	3	14%
Multiple tools in use simultaneously	2	10%
Voice over Internet Protocol (VoIP)	2	10%
Texting	1	5%
Webcam	1	5%
Discussion groups (Yammer)	1	5%

Table 37: *Technology Methods among NNSs*

Codes	# of participants to offer this experience	% of participants to offer this experience
Email	28	97%
Conference/phone calls	28	97%
Video conferences	22	76%
Instant messaging/chat	20	69%
Meeting software (WebEx)	13	45%
Documentation	12	41%
Mobile phones/smartphones	4	14%
Collaboration software (SharePoint)	4	14%
Face-to-face	4	14%
Summary	2	7%
Discussion groups (Yammer)	2	7%
Voice over Internet Protocol (VoIP)	2	7%
Texting	1	3%
Radios (Nextel)	1	3%
Paper/notebooks	1	3%

Virtual training	1	3%

Category 6: Team Effectiveness Evaluation

Table 38: Team Effectiveness Evaluation among NSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Accomplishing tasks/delivering business value	9	43%
Trust	5	24%
Settled/used to the process/comfortable	3	14%
Ineffective/could be more effective	3	14%
Strong leadership/leadership style	3	14%
Raise concerns/risks/provide opinions	2	10%
More open communication	2	10%
Continued to exist and work	2	10%
Continued improvement/evolution	2	10%
Fewer formal requests/more informal	2	10%
Change in participants (moving in and out)	2	10%
Interaction/discussion/contributions	2	10%
Delays	1	5%
On time	1	5%
No response	1	5%
Comfortable with others' styles	1	5%
Unity	1	5%
Focus	1	5%
Side meetings/debrief/feedback	1	5%
Common interest (customer)/shared purpose	1	5%
Hybrid (community/efficiency/motivation)	1	5%
Journey/transformation over time	1	5%
Share across regions to avoid repeat mistakes	1	5%
Welcoming and supporting new members	1	5%
Feedback on continuous improvement	1	5%
Shared common experiences	1	5%
Seek out advice from leader	1	5%

Table 39: Team Effectiveness Evaluation among NNSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Effective open communication	16	55%
Accomplish goals/meet business commitment	9	31%
Team work	6	21%
Needs/room for improvement	5	17%

Focused/engaged/interested	4	14%
Trust	3	10%
Ineffective	2	7%
On time	2	7%
International experience	2	7%
Group size (small or too large)	2	7%
Manage to keep team spirit	1	3%
Accountability	1	3%
Positive feedback	1	3%
No response	1	3%
Leader misdirected focus and inattention	1	3%
Too much leader direction	1	3%
positive leadership team	1	3%
Cooperation	1	3%
Maintaining relationships	1	3%
Participants not prepared	1	3%
Language issues	1	3%

Category 7: Recommended Strategies

Table 40: Recommended Strategies among NSs

Codes	# of participants to offer this experience	% of participants to offer this experience
Clear objectives/planning/process/timelines	13	62%
Asking questions/clarification/repeating	10	48%
F2F interaction	8	38%
Recognize/embrace wide range of differences	6	29%
Document and revisit (decisions, actions)	5	24%
Institute team rules/principles	4	19%
Pre-reads to prepare for participating	4	19%
Develop relationships outside of meetings	4	19%
Extra attention for building virtual teams	4	19%
Give NNSs time to process	3	14%
Patience regarding language problems	3	14%
Check your cultural assumptions	3	14%
Have open lines of 2-way communication	2	10%
Pause conversations and invite feedback	2	10%
Use multiple visual and audio cues	2	10%
Expect accountability	2	10%
Adapt to language (speak slower, avoid slang)	2	10%
Provide access to English classes	2	10%
Help create personal connections	2	10%
Know team well	2	10%
Seek expert advice (cultures/self-awareness)	2	10%

Don't rely only on email chains for connecting	2	10%
Document and revisit past lessons learned	2	10%
Flip hours of meetings across time zones	2	10%
Acknowledge the elephant in the room	2	10%
Provide multiple channels for participation	2	10%
Demonstrate value to earn a F2F meeting	1	5%
Seek management support	1	5%
Don't assume preferences (scheduling)	1	5%
Improve technological equipment	1	5%
Provide opportunities to practice presentations	1	5%
Small working groups/side groups	1	5%
Unity	1	5%
Heightened level of professionalism	1	5%
Put self in others' situation	1	5%
Give praise regularly	1	5%
Admit not understanding/be candid	1	5%
Acknowledge challenges openly	1	5%
Read up on a country/culture (history/current)	1	5%
Be transparent with cultural humor	1	5%
Simplify message	1	5%
Record meetings for review	1	5%
Provide overseas assignments	1	5%
Solicit feedback/reflect on what's working	1	5%
Three email rule - then talk on phone	1	5%
Trust your instincts on how to best interact	1	5%
Request everyone turn on IM for availability	1	5%
Consider separate regional meetings	1	5%
Purposely select tech method (cost, need)	1	5%
Keep your virtual goggles on at all times	1	5%
Use technology as support not a crutch	1	5%
Encourage creative/informal interactions	1	5%
Listen actively and globally between the lines	1	5%
Build in informal chitchat/break times	1	5%
Build in think time/let people process	1	5%
Discuss working well together/draw on past	1	5%
Plan ahead for accommodations/changes	1	5%
Ask for opinions/different perspectives	1	5%
Focus on similarities instead of differences	1	5%
Ask for follow-up confirmation of actions	1	5%
Learn what each individual brings to the team	1	5%

Table 41*: Recommended Strategies among NNSs*

Codes	# of participants to offer this experience	% of participants to offer this experience
Communicate simply, clearly and openly	11	38%

Clear objectives/expectations/roles/norms	9	31%
Spend more time 1:1 with participants	8	28%
Awareness of/research on cultural differences	7	24%
F2F/personal interaction or kickoff meeting	5	17%
Training (intercultural communication)	5	17%
Open to differences/options/other perspectives	5	17%
Expect preparation from participants/leader	4	14%
Encourage participation/names if appropriate	4	14%
Choose right agenda topics/right attendees	3	10%
Leave time for feedback/clarification	3	10%
Invest in virtual team training (multifaceted)	3	10%
Take opportunity to share your culture	3	10%
Develop proficiency in English	3	10%
Accept lack of clarity and guidelines/be flexible	3	10%
Don't assume competency with limited contact	3	10%
Shorten meetings to keep focus/concentration	2	7%
Come to decisions/gain team consensus	2	7%
Reinforce outcomes with post-communication	2	7%
Advocate for value of global virtual teams	2	7%
Newcomers connect with local setting/people	2	7%
Foster a relaxed working environment	2	7%
Introductions	2	7%
Share background knowledge	2	7%
Quick decisions/efficiency	2	7%
Proactively reach out to team for feedback	2	7%
Ask others for guidance/new participants	2	7%
Openly share language challenges	2	7%
Ask mentor to learn about your environment	2	7%
Know and cater to learning/personality styles	2	7%
Listen for message (don't speak for NNSs)	2	7%
Increase member ownership/accountability	1	3%
Give someone fair chance/fair time to onboard	1	3%
Encourage local groups to gather ideas	1	3%
Understand the rules of the game	1	3%
Team-building exercises	1	3%
Regular meetings	1	3%
Strong leadership	1	3%
Don't take anything for granted	1	3%
Be comfortable with silence and pauses	1	3%
Don't always expect 100% comprehension	1	3%
Be natural/be true/be yourself	1	3%
Speak even if not perfect to develop fluency	1	3%
Remember human beings, not machines	1	3%
Ask people to share name before speaking	1	3%
Identify team skills/abilities to develop	1	3%
Learn another language to empathize	1	3%
Have an international experience	1	3%

Create a checklist to train newcomers	1	3%
Don't forget participants from other cultures	1	3%
Learn technology and set-up	1	3%