IMPLEMENTING SUCCESSFUL INTRANETS:
THE CASE STUDY OF A VIRTUAL MNC TEAM

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ABSTRACT

IMPLEMENTING SUCCESSFUL INTRANETS:
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By the nature of their geographic dispersion, multinational corporations (MNCs) and the teams that comprise them must rely on virtual communication to some extent. The present study extends knowledge on virtual MNC teams, specifically in the areas of building collective organizational identities, enactment of locally motivated strategies, media channel preferences, and optimizing Intranets to their full potential. It analyzes the case of a geographically dispersed, functionally diverse, and culturally diverse virtual team that is part of a multinational corporation headquartered in the United States. Through content analysis of preliminary and follow-up survey data, this study contributes findings with practical implications for managers, website designers, internal marketers and consultants whose work relates to virtual MNC teams.

Keywords: Multinational corporations, globalization, organizational communication, information & communication technologies, virtual teams
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CHAPTER 1
INTRODUCTION

Multinational corporations (MNCs), by definition, operate in multiple countries. Although they differ in workforce sizes and business targets, all MNC structures consist of corporate headquarters in one country with subsidiaries located elsewhere (Rosenzweig & Singh, 1991). Firms often expand globally to increase market share, especially by way of vertically or horizontally integrating their goods or services (Townsend, Cavusgil & Baba, 2010). MNCs appear more favorably to external stakeholders if they present themselves as truly networked and global organizations (Johanssen & Stohl, 2012). However, this can be a challenge given their geographically dispersed and multicultural workforces (Newell, Scarbrough, & Swan, 2001). When MNCs grow via acquisitions, they face the daunting task of integrating various subsidiaries into consolidated global networks. MNC employees represent a large variety of local cultures, languages and norms, which makes for a workforce that is more difficult to standardize (Newell et al., 2010). While firms may eagerly jump at the opportunity to globalize, they might only later conclude that cultural competency develops more slowly than economic expansion.
The multinational environments of these organizations present unique lenses through which to study communication. Cross-cultural and virtual communication interrupt usual organizational communication at all levels of the organization, whether the individuals are executives at the headquarters (Iwata, Kurukawa & Fujisue, 2006; Lehtolin, 2011; Townsend et al., 2010), expatriated subsidiary managers (Johansson & Stohl, 2012; Lauring, 2011; Rosenzweig & Singh, 1991) or direct customer facing employees (Downing, 2004; Newell et al., 2001; Tone, Skitmore & Wong, 2009; Yu & Guo, 2008).

MNC employees’ geographic dispersion requires them to rely on virtual communication to some extent. Virtual technologies allow teams to communicate and share information in spite of spatial boundaries, which has obvious advantage for those MNC teams operating simultaneously in multiple locations. In fact, according to a Qualcomm (2012) poll, 87% of educated and high-income business professionals worldwide indicated that wireless mobile technologies make their respective countries more efficient places to do business. However, while virtual communication provides an economic incentive, it also holds implications in the quality and style of communication that typically unfold within virtual teams (Fiol & O’Connor, 2005).

One approach to studying geographically dispersed virtual teams is based upon the frequency with which they engage in face-to-face communication. A team’s degree of “virtualness” can be considered as lying along a spectrum, and its placement along this spectrum holds strong implications for its communicative behaviors. Fiol and O’Connor (2005) surveyed literature on virtual teams and broke them down into three different categories: pure virtual teams, hybrid teams and face-to-face teams. Pure virtual teams
never communicate face-to-face; hybrid teams occasionally communicate face-to-face; and face-to-face teams, as the name suggests, frequently communicate face-to-face (Fiol & O’Connor, 2005). The present study focuses mostly on hybrid teams, since many geographically dispersed MNC teams can be assumed to convene intermittently for team-wide conferences, meetings, trainings and so on. Compared to face-to-face teams, hybrid teams develop common social identities for the group more slowly, and their members lack the intimate social knowledge about each other needed to override fault line differences (Fiol & O’Connor, 2005). These “fault lines” define the boundaries between virtual team subgroups, which could form to separate those employees in different location or with cultural backgrounds (Fiol & O’Connor, 2005). Politeness rituals and non-task related socialization could then, theoretically, lessen these effects by overcoming the lack of awareness and building a shared team identity.

Among the many tools available to facilitate communication in geographically dispersed work situations (email, video conferencing, social networks, shared drives, etc.) many businesses of all sizes and functions use Intranets in their communication mix. Intranets are organizational tools that apply Internet and WWW technologies to disseminate information and facilitate collaboration within organizations (Scheepers, 2003). They situate within an organizational “extranet,” which is a network of multiple platforms used by the business and woven together by the Internet (Sharp, 1998). Organizations typically charge information technology employees with controlling their Intranets and they grant access exclusively to members of the organization (Scheepers, 2003). Companies employ Intranets for a variety of reasons, including internal communication, interaction with key customers, and sharing within different units or
functions of business (Newell et al., 2001). This medium also allows organizations to publish information, facilitate internal transactions, interact with various groups and individuals, search company databases, and keep archived records of important information (Daamsgaard & Scheepers, 2000). Intranet technologies can provide organizations with valuable resources for conducting daily business and communicating internally.

With the advent of globalization, it makes sense to consider how communication technologies adapt to fit the landscape of today’s multinational and geographically dispersed environments business environment. Organizations rely on Intranets to such a degree that deems them worthy of further investigation. The present case study aims to inform professionals of a set of best practices to follow when faced with the task of troubleshooting, renovating or designing Intranets for MNC teams. The research subjects are the members of a global virtual team within a U.S.-owned MNC. This 70-person team, which attends to the company’s growth and development in emerging markets, was formed as the result of an internal restructuring that occurred only 18 months prior to this study. The restructuration resulted in part with a chaotic and mismanaged Intranet that prompted the team’s leaders to bring in this study’s author for consultancy. After providing assessment-based consultation, the author renovated the team’s Intranet. This study longitudinally measures the project’s effectiveness from pre- to post-renovation. The author’s universal access to the team and ability to gather an in-depth understanding of their motives and behaviors allows this case study to provide valuable insight for content managers, designers and project managers.
The study unfolds in the following order. First, it reviews relevant literature
related to virtual MNC teams on the topics of building shared identities, local and global
strategies, media channel preferences and Intranet design features. This literature review
points to gaps in extant research as well as informs the study’s research questions and
hypotheses. Next, it provides detailed information about the case setting and
methodology used to collect results. The results and conclusions will follow, and the
study concludes with a discussion of its compelling findings, practical implications,
acknowledgement of limitations, and suggestions for future research.
The following review of literature examines four major themes pertaining to the present study. First, it investigates the challenges that virtual MNC teams experience when attempting to build a shared identity and highlights some known solutions for overcoming them. Next, it looks at the roles that culture and on-the-ground strategy play in how multinational corporations communicate. Afterwards, it provides a basis for understanding how geographically dispersed teams select communication channels, and what impact virtual communication has on the workplace environment. Finally, the study investigates the factors influencing Intranet use within virtual MNC teams.

**Building a Shared Identity**

The geographically dispersed environment of virtual teams creates certain tensions and challenges that influence conflict. The nature of conflict in global virtual teams differs from those experienced by face-to-face teams (Kankanhalli, Tan, & Kwok-Kee, 2006). Virtual teams lack contextual cues and politeness rituals in their regular conversations, and thus tend to perceive greater sub-group differences than face-to-face teams (Foil & O’Connor, 2005). A study of scientific research collaborators found that geographically dispersed work partners report higher frequencies of coordination problems and misunderstandings than those located in close proximity to each other.
(Walsh & Maloney, 2007). If a virtual team makes more effort for face-to-face communication, it will more likely foster trust and identification within the team (Timmerman & Scott, 2006). Unfortunately, face-to-face communication is not always possible for virtual teams, which can expose them to conflict.

Technology plays an important role in virtual team conflict. Restricting some geographically dispersed team members’ access to technology may cause conflict by barring opportunities for voice (Dempsey, 2007). By studying how non-profit leaders manage on-the-ground volunteers from afar, Dempsey (2007) found that team members with varying access to technology actively negotiate accountability through the practice of “bounded voice.” Bounded voice, she says, is a process in which “opportunities for voice are strategically and provisionally limited to particular forums” (Dempsey, 2007, p. 312). All organizations face this tension, but it often magnifies in geographically dispersed contexts because of their more readily apparent power differences, unequal access to various technologies, and the temporal and spatial boundaries between members (Dempsey, 2007). Technology can create conflict if situated inappropriately with teams’ needs (Larson & Pepper, 2011). Geographically dispersed teams socially construct their identities, so technologies that do not consider team members’ cultures may be poorly received (Larson & Pepper, 2011). Failing to understand the relationship between technology and the conflict and tensions experienced by geographically dispersed virtual teams can lead to organizational practices that limit employees’ performance and relationships within the team.

The geographic dispersion of parties influences who shares what with whom. A study of virtual community members found that users informally interact more with those
that they have previously met face-to-face (Raybourn, Kings, & Davies, 2003), which would put virtual teams at an automatic disadvantage. Similarly, group location homophily also impacts the formation of social network ties (Yuan & Gay, 2006). In other words, the degree of geographic distance between parties negatively correlates with their likelihood of forming a personal connection. Teams that overcome these distance barriers to develop network ties perform better overall, which suggests it is in their best interests to attempt doing so (Yuan & Gay, 2006). To promote the formation of these beneficial network ties, Stark-Meyerring and Andrews (2006) recommend encouraging geographically dispersed team members to socially interact and have some fun and creativity in their projects. Geographic dispersion makes establishing collaborative networks more difficult, but non-task related communication helps lessen its impact.

Communication technologies can reinforce certain perceptions that employees have of the organization, which can be good for some organizations and bad for others. Larson and Pepper (2011) witnessed the effect of culture in a study of an MNC’s new communication technology system. The MNC traditionally used top-down communication and the authors found that the new system only reinforced the employees’ perception that the organization lacked interactive communication and oppressed the voices of certain groups (Larson & Pepper, 2011). Organizations with cultures that clash with the values and practices of Intranets should not expect the implementation of these technologies to be successful. The technology must be a good fit with its organization’s culture to be implemented successfully (Ruppel & Harrington, 2001). Intranet adoption often succeeds in developmental cultures, which are characterized by complexity, change, adaptivity, and proactivity (Ruppel & Harrington,
2001). Corporate culture is a difficult factor to change (Lollar, Beheshti, & Wade, 2010), and if organization members typically resist new technologies, they will face greater difficulty in fully integrating new features (Yi & Hwang, 2003). The success or failure of communication technologies can depend on the corporate culture in which resides.

Intranets also provide ongoing opportunities to actively construct corporate cultures. Unlike one-to-many internal communication such as memos and newsletters, Intranets allow all employees to participate in the construction of the organizational status quo (De Bussy, Ewing, & Pitt, 2003). Intranets can teach organizational culture by example, and have the power to create portals that model organizational values (Bennett, 2014). Intranets frequently used for internal marketing purposes can help the organization construct an identity for itself that is ethical, trustworthy and innovative (De Bussy et al., 2003). For employees to learn organizational culture through Intranets, the designers must consider what elements of the culture can be manifested into virtual form (Bennett, 2014). For example, if the company promotes teamwork as a major tenet of its culture, an Intranet tool that fosters teamwork would be relevant to incorporate (Bennett, 2014). Given that organization members’ social understandings of communication technologies influence the ways in which they are used (Larson & Pepper, 2011), the mutually influential relationship between Intranets and workplace cultures are of no surprise.

Intranets have an additional benefit of helping virtual team members overcome subgroup identities to facilitate collaboration. To study collaboration, Lai (2001) said one must understand that “Collaboration is not really about technology but how technology is used to improve employee performance” (p. 100). Collaboration more likely occurs when employees can efficiently access and share information (Lai, 2001) and when one partner
sees the other as similar (Atouba & Shumate, 2010). This presents challenges for MNC
teams comprised of members with different cultural backgrounds who might therefore be
less likely to collaborate with each other. To complicate matters further, collaboration
becomes more difficult and complex when distance separates collaborators (Walsh &
Maloney, 2007). Geographically dispersed collaborators must send messages with
additional context, and are especially prone towards misunderstandings between work
partners (Walsh & Maloney, 2007). Research suggests that organizations greatly desire
collaboration but find difficultly enforcing it in geographically dispersed work
environments.

Ignoring the sub-group identities in diverse teams will not make them go away,
and in fact discouraging cross-cultural communication may propagate power imbalances.
For example, Lauring (2011) found in his case study of an MNC team that failing to
facilitate two-way communication between foreign expatriate managers and local
employees widens the cultural barrier further (Lauring, 2011). This creates a power
imbalance in favor of the expatriates that restricts opportunities for sharing knowledge
and building relationships (Lauring, 2011). Clearly, deciding not to acknowledge cultural
differences between employees will not make these nuances disappear.

Ensuring the presence of a collective identity within virtual teams that values
learning and sharing is important in light of their limited face-to-face communication
(Stark-Meyerring & Andrews, 2006). Geographically dispersed teams often use
technologies to build identification, but careful consideration must be taken to ensure that
these technologies situate themselves appropriately within the organizational context
(Larson & Pepper, 2011). Larson and Pepper (2011) found that an organization’s
technologies and identifications are inextricably linked and mutually influential. They warn that organizations seeking to foster a favorable collective identity amongst its members should not overlook technology’s role in the process of shaping meanings (Larson & Pepper, 2011).

Several communicative behaviors may bridge the cultural gaps experienced within MNCs. First, small talk builds rapport and helps overcome linguistic and cultural differences in diverse work teams (Pullin, 2010). Breaking from everyday task-related communication to converse in the same language encourages employees to connect (Pullin, 2010). Culturally transcendent topics, such as food and music, bring attention towards sameness rather than differences (Pullin, 2010). Some research offers other suggestions for overcoming the challenges associated with cross-cultural communication. Pointing out that “it cannot be taken for granted that communicated knowledge always corresponds with received knowledge” (p. 437), Lehtonin (2011) argues that including visual references into the corporate communication mix offers value for culturally diverse organizations. Richer media make misunderstandings between different cultures less likely to occur and increase the likelihood of accurately understanding messages (Lehtonin, 2011; Yu & Guo, 2008). Incorporating communication that encourages connectedness can help MNCs overcome their linguistic and cultural barriers.

Leaders can encourage small talk to help establish a collective identity within international teams through the building of rapport (Pullin, 2010). In an example of how small talk creates links between diverse staff members, Pullin (2010) referenced a particular employee’s comment that “the relaxed and friendly atmosphere, which was part of the corporate culture, came from the top” (p. 464). In other words, the leaders
helped set the example that got the rest of the team engaging in small talk. Small talk’s benefits extend even further when discussion topics lead to establishing commonalities (Pullin, 2010). Safe topic choices include music, food, or anything else non-threatening and transcendent across cultural experiences (Pullin, 2010). Teams build more identification when members are thorough, engaging, responsive, and make efforts to understand each other (Timmerman & Scott, 2006). A collective organizational identity is favorable for any organization to have, but difficult for geographically dispersed and culturally diverse teams to come by.

Pullin (2010) says that encouraging non-task related communication can help build rapport via small talk, but little is known about if this effect can still occur in voluntary disclosure of personal information in an asynchronous format via communication technologies. Given how technology and organizational identifications mutually influence one another (Larson & Pepper, 2011), the present study seeks to understand how the implementation of a particular technological feature may relate to the solidification of collective team identities. The following research questions and hypotheses aims to understand whether reliance upon self-authored employee profiles (EPs) could effectively build rapport if implemented into virtual teams’ Intranets:

RQ1: Do employee profiles help virtual team members build a shared identity?

H1a: Frequency of use of employee profiles will be a predictor of organizational identification.

H1b: Employee profiles’ usage to fulfill content gratification will be a predictor of organizational identification.
H1c: Employee profiles’ usage to fulfill process gratification will be a predictor of organizational identification.

H1d: Employee profiles’ usage to fulfill social gratification will be a predictor of organizational identification.

**Local vs. Global Strategies in Virtual MNC Teams**

MNCs operating in multiple countries employ culturally diverse workforces, which impacts their internal communication. Cultural communication patterns vary across five dimensions: individualism vs. collectivism, large vs. small power distance, strong versus weak uncertainty avoidance, masculine vs. feminine, and long- vs. short-term orientation (Hofstede, 1984; Minkov & Hofstede, 2012). Several researchers have since used Hofstede’s framework, or modeled off of it, to understand the global context of organizations (Bertsch, 2013; Gevorgyan & Manucharova, 2009; Morris, Podolny, & Sullivan, 2008; Zhu, 2009). These dimensions play a role in how MNC employees with different cultural backgrounds communicate.

An alternate viewpoint takes a more fluid approach to culture, holding that individuals actively construct culture through communication. Lauring (2011) suggests that organizations socially construct and actively negotiate cultural differences; that they are not assigned, inevitable, or predetermined. In other words, MNC employees use communication to shape how cultural differences impact organizational reality (Lauring, 2011). Moore (2004) echoes this school of thought in her study of how MNC employees enact “German business style.” She holds that MNC employees create culture through the complex and ongoing process of negotiating symbols. People use the symbols they associate with different cultures to create their international business environment and to
then make sense of these environments (Moore, 2004). Like Lauring (2011), Moore (2004) does not hold that cultural dimensions are assigned. It appears that while culture can predict what individuals typically value (Hofstede, 1984; Minkov & Hofstede, 2012), others resist the idea that cultural background can be a causal force upon communication.

Considering the cultural backgrounds of local employees can help MNCs execute global projects with cultural sensitivity. Communication patterns differ among cultural backgrounds, which change individuals’ behaviors in and perceptions of organizational interactions (Morris et al., 2008). For example, a survey of American, Chinese, German and Spanish divisions of a global retail bank indicated that despite working for the same company, members from each culture interpreted job-related interactions differently (Morris et al., 2008). While most individuals conceptualize culture as something belonging to a nation, cultural nuances within a single country usually exist and might also be taken into consideration (Bertsch, 2013). Without awareness to these patterns of cultural differences in communication, an individual might cause accidental offense or inaccurately perceive another’s intent (Hofstede, 1984; Morris et al., 2008). Cultural sensitivity requires an understanding of how culture potentially alters the coding and decoding of messages.

Teams comprised of diverse cultural and linguistic backgrounds experience conflict in certain communicative circumstances. Members’ native cultures might clash in organizational contexts, causing unintended offense or a failed interaction (Morris et al., 2008). For example, “[a]n American manager in Hong Kong may misread employees’ favor-doing as scheming, an American in Germany may misread the employees’ formality as inflexibility, and in Spain may misread employees’ sociability as a lack of
professionalism” (Morris et al., 2008, p. 530). Clearly, cultural communication differences may increase the risk the misunderstandings between interaction partners. This risk intensifies when members speak different languages because socially defined linguistic nuances do not always translate perfectly (Zhu, 2009). Furthermore, the process of translating languages costs non-native speakers time and stress (Zhu, 2009). These linguistic barriers may cause conflict if unaddressed.

In addition to accidental offense at the individual level, failing to understand or overcome cultural differences can also create conflict at the greater organizational level. Decision-makers in MNCs might characterize cross-cultural communication as a problem, and fear that it slows organizational processes. However, extant research suggests that discouraging cross-cultural communication does more harm than good. In one study, this behavior created a corporate culture ridden with social boundaries, racial segregation, and discrimination (Lauring, 2011). A vicious cycle of mistrust and segregation occurred between Danish expatriates and local Saudi employees that failed to communicate with each other (Lauring, 2011).

Strategy and culture mutually influence each other to shape internal communication within MNCs. The term “strategy” in this context refers to how multinational organizations manage the tensions between local and global perspectives (Lauring, 2011; Moore, 2004; Rosenzweig & Singh, 1991; Tone et al., 2009; Yu & Guo, 2008). Local perspectives prioritize the needs and autonomy of each subsidiary’s cultures, while global perspectives institute the dominant headquarters’ culture within its subsidiaries (Lauring, 2011; Moore, 2004; Rosenzweig & Singh, 1991; Tone et al., 2009; Yu & Guo, 2008). Regardless of whether MNCs employ local or global strategies, the
local culture’s characteristics interact with global organizational culture to shape the firms’ overall communication.

As previously stated, negotiating the tension between local and global strategies influences cross-cultural communication within MNCs. An early description of these tensions states that “Multinational enterprises face, at the same time, a pressure for conformity to conditions in the local environment and an imperative for consistency within the multinational enterprise” (Rosenzweig & Singh, 1991, p. 344). Assuming that multinational enterprises face a single global environment oversimplifies their nature, according to Rosenzweig and Singh (1991). In actuality, these organizations face multiple local environments to which they must adapt (Rosenzweig & Singh, 1991). The local and global mutually influence each other, and the changes brought on by one subsidiary could also be incorporated more widely into the organization (Rosenzweig & Singh, 1991). Rosenzweig and Singh (1991) argue that one must understand how each subsidiary represents different cultures that face different environments in order to understand complex multinational enterprises. The global and local environments mutually influence each other through communication, and together shape the environment within the organization.

In today’s globalized world, organizations face challenges in striking a proper balance between global and local communication strategies. Corporations strategically position their brands, products, and services across targeted international markets to stay competitive in an increasingly internationalized world economy (Townsend et al., 2009). This usually means corporations will open local subsidiaries in target locations to better facilitate the production and distribution of goods (Townsend et al., 2009). A global
strategy appeals to the desire to meet operational goals, since it might standardize processes across the organization and create a more unified identification with the corporate culture. While successful business practices for MNCs require a global footprint, research clearly outlines the dangers of neglecting the cultures and general communicative behaviors of local employees hired in corporate subsidiaries.

Oftentimes, multinational corporations find themselves caught between the economic imperative to go global and the human resources imperative to attend to the local. The complexity of organizational environment calls for a rich understanding of the conflicting pressures faced by multinational enterprises (Rozenweig & Singh, 1991). Lauring (2011) suggests that researchers place context at the forefront of studies investigating these complex and dynamic social interaction processes, as opposed to a framework of assumptions “based on generalizable out-of-context models” (p. 238). The best strategy, then, for striking an appropriate global-local balance might be to make decisions with rich understandings of local contexts.

Some cases illustrate the success to be had with context-first approaches to a global-local balance. A survey of expatriate managers from international donor agencies overseeing construction projects in Samoa used the mantra “Think globally, act locally” in attempt to guide its decision process (Tone et al., 2009, p. 352). The study found that effective international project management of host cultures requires two-way knowledge sharing between locals and managers (Tone et al, 2009). This echoes Lauring’s (2011) suggestion of heavily weighing context, as evidenced by how Tone et al. (2009) assert that “an organization must have a global perspective and be willing to modify
communication strategies that are appropriate in the context of the host cultures” for an effectively managed international project (Tone et al., 2009, p. 352).

Some online learning environments in higher education also successfully incorporate the global aim with local contexts of individual team members. Stark-Meyerring and Andrews (2006) built a curriculum for an online class that required standardization across sections and collective culture yet still needed to be adaptable to the needs of students in the local classrooms. The students worked in virtual teams over the course of a semester, and found that their success at achieving learning outcomes depended upon interactions, technologies, and context (Stark-Meyerring & Andrews, 2006). In line with Tone et al. (2009) and Lauring (2009), the research indicates that no “best fit” model exists for how to adapt a global goal to a local context (Stark-Meyerring & Andrews, 2006). Instead, practitioners should be mindful of the local context and its complexities and nuances before implementing a communication strategy.

Overly emphasizing the global strategy can hinder MNC employees’ ability and willingness to communicate. Ignoring the local context of MNC subsidiaries can cause both headquarters and expatriate managers of subsidiaries to build mistrust and discrimination towards local employees (Lauring, 2011). Local strategies give on-the-ground people more authority in making decision, while global strategies propagate a vertical communication hierarchy that limits subsidiaries’ flexibility (Yu & Guo, 2008). Additionally, failure to understand the local context in which the MNC operates can expose it to risk if it occurs in situations in which it must appeal to the local public’s opinion (Johanssen & Stohl, 2012). Take the example of one MNC that intended to shift a small Swedish community’s attitudes in favor of the installation of a hydropower plant.
It found that its cultural incompetency exposed the public to paradoxes between its desire for isomorphism and the community’s best interests (Johanssen & Stohl, 2012). MNCs engaged in global strategies ought to actively engage in frequent and meaningful communication with local employees to ensure that they feel empowered and autonomous enough to contribute their knowledge to the organization.

Many multinational organizations will expatriate members from their host countries to manage subsidiaries in other countries. Conflict may arise when expatriates violate the cultural expectations and norms held by the subsidiary’s employees (Lauring, 2011; Tone et al., 2009). In a hasty and ignorant attempt to mitigate such conflicts, some organizations socially construct a segregated work environment that restricts upward flow of communication and fosters cultural discrimination (Lauring, 2011). Managers with ethnocentric attitudes, culture shock, cultural insensitivity, or unwillingness to communicate across cultures are viewed unfavorably by the local employees (Tone et al., 2009). While they perceive cultural and linguistic differences as the biggest barriers to cross-cultural communication, the employees perceive that the problem is a top-down communication flow and authoritarian management (Lauring, 2011; Tone et al., 2009; Yu & Guo, 2008). It should be said that limiting the opportunities for voice amongst local employees has its advantages when used in the appropriate contexts and executed with cultural sensitivity: for a particular international nonprofit organization, local employees perceived an emphasis on two-way communication as excessive, burdensome, and a threat to their autonomy (Dempsey, 2007).

Special considerations must also be taken when considering a local approach to websites for an audience of a particular culture. First, online writers must learn to meet
the local audience’s linguistic expectations without sacrificing the words’ intended meaning (Zhu, 2009). Certain words have different meanings, connotations, and associations that translate poorly to other languages, which makes the online writer’s task more difficult (Zhu, 2009). Second, maximally effective website localization also requires incorporating the design elements that appeal to the target culture (Gevorgyan & Manucharova, 2009). In their study of culturally adapted online communication, Gevorgyan and Manucharova (2009) found that American and Chinese website users prefer different website design features. With these examples of thorough research into cultural preferences in mind, it is easy to see how many organizations might be deterred from the arduous and expensive task of localizing communication.

Extant literature related to global vs. local strategy typically investigates the problems with failing to attend to the local needs of subsidiaries (Lauring, 2011; Tone et al., 2009; Yu & Guo, 2008). These studies investigate global strategies and offer suggestions for how to make them more local. However, a gap exists in understanding how MNC teams communicate when a local strategy is already in place. Dempsey (2007) comes closest by investigating how local strategies interact with opportunities for voice. However, she studied how non-profit organizers govern on-the-ground volunteers from afar instead of internal communications within MNC teams. The present study aims to further understand how a local strategy plays out among members of an MNC team, whose relationships are notably different than those in Dempsey’s (2007) study since they are all tied together by legitimate forces and are members of the same corporate environment.
Given the gaps in understanding the effects of MNCs using a local strategy, the following research question emerges:

RQ2: How do MNC employees describe the effects that a local strategy has on their team’s communication?

Media Channel Preferences

The geographic dispersion of teams limits opportunities for face-to-face communication, which influences the members’ interrelationships and alters their communication behaviors. In the absence of frequent face-to-face communication, teams rely on virtual technologies to socially identify with the organization (Fiol & O’Conner, 2005). One study found that a virtual team’s communication behaviors depend even more on its degree of geographic dispersion than on team members’ responsiveness, thoroughness, connectedness, and levels of engagement (Timmerman & Scott, 2006). A lack of face-to-face communication also increases the need for context clues in order to achieve mutual understanding between parties (Walsh & Maloney, 2007). Virtual team members possess only limited control over the circumstances of time and space that make communication a challenge. For example, they are without the power to control time zones, convene face-to-face on a regular basis, or permanently relocate the entire team to a single location. Therefore, team members cope by altering their communication styles, a variable situated within each individual’s control (Timmerman & Scott, 2006). Geographic dispersion influences the methods that virtual teams use to effectively communicate and build identities.

Organizations will often select media types for the purpose of increasing collaboration and knowledge sharing. Capturing and coding forms of tacit knowledge,
such as intuitions and insights, can be difficult when opportunities for face-to-face communication lack (Ruppel & Harrington, 2001). The challenge grows further in cross-cultural communication, when complex messages might be taken out of context (Morris et al., 2008). Lehtonin (2011) makes a fair point that one cannot guarantee that the attempt to share knowledge will necessarily occur in learning, especially when the exchange is between two different cultures. Organizations reach their knowledge management goals by understanding how to effectively manage particular technologies.

Knowledge management technologies can increase learning if they incorporate richer mediums into the delivery scheme. To promote knowledge sharing in multicultural contexts, adding visual signifiers into the communication mix can help the information receivers accurately decode the senders’ message (Lehtonin, 2011). Lehtonin (2011) based her study around the argument that PechaKucha presentations, brief pictoral PowerPoint slides that accompany verbal messages, would increase an MNC’s ability to communicate and share knowledge by overcoming linguistic and cultural barriers. Making multiple mediums available for employees to help them understand a message can assist the decoding process. For example, Intranets can capture knowledge in the forms of discussion databases, chat rooms, team-building systems, and more (Ruppel & Harrington, 2001). Technologies that present messages in richer formats offer a greater variety of options through which a receiver can interpret the message. They allow the receiver to learn based on their personal learning style and capability, whether that be audio, visual imagery, or the written word (Lehtonin, 2011).

In addition to network patterns, geographic dispersion also influences the volume and perceptions of the messages sent and received amongst virtual team members.
Virtual teams inherently rely on technology, but an overreliance on technology can increase the volume of incoming messages to a point where information overload and overall poor outcomes occur (Kankanhalli et al., 2006, Timmerman & Scott, 2006). Information overload usually stems from overreliance on email, which can increase task-related conflicts (Kankanhalli et al., 2006). Overwhelming individuals with more emails than they can reasonably handle forces them to decide who gets responses and who gets ignored (Kankanhalli et al., 2006). Many messages often slip through the cracks as a result, which could create resentment and frustration on the part of the original sender (Kankanhalli et al., 2006). However, when appropriate for the task at hand, asynchronous media can provide great benefit to teams.

In their historical analysis of computer-mediated communication, Kalman and Rafaeli (2007) describe the differences between synchronous and asynchronous media. Essentially, synchronous media facilitate communication and collaboration in real time, while asynchronous media allow for interactions over a punctuated period of time (Kalman & Rafaeli, 2007). Typical examples of synchronous media include telephone calls, video conferencing, and instant messaging, all of which involve the parties’ presence and participation as the interaction unfolds. Meanwhile asynchronous media such as email, discussion boards, and most video training tools do not require the immediate feedback interaction partners.

As this relates to geographic dispersion, a study of dispersed academic collaborators in the science field found that asynchronous media kept certain projects on track for the teams better than synchronous media (Walsh & Maloney, 2007). As stated by the study’s authors, the coordination and scheduling required to communicate
synchronously (via phone, face-to-face, etc.) often exceed their value (Walsh & Maloney, 2007). For example, it might be less of a hassle to send a long email than it would be to arrange a long-distance phone call to parties located in different time zones. Virtual teams work most effectively when they select a media channel by considering its compatibility with the task at hand (Kankanhalli et al., 2006; Stark-Meyerring & Andrews, 2006; Timmerman & Scott, 2006). No “one size fits all” exists for the decision to communicate via synchronous or asynchronous media.

Extant research on preferences between synchronous and asynchronous media is mixed at best. Walsh and Maloney (2009) take the position that asynchronous media often help geographically dispersed collaborators communicate. Meanwhile, Kankanhalli et al. (2006) note that overreliance upon asynchronous media can overwhelm virtual team members and create conflict. What is still unknown is whether virtual MNC teams would prefer to enact more synchronous or asynchronous media if given the opportunity to decide. Given this gap, another research question emerges:

RQ3: When prompted, will virtual MNC team members request that the team use more synchronous or asynchronous media?

**Technological Factors Influencing Intranet Use**

Organizations rely heavily on Intranets for completing a variety of crucial tasks. Large organizations, which Lollar et al. (2010) define as organizations with over 250 members, use web-based technology for almost all aspects of business activity. These activities can range from streamlining the supply chain to marketing and promotions to internal operations and organization (Lollar et al., 2010). At the advent of the trend towards Intranets, an early study lauded them for their ability to make collaboration
possible in situations where they would otherwise be impossible (Lai, 2001). This occurs at a relatively low cost to the organization (Lai, 2001). When effectively leveraged, Intranets can break functional and geographic barriers to facilitate greater communication and collaboration within an organization (Lai, 2001). Organizations incorporate Intranets for myriad essential business functions and for overcoming boundaries of time and space.

The use and success of Intranet technologies depend on the communicative culture and norms of the organization. In fact, communicative behaviors influence teams’ ability to achieve positive outcomes more than the structure and features of the technologies they use (Timmerman & Scott, 2006). The social factors of Intranets, such as the attitudes and habits of its gatekeepers and how busy the workforce is, can impact the technology’s adoption within organizations (Weerakkody, 2004).

Several characteristics of individual users’ communicative behaviors can also influence their use of Intranets. According to the Technology Acceptance Model (TAM), communication factors play a critical role in the extent to which organization members actually use new technologies (Yi & Hwang, 2003). Yi and Hwang (2003) studied how students uptake the virtual classroom learning technology Blackboard to identify enjoyment, learning goal orientation, and self-efficacy as predictors of the technology’s actual use. Individuals select technologies that they enjoy using, believe they are capable of mastering, and actually desire to learn (Yi & Hwang, 2003). Perceived enjoyment refers to the extent to which individual users enjoy a technology “on its own right aside from its instrumental value” (Yi & Hwang, 2003, p. 345). Perceived enjoyment of using a website relates closely to variables of its perceived ease of use and perceived usefulness. Users will more likely enjoy a website if they find it easy to use and believe its services
or functions to be useful to their lives or their work (Teo & Lim, 1999; Yi & Hwang, 2003). In computer-mediated communication, users’ self-efficacy also predicts their media use. Users who feel confident in their ability to learn and navigate a specific application will use it more than those who doubt themselves (Yi & Hwang, 2003). Users with learning goal orientations approach new technology with the goal of understanding it (Yi & Hwang, 2003). High learning goal orientations will result in higher levels of enjoyment and application specific self-efficacy, both of which increase the technology’s ease of use and thus its actual use. In organizations, individual factors of enjoyment, self-efficacy and learning goal orientation all influence the extent to which new technologies are accepted.

Unorganized content makes for inconvenience, which can limit Intranets’ full adoption within an organization (Weerakkody, 2003). A case study of Intranet adoption in a 200-person company found that employees often didn’t use the Intranet because they had to disrupt their routines and schedules to do so (Weerakkody, 2003). Designing Intranets that help employees do their jobs instead of interrupting their daily routines increases the likelihood of their sustainability (Teo, Chan, Wei, & Zhang, 2003). Therefore, the process of controlling an Intranet after its initial creation cannot be underscored.

Given the technological and social factors influencing how Intranets integrate into organizations, research suggests that individuals managing Intranet content pay special attention to their how that content gets organized. The process of content management involves organizing abstract content types into meaningful categories, which can then be viewed in various formats to appeal to the specific role and type of user who the
organization intends to target (Hart-Davidson, Bernhardt, McLeod, Rife, & Grabill, 2008). Controlling the Intranet and its organization involves everything from fixing broken links to instituting routine processes for keeping information organized and up-to-date (Daamsgaard & Scheepers, 2000). Without control, the Intranet will fail to fully integrate into organizational processes and users will seek other mediums to gratify their needs (Daamsgaard & Scheepers, 2000). Sustained use of Intranets requires content managers to organize its content into formats that users may easily access.

Understanding the intentions of intended users also aids content managers in their maintenance of Intranets. Successful content management becomes realized thorough a process of inquiry with all levels and functions of the organization (Hart-Davidson et al., 2008). Design principles achieve greatest value when they satisfy users’ needs and deliver the needed information efficiently and without causing stress or confusion (Teo et al., 2003a). Therefore, content managers can build a user-centered design strategy by considering user roles in addition to user groups (Hart-Davidson et al., 2008). User groups categorize audiences demographically, while user roles are more flexible, potentially overlapping categories of personas that audience members might take on while viewing the website (Hart-Davidson et al., 2008). For example, different user roles on an e-commerce website might be shopper, information seeker, review writer, shipping tracker, and so on. Considering various user roles gives content managers insight when designing technological architecture that best fits different goals for browsing (Hart-Davidson et al., 2008). Content managers must gain a thorough understanding of user experience to design a website effectively.
Practitioners involved in Intranet implementation may call upon several technological features known to make the tool more effective. Extant research suggests that factors of Intranet design (Gevorgyan & Manucharova, 2009; Hart-Davison, et al., 2008; Newell et al., 2001; Teo, Oh, Liu, & Wei, 2003), usability (Hart-Davison, et al., 2008; Teo et al., 2003b; Teo & Lim, 1999), and accessibility (Teo et al., 2003a; Weerakkody, 2004) be taken into consideration.

**Design.** Intranets for diverse work teams benefit from user-centered designs. Intranet designers can create more translatable Intranets for multicultural audiences by simplify the text to decrease likelihood of meaning being lost in translation (Zhu, 2009). Designers can intentionally alter Intranets’ language to better ensure accurate translations of definitions and associations of words (Zhu, 2009). Gevorgyan and Manucharova (2009) support the idea that web designers should research their intended audiences to learn if different cultures prefer different visual design elements. Overall, the most effective Intranet designs create systems that reflect the users’ roles and goals (Hart-Davidson et al., 2008; Teo et al., 2003b). Content managers and website designers benefit from approaching the Intranet from the perspectives of intended audiences. This will help proactively catch and correct any unnecessary stresses or confusion that users might experience on the site (Teo et al., 2003a). User-centered design that puts the audience’s needs before the initial intuitions of designers will produce Intranets that the intended audiences can most greatly benefit from.

**Usability.** Usability also improves the quality of Intranets. Users who perceive a system as easy to use will be more likely to adopt that system (Teo & Lim, 1999). These users will tolerate difficultly in using the system to some degree only if they perceive its
functions to be crucial (Teo & Lim, 1999). The Technology Acceptance Model emphasizes the importance of usability, stating that users are more likely to uptake a technology that they perceive as easy to use (Yi & Hwang, 2003). Website users do not appreciate content that they perceive as irrelevant, so one method for increasing usability on Intranets could involve the availability to view data that is organized into relevant categories (Teo et al., 2003b). This would avoid the irritating process of sifting and searching through websites, which makes them more difficult to use (Teo et al., 2003b). Conducting usability testing prior to the tools’ implementation detects early issues in the system design. Therefore, it can avoid the sunk costs associated with investing in a flawed technology (Downing, 2004). Unfortunately, many organizations skip this testing because of scare time or resources (Hart-Davidson et al., 2008). Although underutilized by many organizations, conducting usability testing prior to Intranets’ implementation can help ensure that users will find them easy to use and thus more likely to use.

**Accessibility.** Accessibility relates closely to usability, and incorporating this feature into Intranet technologies also results in a higher quality product. Information accessibility refers to the characteristics of the content and volume of the information itself, as well the users’ ability to locate and make sense of that content (Teo et al., 2003a). Greater accessibility increases the likelihood of collaboration (Lai, 2001). It’s important for virtual team members to have access to the team technology on the go. Mobile compatibility and lighter versions of the technology can allow users to quickly access the information they need in a meaningful way, without causing information overload (Raybourn et al., 2003). Unequal access to communication technologies can make certain organizational members or groups feel excluded and marginalized.
(Weerakkody, 2004). Making an Intranet equally accessible to all members of the team as well as presenting its content in a manner that makes it easier to extract knowledge from will benefit the teams that use it.

While several studies highlight the role of system design, usability, and accessibility in online technologies. However, none have explored these variables in the context of a corporate Intranet. Therefore, the present case study aims to understand to the following research questions:

  RQ4: To what extent do frequency of website use, employees’ perceptions of Intranet design, employees’ perceptions of Intranet usability/navigation, and employees’ perception of Intranet accessibility change throughout the course of an Intranet renovation?

  RQ5: Are frequency of Intranet use, perceptions of Intranet design, perceptions of Intranet usability, or perceptions of Intranet accessibility correlated with each other?

  Given the state of literature on design, usability, and accessibility noted above, the research question further evolves into three related hypotheses:

  H2a: Frequency of Intranet use will increase as perceived quality of Intranet design increases.

  H2b: Frequency of Intranet use will increase as perceived quality of Intranet usability/navigation increases.

  H2c: Frequency of Intranet use will increase as perceived quality of Intranet accessibility increases.
CHAPTER 3
METHODS

This study used mixed methods to answer the previously stated research questions and test the hypotheses. It analyzed the case of a single virtual MNC team via interviews, a preliminary survey, and a follow-up survey. This MNC team temporarily hired the researcher for ten weeks to evaluate and redesign its Intranet. The researcher began by performing an initial audit of the Intranet’s features, design, and content. Next, the researcher designed and disseminated a preliminary survey to the entire MNC team in order to conduct an in-depth assessment of its communicative behaviors. The survey data and interview notes then informed the researcher’s strategy for how the Intranet redesign project unfolded in the following weeks. The final step of the study followed up with the MNC team eight months after the new Intranet’s implementation to investigate the factors that may have contributed to the ways in which it succeeded or failed at achieving its purpose.

Research Setting

This study analyzed the case of a single virtual team, which shall be referred to throughout this study as “Emerging Markets,” within an MNC, which shall be referred to as “Company X.” At the time this research was conducted, the MNC consisted of approximately 4,000 employees, approximately 25 percent of whom worked at its
headquarters in the Midwestern United States. It owns, manufactures and distributes a family of about 25 related consumer products. The company grew via the acquisitions of horizontally scaled brands and maintains offices and facilities in dozens of locations all across the six major continents. It is American-owned and trades on the New York Stock Exchange, but many of its major brands originated and operated solely in various other countries or regions prior to their acquisition by Company X.

Company X provides employees with access to a multitude of communicative mediums. These include email, two separate instant messaging platforms, calendar sharing, office phones, mobile phones, desktop sharing, audiovisual conferencing and a dynamic and adaptive corporate Intranet. Company X’s Intranet integrates two separate services with different functionalities. The first of these is a major Cloud-based customer relationship management (CRM) system that Company X licenses to facilitate several complex internal and external business tasks ranging from supply chain management to market planning. The CRM also provides a social network service that allows employees to create newsfeed groups with varying levels of access in which to share posts that range from updates in competitive intelligence to news articles to internal memorandums that relate to that particular group.

The second software that comprises Company X’s Intranet is Google Apps. Google provides Company X with collaborative Cloud tools that allow for multiple authors to view and edit documents, presentations, forms and spreadsheets in real time. Instead of an internal server, most of Company X’s data are stored and accessed from Google Drive. Of greatest importance to this study, however, was the Google Sites application within Google Apps. Company X’s license of Google Sites allows any
employee to create a website with little to no computer science background and share viewing and/or editing privileges with any desired amount of collaborators. Google Sites often acts as a front-end for accessing files stored on the Google Drive. Many teams within Company X constructed their own Google Sites, which they customized to fit their own needs and objectives with greater specificity than the standard company-wide communication.

While the previous description of Company X provides important context for this study, it is also important to note that this study focuses only on one of the many teams within Company X. The Emerging Markets team consisted of 70 employees at the time of the study. It was culturally diverse and geographically dispersed, with only eight members working out of the headquarter location, five elsewhere in the United States, and the rest either working in small satellite offices or from home in the United Arab Emirates, India, London, New Zealand, Mexico, South Africa, Germany, Russia, Hong Kong, Australia, Thailand, Finland or France. Company X held the members of the Emerging Markets team responsible for developing and growing the presence of its brand portfolio in new and emerging markets. The team members’ functions ranged from finance to marketing to sales to administration and management.

Company X created the Emerging Markets team only 18 months prior to the start of this study after a decision to reorganize the corporate structure to better support emerging markets. To create the Emerging Markets team, Company X pulled about 45 employees away from one team and merged them with another team of about 25 employees. The group of 45 came from a global team that served one specific market channel, and the group of 25 came from a team that served multiple market channels but
only within one regional territory. This reorganization meant that the Emerging Markets team employees worked alongside some people they knew well and had spent years working with before and many others they did not know well at all.

The Emerging Markets team’s leadership recognized the need for improved communication, which led to their decision to hire this study’s author. The author received compensation for the communication project itself but not for formally conducting the present study. The Emerging Markets team gave the author full access to its communication technologies to enable her to make informed suggestions for its improvement. In a memo to the author dated 10 days prior to her arrival at Company X, the Emerging Markets team leadership set forth the following project description for improving the team’s Intranet:

[The Emerging Markets] team is geographically widespread. Because of that, we do not naturally interact with each other every day. This makes it difficult for everyone to stay informed about business performance or share ideas. Your task this summer will be to help us solve some of our communications challenges. We would like to evolve our [Emerging Markets] team’s group website so that it becomes a destination for our team to stay informed. By evolve, we mean:

• Identify proper content. What information should live on the website? How should that information be conveyed? (e.g. documents, videos, etc.) When should it be updated?

• Build a logical structure to house content.

• Develop a process for information updates and technical maintenance.
The goal of your internship is to deliver a redesigned website and, very importantly, a process to keep it relevant.

As evidenced in the quote above, the Emerging Markets team’s leadership gave the study’s author free rein in deciding how to realize their overarching goals. In other words, they knew what they wanted the intern to achieve, but left the assessment for how to arrive there up to her.

Company X switched to Google Apps only two years before the Emerging Markets team hired the author. In the project description quoted above, the “[Emerging Markets] group website” refers to its Google Site, which the team used as its Intranet. The Emerging Markets team’s leadership outlined many problems with its Intranet and communicative behaviors in general. First, the Emerging Markets team’s leadership said that the geographic and temporal dispersion of team members led to difficulty when attempting to coordinate meaningful communication. This is no surprise, given extant literature on the topic (Fiol & O’Connor, 2005; Stark-Meyering & Andrews, 2006). Secondly, the Emerging Markets team never assigned to any particular individual accountability for the maintenance of its communication. As previously mentioned, the team was created by merging two groups within the organization. Up until the hiring of this study’s author, it lacked a strategic communication plan to ensure that the merger went smoothly on the ground. Its members both tended to use the same separate Intranets they used before the merger, which its leadership blamed in part for an “us versus them” culture that existed throughout the team. When the merger took place, a member of Company X’s corporate IT department took one of former team’s Intranets and the website’s title and language to reflect the merger. A few other individuals on the team
took it upon themselves as needed to add new information to the site, but no one ever had the time or resources to invest in a total renovation to reflect the new team’s needs. Scheepers (2003) outlined several actors needed for the successful Intranet implementation, which include a technology champion, an organizational sponsor, and change agents. These formal roles appear to be missing from the Emerging Markets team.

Ultimately, this study seeks to determine the influence that a renovated Intranet has on the communication within an MNC virtual team. The Emerging Markets team presents an opportunity to longitudinally measure a research-based project management strategy’s effectiveness from initiation to completion. Furthermore, the case of this team allows the conclusions of prior research to be tested within a naturally occurring business setting.

Data Collection

As previously stated, the study uses mixed methods to answer the research questions and hypotheses. The process began with probative interviews, which were followed by a preliminary assessment survey. A follow-up survey was administered eight months after the preliminary survey. RQ1 and H1a-d were answered through statistical analysis of a series of question in the follow-up survey; RQ2 and RQ3 were answered via content analysis of open-ended items on the assessment survey; and RQ4 was answered via statistically analyzing how respondents varied in their responses on identical survey question items from preliminary test to follow-up test.

Interviews. The reported interview data are given to provide the context that informed the surveys used to answer the present study’s research questions. The author began the assessment by conducting in-depth interviews with 15 members of the
Emerging Markets team. The author interviewed these particular subjects out of the 70 total team members because a senior leader suggested they would, in his opinion, provide the author with a well-rounded set of responses from the various functional areas and geographic locations that represent the Emerging Markets team. These demographics are presented in Table 1. The author conducted six face-to-face interviews and nine phone interviews.

The semi-constructed interviews varied in length and aimed more at probing for leads than answering a prescriptive set of questions. The interviewer asked the interviewees open-ended questions about how they would describe the team’s communication in general terms, as well as how they interacted with its Intranet and for what purposes. The interviewer also asked the interviewees to offer suggestions for ways in which the Intranet could be improved so that it could become useful for them in light of their uniquely situated geographic location and job duties.

The interviews were probative; they were not coded or used to answer any specific hypotheses. Instead, they informed the author about what types of questions to ask the entire team upon sending out an assessment survey. The author collected some general impressions from these interviews, which were explored in the survey: 1) the Intranet is cluttered, ugly, and difficult to use, 2) communication and reporting become difficult to standardize among multiple work areas, 3) the Intranet lacks job-critical information, 4) many areas of the Emerging Markets team felt that they were underrepresented on the Intranet, and 5) a desire to be in-the-know about what other team members are working on is left largely unaddressed.
Table 1

*Interview subjects*

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Preliminary Survey. The assessment survey’s primary purpose was to gather intelligence about the Emerging Markets team’s communicative behaviors, which were then used to inform the strategy for improving it. Items on this survey that were included in the analysis can be found the Appendix. All 70 members of the Emerging Markets team were asked to complete the survey, 58 of which did so (82% response rate). On this survey, a contingency question asked respondents how frequently they visit the team’s Intranet site. Twelve respondents indicated that they had never visited the site before, which ended the survey, and one participant was disqualified for failure to complete the survey. Therefore, 46 respondents completed the survey in its entirety. The team’s executive director sent out the survey link on behalf of the study’s author via his work email address. In it, he gave the team members a one-week suggested deadline for completing it.

Follow-Up Survey. To evaluate the effects that renovating the Emerging Market team website had over time, the author followed up with a post-test questionnaire eight months after the project to renovate its Intranet was completed. This questionnaire was disseminated to 52 members of the Emerging Markets team, 34 of which completed it (65% response rate). One of the team’s senior leaders sent out the survey link on behalf of the study’s author via his work email address. The items on the follow-up survey are listed in the Appendix.

Operationalizing and Testing of Variables

The first research question sought to understand the extent to which employee profiles helped virtual team members build a shared identity. To answer this question, the
follow-up survey included items that measured respondents’ reliance on employee profiles as well as an organizational identification scale.

The follow-up survey included multiple Likert scale questions that were incorporated to operationalize the independent variable, reliance upon employee profiles. Each of these was followed by an optional open-ended question asking for additional comments. The first of these Likert questions asked, “How frequently do you visit the employee profiles located on the [Emerging Markets team] website?” with the following available responses: 1 = “I have never visited this before,” 2 = “A few times per year,” 3 = “A few times per month,” 4 = “1-3 times per month,” and 5 = “Most every day,” and 6 = “More than 3 times per day.” The second Likert scale question used to measure reliance on employee profiles was based on the uses and gratifications paradigm as it relates to Internets. Stafford, Stafford, and Schkade (2004) identified three primary dimensions that motivate individuals to use the Internet: content gratification, process gratification, and social gratification. Based upon these findings, a series of 5-point Likert scale questions asked respondents to report how frequently they were motivated by each of the three gratifications types when viewing the employee profiles. The survey operationalized content gratification as “to research or find specific information;” process gratification as “to satisfy my curiosity and absorb an understanding of what my colleagues are working on;” and social gratification as “to deepen the social connections I have with my colleagues.” Responses for this items ranged from 1 = “Every Time,” to 5 = “Never.”

To measure RQ1’s dependent variable, shared identity, the follow-up survey included an adapted version Mael and Ashforth’s (1992) organizational identification scale. The scale included a total of six 5-point Likert scale questions which asked
respondents to state the extent to which they agree or disagree with statements such as “If someone from [Company X] criticizes [the Emerging Markets team], I would take it as a personal insult,” and “When I talk about [the Emerging Markets team], I usually say ‘we’ rather than ‘they.’” The available responses ranged from 1 = “Strongly Agree,” to 5 = “Strongly Disagree.” The six items that comprised the organizational identification scale can be found in the Appendix.

The responses from these survey items answered RQ1 and H1a-d by testing the reliance on employee profiles against organizational identification to determine the existence and/or strength of their relationship. The findings were calculated via multiple regressions on Statistical Package for the Social Sciences (SPSS).

The second research question asked how virtual MNC team employees describe the effects of a local strategy. This question was answered via content analysis of two open-ended items on the preliminary survey. The first of these items asked respondents to “Please share any relevant experiences, in addition to geographic dispersion and different time zones, that have challenged your ability to communicate with coworkers residing in different locations or identifying with cultures other than your own.” The second item asked respondents, “Can you recall instances where you felt that you lacked knowledge or involvement in your coworkers’ projects? If so, please discuss suggestions for how [the Emerging Markets team] can improve the features/applications/use of its existing communication technologies to achieve a higher level of inclusion and collaboration.” Each instance that evidenced a situation that resulted from a lack of emphasis on global strategy was coded. Reliability of the coding will be addressed below.
The third research question sought to investigate whether the Emerging Markets team members would suggest a need to implement more synchronous or asynchronous communication mediums. This question was answered via content analysis of an open-ended item on the preliminary survey. This item asked respondents, “Given the geographic dispersion of [the Emerging Markets team], it is difficult to meet and work in face-to-face settings. Therefore, we must use online tools to build a sense of community, share ideas, and collaborate with each other. Features like [Company X’s social network] and blogs are examples of online tools designed to facilitate this communication. Please take the space below to provide suggestions for ideas for any new tools that we could incorporate into [the Emerging Markets team’s Intranet] to achieve the same outcomes.” Responses were coded into a two-category scheme: suggestions for synchronous media or suggestions for asynchronous media.

The fourth research question sought to understand the relationship between frequency of Intranet use and users’ perceptions of its design, usability, and accessibility. To measure frequency of use, preliminary and follow-up surveys both included the 6-point Likert scale question “How frequently do you visit the [the Emerging Markets team’s Intranet]?” with 1 = “I have never visited this website,” 2 = “A few times per year,” 3 = “A few times per month,” 4 = “1-3 times per month,” 5 = “Most every day,” and 6 = “More than 3 times per day.” To measure design, usability, and accessibility, the preliminary and assessment surveys both included the 5-point Likert scale question, “Please rate the [the Emerging Markets team’s Intranet] in terms of design (its layout, colors, images, fonts, etc.), navigation (the organization and structure of content and pages), and accessibility (the ease of locating, entering and using the site itself.” The
word “navigation” was selected for use instead of “usability” since it can be assumed that a site that is easy to navigate will inherently be easier to use. The possible responses were 1 = “Exceptional,” 2 = “Exceeds Expectations,” 3 = “Meets expectations,” 4 = “Below Expectations,” and 5 = “Poor/unacceptable.”

To answer RQ4, independent samples t-tests were run on each of the four variables (perceptions of design, perceptions of usability/navigation, perceptions of accessibility, and frequency of use) to measure the changes in responses from preliminary survey to follow-up survey. To answer RQ5, correlation tests were used to determine whether frequency of use and any of the three perception variables had collinear relationships. H2a, H2b, and H2c sought to understand if relationships exist between the three perception variables, respectively, and frequency of use. These hypotheses were tested via simple regressions. Each hypothesis tested one perception variable against the dependent variable, frequency of use. Then, an additional multiple regression tested the summation of all three of the perception variables against frequency of use to determine if collinear relationships exist. All results for RQ4, RQ5, and H1-4 were calculated via SPSS.

**Intercoder Reliability**

Both RQ2 and RQ3 were answered via content analysis, and thus required the establishment of intercoder reliability. To achieve this, the study’s author trained a graduate student in the coding schemes for both research questions; this graduate student later independently coded 20% of the data. This graduate student had previous experience in conducting content analyses and reliability assessment. The study’s author trained this secondary coder in a one-hour face-to-face meeting, which provided the secondary coder
with study’s background, research questions, method, and coding scheme. The author also explained the categories of each coding scheme in detail during this session, and went through several data samples together to ensure consistency and give the secondary coder the opportunity to practice coding with the author’s guidance. Once the secondary coder expressed confidence in understanding of the coding scheme, she then coded 20% of the data (9 responses per open-ended survey item). The author then compared their areas of agreement and disagreement to arrive at a reliable Cohen’s Kappa value.
CHAPTER 4

RESULTS

The preliminary survey collected open-ended and fixed-response survey data from members of the Emerging Markets team \((n = 58)\). Due to “frequency of use” being a contingency question that disqualified participants from completing the rest of the questionnaire, fewer participants completed the subsequent questions \((n = 46)\). The preliminary survey collected responses to frequency of Intranet use \((n = 58, M = 2.76, SD = 1.22)\), perceptions of Intranet design \((n = 46, M = 3.48, SD = .81)\), perceptions of Intranet usability \((n = 46, M = 3.37, SD = .71)\), and perceptions of Intranet accessibility \((n = 46, M = 3.04, SD = .67)\).

The follow-up survey also collected responses for frequency of use \((n = 34, M = 3.53, SD = 1.05)\), design \((n = 32, M = 2.81, SD = .74)\), usability \((n = 32, M = 2.63, SD = .66)\), and accessibility \((n = 32, M = 2.78, SD = .87)\). Furthermore, the follow-up survey also collected data from items regarding frequency of employee profile use, \((n = 32, M = 1.75, SD = .56)\), EP reliance for content gratification \((n = 22, M = 3.05, SD = 1.02)\), process gratification \((n = 22, M = 2.82, SD = .72)\), and social gratification \((n = 22, M = \)
3.45, $SD = .99$). Finally, it combined a six-question scale to determine organizational identity ($n = 32, M = 10.59, SD = 2.62$).

This study analyzed the case of a virtual MNC team to gather the results reported in this section. The team members completed a preliminary survey and a follow-up survey, which were used to answer the study’s research questions and hypotheses. RQ1 sought to understand the relationship between the addition of employee profiles on an MNC team members’ Intranet site and the strength of their organizational identification. It was answered via simple and multiple regressions of items on the follow-up survey. RQ2 sought to understand the effects that a local strategy has on virtual MNC teams. It was answered via content analysis of two survey items on the preliminary survey. RQ3 was also answered via content analysis of an open-ended item on the preliminary survey, and it asked whether virtual MNC team employees would request more asynchronous or synchronous media channels to be incorporated into its communication mix. Next, RQ4 investigated the differences in reported frequencies of Intranet use and perceptions of Intranet design, usability, and accessibility from preliminary to follow-up survey. It statistically analyzed identical fixed-response questions that appeared on both the preliminary and follow-up surveys. This tested both the strength of correlations and whether increasingly favorable perceptions of the Intranet’s features in the time that the Intranet was renovated would positively and significantly correlate with frequency of Intranet use. RQ5 also used correlations and tested for the strength of correlations between frequency of use and all of the perception variables. Hypotheses 2a, 2b, and 2c looked further into these relationships via regression analyses and sought to determine whether or not the perception variables could predict frequency of use.
The first research question measured the relationships between reliance upon employee profiles and organizational identification by conducting correlations and both simple and multiple regressions tests. The overall multiple regressions were not significant, with $F(3, 19) = 2.06, p = .14$. Therefore, H1a-d were not supported. However, regressions that tested the IV of reliance upon EPs to fulfill social gratification against the DV of organizational identification would have been statistically significant if the multiple regression were also statistically significant. This particular independent variable had a $p$ value of .039 ($\beta = -.52, t(22) = -2.22$). These results indicate that high reliance on employee profiles to gratify social needs is associated with more frequent usage of employee profiles.

Frequency of employee profile use was lower than anticipated. Out of 32 responses to the follow-up survey item that measured this frequency of use variable, 10 respondents reported, “I have never visited these before,” 20 reported visiting them “a few times per year,” and 2 respondents reported visiting them “a few times per month.” Therefore, Emerging Markets team members do not use the employee profiles frequently enough for this study to assume that it has the potential to moderate organizational identification. As a result, the multiple regression tests that measured reliance on employee profiles as the IV and organizational identification as the DV did not provide meaningful data.

The present study also found noteworthy results when it ran correlations of all four of the employee reliance variables (frequency of employee profile of use, fulfillment of content gratification, fulfillment of process gratification, and fulfillment of social gratification) together. Specifically, it found that the extent to which users rely on EPs for
social gratification is significantly correlated with how the frequency with which the EPs are used, $r = -0.533$ ($n = 23, p = .01$). The correlation coefficient was negative because the frequency of employee profile use variable was scored to associate lower means with lower use, while fulfillment of social gratification associated lower means with stronger agreement. Therefore, results from this correlation indicate that users who visit the employee profiles more frequently are more likely to be relying on them to gratify their social needs.

The second research question was answered via content analysis of the responses to two open-ended questions on the preliminary survey. One question asked the respondents to describe specific challenges they face related to communication with geographically dispersed and culturally diverse coworkers; the other asked them if they feel they lacked knowledge or involvement in coworkers’ projects and to offer any potential solutions. Instances that evidenced a situation or perception that appeared to have been caused by a lack of overarching global strategy were coded. As noted in the previous chapter, a second coder who was trained in the coding scheme independently coded 20 percent of the survey responses. Reliability was calculated with a Cohen’s Kappa value of 0.807, which is considered reliable.

Three primary categories emerged from the data: sharing challenges, coordination challenges, and sub-group fault lines. The first category, sharing challenges, included data that indicated team members’ lack of knowledge and awareness of each other or that alluded to how both task- and non-task-related information were often withheld from all the parties who might found it beneficial. Data were coded into second category, coordination challenges, if they expressed situations in which a lack of collectively
standardized norms resulted in difficulty with managing projects or collaborating with team members. The term for the final category, “sub-group fault lines,” was taken from Foil and O’Connor (2005), who say that sub-group identities tend to develop within virtual teams. The sub-groups might be divided along certain fault lines such as cultural differences, geographic distance or function. Therefore, survey responses were coded into the sub-group fault lines category if they evidenced an “us vs. them” mentality or indicated certain tensions or divides within specific sections of the team. Examples of instances of each of these three themes are provided in Table 2.

The challenges associated with sharing occurred most frequently in the data set, with 24 total instances that linked between sharing and a local strategy. Data suggest that the Emerging Markets team members desire greater knowledge sharing and transparency between and among its regions and functions. Several respondents cited frustrations with how they have relatively no understanding of projects and innovations occurring outside of their own immediate region or functional area. One individual said, “There are times I feel I stumble across something going on in another region that I was not aware of and only came across this because I was speaking to my manager about something I wanted to do in my region.” Another said, “We only hear about certain projects once they are done, it would be good to be informed before they go live so we can share learnings [sic] and maybe have involvement in a great opportunity.” This lack of information sharing and organization knowledge caused some concern to team members, who felt they missed out on potential opportunities as a result. One respondent said, “We tend to find out after they start a project, they hit a hurdle and then they realize they need our input… it may be too late by that point.” It appeared that the Emerging Markets team’s
development of a local strategy contributed frequent interruptions in its knowledge-sharing communication chain.

The second strongest category found in the data was the theme of coordination challenges that resulted from a local strategy. Nine instances evidenced members of the Emerging Markets team voicing challenges related to completing tasks, understanding other’s processes, and standardizing their reporting structures. For example, one respondent said, “One major issue is the use of multiple, various forms and formats that we use across the globe such as pricing spreadsheets, business review templates or sell sheets. We need to have a common template that we all agree on.” Another respondent echoed this concern, citing that one challenge is “[t]he variety and lack of similarities between the different markets - What works in one may need to be edited for another.” It appeared that each geographic region of the Emerging Markets team operated in their own way to such an extent that it became difficult for them to coordinate their efforts and standardize their processes.

The sub-group fault lines theme emerged seven times within the data. Fiol and O’Connor (2005) define sub-group fault lines as the borders that polarize team members into their different sub-group identifications, often citing geographic dispersion and team diversity as their antecedents. The seven instances evidencing sub-group fault lines suggest that a local strategy can contribute to the development of sub-group fault lines within virtual MNC teams.

Some instances suggested that a fault line remained between members of the pre-merger Retail Market team and the team that covered a geographic territory. For example, one respondent said, “[Retail Market] team and [Geographic Territory] work as
Table 2

*The three categories of effects of a local strategy*

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Telling Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing challenges</td>
<td>24</td>
<td>“A lack of understanding of who they are and what they do sometimes lead to me not even thinking of contacting them in a matter where it could be useful to exchange experiences or information.” “We only hear about certain projects once they are done, it would be good to be informed before they go live so we can share learnings [sic] and maybe have involvement in a great opportunity.” “We tend to find out after they start a project, they hit a hurdle and then they realize they need our input... it may be too late by that point.” “There are times I feel I stumble across something going on in another region that I was not aware of and only came across this because I was speaking to my manager about something I wanted to do in my region.”</td>
</tr>
<tr>
<td>Coordination challenges</td>
<td>9</td>
<td>“One major issue is the use of multiple, various forms and formats that we use across the globe such as pricing spreadsheets, business review templates or sell sheets. We need to have a common template that we all agree on.” “Weekend days are different in parts of the region. E.g. weekend in [the United Arab Emirates] is Friday and Saturday. Whereas Sunday is A work day [sic]” “[one challenge is] the variety and lack of similarities between the different markets - What works in one may need to be edited for another.”</td>
</tr>
<tr>
<td>Sub-group fault lines</td>
<td>7</td>
<td>“[The retail market side and the geographic region side of the Emerging Markets team] work as rather separate entities, thus it seems not too many opportunities arise to reach out to colleagues of the other part” “[P]eople tend to be fully influenced by their own particular focus area-- geography, brand, channel-- and they don't consider the different angles that others have.”</td>
</tr>
</tbody>
</table>
rather separate entities, thus it seems not too many opportunities arise to reach out to colleagues of the other part.” Although the two teams merged to form the Emerging Markets team, data suggest that the merger did not fully eliminate the boundary between the two teams. Although they were merged in title, the Emerging Markets team indicated they had trouble merging their communicative behaviors. One respondent said that this fault line was even visible on the team’s Intranet, that there was no oversight to ensure that information from all of the different areas of the team was represented. Other fault lines were coded along the boundaries of functional and geographic area. For example, one respondent said, “[P]eople tend to be fully influenced by their own particular focus area-- geography, brand, channel-- and they don't consider the different angles that others have.” Again, this evidences a lack of shared strategy among all team members that results in a more local strategy than global.

The third research question was also answered via content analysis of the responses to an open-ended question on the preliminary survey. Instances that evidenced an expression of desire for a new synchronous or asynchronous channel type were coded. In total, employees asked for synchronous media in 13 instances and asked for asynchronous media in 8 instances. Notably excluded from coding were instances that did not specify or imply whether or not the suggested communication channel would require real time participation. Also excluded were instances in which employees suggested that the team get in a better habit of using a media type that they already had access to. To establish intercoder reliability, a second coder who was trained in the coding scheme independently coded 20 percent of the survey responses. Reliability was calculated with a Cohen’s Kappa value of 0.727, which is considered reliable.
When prompted to offer suggestions for new online tools, 13 respondents named asynchronous media and 8 respondents named synchronous media. The synchronous media suggested by the team members included video conferencing, regular team wide conference calls, and mobile-based instant messaging. The suggested asynchronous media, however, were more varied. Several respondents reported a desire for its Intranet to act as a comprehensive warehouse for various resources, which team members could search access at any point in time. For example, one individual suggested that the team implement “best practice sharing - where everyone could upload a one-pager with their most recent promotional, sales, etc. executions, that would be interesting for others to see and learn from [sic].” Similarly, another said that “it would be good if [the Intranet] were a go to place for everything.” Others requested a feature that would notify them when new resources were added to the Intranet so that they could know to log on and view changes, but have the flexibility of doing so at their own convenience. As one of the members put it, “It would be useful to have a tool which flags the addition of material to the website. For example, one might not be aware of meetings that might be taking place and therefore not aware of new material being posted. If there was some sort of tool that could highlight such material it would be of benefit. This would include team presentation, news and any current insight data.” Three of the 13 media suggestions coded for asynchronicity involved expanding an existing discussion board platform that the respondents felt had untapped potential.

To answer research question four, independent samples t-tests were used to compare means between preliminary and follow-up survey results for four different variables: frequency of Intranet use, perceptions of design, perceptions of usability, and
perceptions of accessibility. Independent samples t-tests were used instead of paired samples because the survey respondents were not individually tracked from one test to the other, thus preventing the ability to accurately identify responses in pairs.

Results from Levene’s test for equality of variances assumed equal variances for frequency of use, perceptions of design, and perceptions of usability. Equal variances could not be assumed for perceptions of accessibility. The independent samples t-tests found significant differences in equality of means for frequency of use ($p = .00$), perceptions of design ($p = .00$), and perceptions of usability ($p = .00$), with the confidence interval of 95%. These results indicate that employees use the Intranet more frequently since the time that the preliminary survey was disseminated. Further, the results indicate that that the employees rated the Intranet’s design and usability significantly higher on the follow-up test than they did on the preliminary test. The mean for accessibility was lower on the preliminary test ($n = 46, M = 3.04$), than on the follow-up test ($n = 32, M = 2.78$), indicating that the respondents perceived the post-renovation Intranet to be more accessible. However, this difference of means was not found to be statistically significant. The group statistics from the independent samples t-tests are found in Table 3, and the results are found in Table 4.

The fifth research question was answered by testing for the presence of significant correlations between perceptions of Intranet design, usability, and accessibility. Bivariate correlations were calculated once with only the preliminary survey data, once with only the follow-up survey data, and once with both data sets combined. Results from these correlations are presented in Tables 5a, 5b, and 5c.
Table 3

*Group statistics from independent samples t-tests*

<table>
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<tr>
<th></th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
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<td><strong>Frequency of Use</strong></td>
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<tr>
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<td>58</td>
<td>2.76</td>
<td>1.22</td>
</tr>
<tr>
<td>Follow-up</td>
<td>34</td>
<td>3.53</td>
<td>1.15</td>
</tr>
<tr>
<td><strong>Design</strong></td>
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<tr>
<td>Preliminary</td>
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<td>.81</td>
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<td>Follow-up</td>
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<td>.74</td>
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<tr>
<td><strong>Usability</strong></td>
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<td>Preliminary</td>
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<td>Follow-up</td>
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<td>.66</td>
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<td><strong>Accessibility</strong></td>
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<td>Follow-up</td>
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Table 4

Results of independent samples t-tests

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<tr>
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<th>df</th>
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<tr>
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<td>-3.08</td>
<td>90</td>
<td>.00</td>
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<td>Design</td>
<td>1.00</td>
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<td>3.70</td>
<td>76</td>
<td>.00</td>
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<tr>
<td>Usability</td>
<td>.43</td>
<td>.51</td>
<td>4.69</td>
<td>76</td>
<td>.00</td>
</tr>
<tr>
<td>Accessibility</td>
<td>7.77</td>
<td>.01</td>
<td>1.51</td>
<td>76</td>
<td>.14</td>
</tr>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>Equal variances not assumed</td>
</tr>
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<td>1.44</td>
<td></td>
<td></td>
<td>55.06</td>
<td>.16</td>
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Table 5a

Correlations in preliminary data

<table>
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<th></th>
<th>Frequency of Use</th>
<th>Design</th>
<th>Usability</th>
<th>Accessibility</th>
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<tr>
<td>Frequency of Use</td>
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<td></td>
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<tr>
<td>$p$ (2-tailed)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>58</td>
<td></td>
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</tr>
<tr>
<td>Design</td>
<td>$r$</td>
<td>.43**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>$p$ (2-tailed)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>46</td>
<td>46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usability</td>
<td>$r$</td>
<td>.32*</td>
<td>.54**</td>
<td>1</td>
</tr>
<tr>
<td>$p$ (2-tailed)</td>
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<td>0</td>
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<tr>
<td>$N$</td>
<td>46</td>
<td>46</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Accessibility</td>
<td>$r$</td>
<td>.31*</td>
<td>.62**</td>
<td>.48**</td>
</tr>
<tr>
<td>$p$ (2-tailed)</td>
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<td>0</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>$N$</td>
<td>46</td>
<td>46</td>
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**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Table 5b

*Correlations in follow-up data*

<table>
<thead>
<tr>
<th>Frequency of Use</th>
<th>Design</th>
<th>Usability</th>
<th>Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of Use</td>
<td>$r$</td>
<td>-0.16</td>
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<td>$p$ (2-tailed)</td>
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<td>0.93</td>
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<td>$N$</td>
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<td>32</td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td>1</td>
<td>.51**</td>
</tr>
<tr>
<td></td>
<td>$p$ (2-tailed)</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>$N$</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Usability</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$r$</td>
<td>0.22</td>
<td>0.29</td>
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<tr>
<td></td>
<td>$p$ (2-tailed)</td>
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<td>0.11</td>
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<td></td>
<td>$N$</td>
<td>32</td>
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<tr>
<td>Accessibility</td>
<td></td>
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</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Table 5c

*Correlations in combined data*

<table>
<thead>
<tr>
<th>Frequency of use</th>
<th>Design</th>
<th>Usability</th>
<th>Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>r</strong></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>p (2-tailed)</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>N</strong></td>
<td>92</td>
<td></td>
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<tr>
<td><strong>r</strong></td>
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<td>1</td>
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</tr>
<tr>
<td><strong>p (2-tailed)</strong></td>
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<tr>
<td><strong>N</strong></td>
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<td>78</td>
<td></td>
</tr>
<tr>
<td><strong>r</strong></td>
<td>0.09</td>
<td>.61**</td>
<td>1</td>
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<tr>
<td><strong>p (2-tailed)</strong></td>
<td>0.44</td>
<td>0</td>
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<tr>
<td><strong>N</strong></td>
<td>78</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td><strong>r</strong></td>
<td>0.01</td>
<td>.49**</td>
<td>.53**</td>
</tr>
<tr>
<td><strong>p (2-tailed)</strong></td>
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<td>0</td>
<td>0</td>
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<tr>
<td><strong>N</strong></td>
<td>78</td>
<td>78</td>
<td>78</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).
The combined data sets found several significant positive correlations. Perceptions of design and perceptions of usability were correlated, $r(76) = .61, p = .00$, indicating that the favorability of the perceptions of design increased as the favorability of the perceptions of usability also increased. Additionally, perceptions of design and perceptions of accessibility were correlated, $r(76) = .49, p = .00$, indicating that the favorability of the perceptions of design increased as the favorability of the perceptions of accessibility increased. Last, perceptions of usability and perceptions of accessibility were correlated, $r(76) = .52, p = .00$, indicating that the favorability of the perceptions of usability increased as the favorability of the perceptions of accessibility increased.

Correlation tests that only included data from the preliminary survey also found statistically significant positive correlations between design and usability ($r(44) = .54, p = .00$), between design and accessibility ($r(44) = .62, p = .00$), and between usability and accessibility ($r(44) = .48, p = .00$). These data indicate that like the combined data set, favorability of perceptions of design and usability increase together; that the favorability of design and accessibility increase together; and that the favorability of perceptions of usability and accessibility increase together. However, unlike results from the combined data set, the preliminary survey data also found positive and significant correlations between frequency of Intranet use and all three of the perception variables. Frequency of use was most strongly correlated with design ($r(44) = .43, p = .00$), next with usability ($r(44) = .32, p = .03$), and then with accessibility ($r(44) = .31, p = .04$).

Only two statistically significant correlations were found within the data from the follow-up survey. Like the combined and the preliminary data sets, the follow-up data set found significant and positive correlations between perceptions of design and of usability.
While the combined and preliminary-only data both found correlations between design and accessibility, this result was not found on the follow-up survey. Further testing is needed to determine why the same correlations were not observed after the Intranet’s renovation was completed.

To answer H2a, H2b, and H2c, regression analyses were conducted which ran employee perceptions of Intranet design, usability, and accessibility against frequency of Intranet use. Data aggregated from both preliminary and follow-up surveys indicated that the perception variables were not statistically significant predictors of frequency of Intranet use, thus rejecting H2a, H2b, and H2c. However, further analysis found that repeating this test on preliminary survey data yielded results that came much closer to statistical significance. In this test, the regression indicated that the three perception variables predict frequency of use, $F(3,42) = 3.37, p = .03$, with an $R^2$ of .19. However, each individual perception variable still fell short of significance. Perceptions of design did not significantly predict frequency of use, with $\beta = .33, t(45) = 1.77$, and $p = .08$. Perceptions of usability also could not predict frequency of use, with $\beta = .12, t(45) = .68$, and $p = .50$. Finally, perceptions of accessibility could also not predict frequency of Intranet use, with $\beta = .25, t(45) = .27$, and $p = .79$. A third multiple regression test was run, which only ran the follow-up survey data for the perception variables and frequency of use. However, this regression did not approach significance in the way the preliminary survey did, with $F(3,2) = 1.23, p = .319$, and $R^2$ of .12.
CHAPTER 5
DISCUSSION AND CONCLUSIONS

Although RQ1 and its associated hypotheses were unable to support a relationship between EP reliance and organizational identification, the results still provide some valuable insight. Members of the Emerging Markets team had specifically requested the implementation of employee profiles, so the fact that the team members reported low frequencies of EP use ($M = 1.81$, $SD = .59$) is surprising. Since the mean for frequency of use was so low, use of EPs cannot be assumed to have had an outcome on the employees’ organizational identification scores.

The most interesting result of the EP reliance and organizational identification data was in the correlation between EP’s fulfillment of social gratification and organizational identification. Although this correlation was not statistically significant, the fact that it would have been of relevance if the overall multiple regression equations had been significant is noteworthy. This finding is interesting because of its consistency with research that suggests that encouraging non-task related communication can help build rapport within members of international work teams (Pullin, 2010).

Perhaps the present study’s most significant contribution to extant literature is its findings for RQ2, on how virtual MNC teams enact a local strategy and what these effects have on team communication. The three themes uncovered through content
analysis of two open-ended items on the preliminary survey extend knowledge about local and global strategies within multinational corporations. These themes were categorized as sharing challenges, coordination challenges, and sub-group fault lines. Much is known about the effects of a global strategy, thanks to such works as Lauring’s (2011) study of Danish expatriates at a local subsidiary and Tone et al.’s (2009) study of managing construction projects in Samoa from afar. Like these examples, the present research was conducted via case study analysis. All three of the themes found in the present research in regard to local strategies were resonant of literature regarding virtual teams and multinational workforces. Fiol and O’Connor (2005) theorized the existence of sub-group fault lines in the context of virtual teams, but stopped short of studying them in the unique settings of MNCs. Similarly, Lai (2001) discussed sharing in the context of Intranets, but not in the context of virtual teams. Stark-Meyerring and Andrews (2006) articulated sharing challenges within virtual teams, but studied a university online classroom and not an MNC team. Lauring (2011) studied knowledge sharing in MNCs, but not within a virtual team. Walsh and Maloney (2007) discovered coordination challenges in virtual scientific work teams, but never within the context of a large and dynamic MNC team. Taken together, the findings in the present case study fill in the gaps that connect conclusions from multiple areas of discourse to weave together a broader understanding of virtual MNC teams that operate with a local strategy.

Although content analysis cannot determine causality, it can be reasonably assumed that the relationships between the themes are interwoven and mutually influential. It is likely that the Emerging Market team’s accidental cultivation of a local strategy favored the formation of sub-group fault lines between the groups that existed
before the two previously existing teams merged together to become one. As a result of this, it’s also likely that members were more inclined to share information with members situated within their own sub-groups, further carving the distinctions between them.

Furthermore, coordination challenges were present in instances when processes weren’t standardized between specific areas that required collaboration. Perhaps this frustration was expressed because certain individuals or sub-groups in the team either did not intuitively know to change their processes or lacked the motivation to accommodate to those that they perceived as newcomers. In the presence of frequent and cumbersome coordination challenges, it seems unlikely that team members would feel satisfied with the levels of quality and openness of their information sharing.

Sharing challenges were referenced 24 times within the data, making them the most frequently expressed effect of a local strategy. This is consistent with literature regarding homophily in virtual teams. Sharing occurs more frequently when collaborators see the other parties as similar to themselves (Lai, 2001), as well as when geographic separation decreases (Walsh & Maloney, 2007). Therefore, it is not surprising that the Emerging Markets team’s culturally and functionally diverse members, working from all around the world, articulated that sharing information sometimes has its challenges. The present study suggests that sharing within virtual teams might further decrease when teams do not collectively recognize an imperative to do so. In other words, falling into a local strategy develops more norms for sub-group sharing and detracts from the ability for developing team-wide sharing norms. As such, team members might perceive that they lack the motivation or means to share information with the wider team.
The third research question contributes a greater understanding to virtual MNC team members’ desires for new communication mediums. As concluded in extant research by Walsh and Maloney (2007), the capabilities of asynchronous media to allow for collaboration to occur in spite of differences in space and time can help geographically dispersed keep their projects on track. The data gathered from the Emerging Markets team is consistent with this assumption. However, the Emerging Markets team also recognizes the value in synchronous communication, even though this type is presumably less attainable for the temporally dispersed team members. It appears from the data collected that this particular team acknowledges the advantages of richness and immediate feedback offered by synchronous media while still respecting the practical imperative to communicate asynchronously when the other party is unavailable.

Although suggestions for asynchronous media (n = 13) outnumbered suggestions for synchronous media (n = 8), the present study falls short of supporting the notion that all virtual MNC teams will express a greater desire for asynchronous than synchronous media. It is expected that the content of team members’ responses are almost entirely dependent on whatever resources are already available to them and whether or not these are capable of meeting the team members’ needs. For example, if Emerging Markets had not had access to instant messaging (a synchronous medium), then respondents would likely have suggested that it be incorporated, thus potentially causing the number of synchronous instances to exceed asynchronous instances.

The fourth research question was answered in a pre-test/post-test style to see how members of the Emerging Markets team’s responses to Intranet use and perceptions changed over time. Results indicated that the respondents use the Intranet significantly
more often and perceive a significant improvement in the Intranet’s design and usability after its renovation was completed. Although perceptions of accessibility were more favorable on the follow-up than on the preliminary test, the difference of means was not statistically significant. It makes sense that a complete renovation on the Intranet led to an improvement in use and perceptions of these Intranet features. These findings simply show that the renovation achieved its goal of creating a more user-friendly and useful resource for Emerging Markets team employees.

The most surprising finding in RQ5 was that frequency of use correlated with all three of perception variables in the preliminary test, but not in the follow-up test. It’s likely that this unusual result occurred because during the time that the preliminary survey was disseminated, Emerging Markets team members reported very infrequent usage of the Intranet ($M = 2.76$, $SD = 1.22$). Because this mean was so low and the Intranet was so poorly designed and maintained prior to the renovation, it is possible that these strong correlations were present simply because everyone generally agreed that the Intranet was in bad shape in all areas. In other words, when employees perceive that an Intranet is below their expectations of design, usability, and accessibility, it is no surprise that these perceptions are also associated with lower frequency of use. Therefore, the correlations found in the follow-up survey are more relevant for future researchers and practitioners because they exist in the presence of a renovated and carefully managed Intranet.

When testing correlations within the follow-up survey data, the only two significant relationships found were between usability and design, and with usability and accessibility. These findings reinforce the importance of Intranet usability, which were
often cited in literature (Teo & Lim, 1999; Weerakkody, 2004; Yi & Hwang, 2003). The case of the Emerging Markets team provides further evidence that Intranet usability increases when it is designed effectively and is easy for users to access.

H2a, H2b, and H2d were run to test whether Intranet design, usability, and accessibility, respectively, could predict the frequency with which the Emerging Markets team used their Intranet. When the preliminary and follow-up data were aggregated, these hypotheses were rejected. However, much like in RQ5, significance was found when only the preliminary data were analyzed. Also like RQ5, the study’s author suspects that this effect was observed because frequency of use was so low before the Intranet was renovated (i.e. during data collection for the preliminary test). The overall multiple regression on the preliminary data was likely significant because employees generally perceived the Intranet to fall below their expectations, and also were not in the habit of frequently using it. Therefore, caution must be taken before putting too much stock into these findings. If significant results had been found on the multiple regression for the follow-up survey, the results would have been more meaningful.

Practical Implications

The findings gathered in the present study have several practical implications. Although RQ1 was unable to find significance in tying employee profiles to organizational identification, it still has practical use. The relationship that EP reliance shares with social gratification suggests that with careful development, managers can potentially utilize these tools to bridge communication gaps existing within virtual MNC teams.
The findings of RQ2 are useful for many reasons. Managers of multinational corporations equipped with the understanding of the effects of a local strategy are better able to make decisions about communication strategies within their virtual teams. They underscore the importance of dedicating company time and resources into the management of geographically dispersed and virtual teams, especially if these teams are adjusting to a merger or other major organizational change. Some solutions for managing these changes might include hiring a consultant to help ensure that the teams’ communication challenges are understood and accommodated. It is also suggested that during these times of organizational change, managers standardize the relevant processes and project structures to allow for commonalities between different areas of the team. The present study suggests that doing so will facilitate more of the team-wide collaboration characteristic of a global strategy. Strategies cannot occur without planning and effort, so virtual MNC team managers should assign to a particular party the responsibility of conducting the proper research into the team’s communication needs.

Practitioners can use the findings from RQ3 to gather insights about which types of communication media might be beneficial to the virtual MNC teams that they manage. Synchronous and asynchronous media have their advantages and disadvantages in different circumstances, so providing team members with a mix of media can give them the opportunity to select a channel that fits their communication ambitions. For synchronous media, it is suggested that virtual MNC teams incorporate work phones, instant messaging, video conferencing, and desktop sharing. For asynchronous media, it is suggested that they have a company email account and an Intranet that stores both task- and non-task-related information. Selecting an Intranet’s content should be a process of
determining the team’s needs and finding ways in which these needs can be virtually satisfied.

Findings that addressed the fourth research question reinforce the importance of keeping Intranets from falling into disorganized chaos. In the opinion of this study’s author, this requires both technical maintenance, proper organization of content, and providing employees with adequate training. The Emerging Markets team’s Intranet renovation was successful at increasing the frequency with which employees use it. The renovation involved cleaning up its design aesthetic, reorganizing its content, and deleting content that was no longer relevant. The Intranet needed a renovation in the first place because prior to the study’s author arriving at Emerging Markets, no single party was ever assigned the responsibility of maintaining the team’s Intranet or developing a sustainable process for updating and controlling its content. Therefore, it is recommended that virtual MNC teams should assign Intranet accountability to one individual or group. This individual or group should be granted authority to make decisions about how content gets organized, but it is recommended that this individual or group make these decisions based on thorough research into the team’s needs.

The findings of RQ5, particularly those that show how perceptions of usability correlate positively with design and accessibility, underscore the need for usability testing. Those charged with the responsibility of creating a new Intranet ought to ensure that the site undergoes thorough usability testing prior to fully launching. Due to the ambiguity with which the results of testing H2a-c can be interpreted, no practical implications are recommended from this portion of study.
Limitations

Although it yields significant contribution to theory and practice, the present study was not without limitations. Most importantly, readers must understand that case studies such as this are incapable of making sweeping conclusions about broad populations. This case can shed light on similar cases, but practitioners are advised to interpret its results within the context of the research setting and the Emerging Markets team’s unique communicative circumstance. A “one size fits all” does not apply to the study’s results.

A second limitation is that the preliminary survey was written and disseminated at the time that the study’s author was employed at Company X, months before research questions were articulated. As a result, decisions were made in the inclusion and wording of questions on the preliminary survey without first consulting prior research or even with the intention of using them for a controlled study. This limitation is relevant in the wording of the word “navigation” instead of the preferred term “usability.” It is also relevant in the open-ended survey questions, which would have been phrased with less ambiguity and more directly related to the research questions if they had been written with the knowledge that they would be used in the present study.

A third limitation of this study is in the sample. The study’s author was a member of Company X at the time that the preliminary survey was disseminated, which allowed her greater access to its database of contact information. As a result, all members of the Emerging Markets team were given the opportunity to complete it. However, with the author’s limited access at the time that the follow-up survey was disseminated, only 52 of the team members could be contacted. In addition to yielding a smaller sample size in the
follow-up sample, this limitation also ruled out the possibility of conducting paired samples t-tests, as originally intended. The respondents were guaranteed total anonymity, which meant the author was unable to match up individuals’ responses from the first survey to the second.

Yet another limitation of this study is in its adaptation of Mael and Ashford’s (1992) organizational identification scale. First, organizational identification is difficult to operationalize. Self-report bias and external validity are of concern when asking respondents to complete scales that regard such abstract concepts. Second, Mael and Ashford’s (1992) organizational identification scale was created with the intention of assessing how university alumni identify with their alma maters. It can be reasonably assumed that the identification alumni report having with their alma mater manifests itself differently than the identification that employees perceive as having with their current employer.

Suggestions for Future Research

The present study offers several suggestions for future research into virtual teams, MNC teams, and information communication technologies. First, further exploration is needed to understand the relationship between EP reliance and social gratification. The results of the present study approached significance in establishing this relationship, but further investigation is needed. It is possible that it takes more time for the employee profiles to make an impact on social gratification than the study’s author allowed to elapse before collecting data for the follow-up survey.

Second, it is suggested that future research test frequency of Intranet use, perceptions of design, perceptions of usability, and perceptions of accessibility in a
virtual MNC team that has a more established Intranet. The Emerging Markets team’s renovated Intranet was still relatively new at the time that the follow-up survey data was collected, with behavioral norms likely still in the process of developing around it. Therefore, it is possible that no statistically significant results emerged in the multiple regressions that investigated whether the perceptions variables could predict frequency of use because those habits of use were still in the process of forming.

Conclusion

The present study offers insight into the communicative behaviors of a particular virtual MNC team, referred to as “Emerging Markets.” Given the literature on how virtual teams build collective identities, enact globally or locally motivated strategies, select media channels, and perceive and use Intranets, several research questions and hypotheses were offered. Through content and statistical analyses of survey data, the study contributed to research in several ways. It offers a set of communicative behaviors enacted by employees as a result of their team’s local strategy. It also offers insight into the reasons for which virtual MNC team employees select synchronous or asynchronous media channels. Finally, it offers support and suggestions for future research into linking employee profiles with social gratification, and between perceptions of Intranet features with frequency of Intranet use.
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doi:10.1080/01446190902748713


APPENDIX

The following items were included on the preliminary and follow-up surveys.

Preliminary survey

1. How frequently do you visit the [Emerging Markets team’s Intranet]?
   a. I have never visited this website
   b. A few times per year
   c. A few times per month
   d. 1-3 times per week
   e. Most every day
   f. More than 3 times per day

2. Take a moment to consider how [the Emerging Markets team Intranet] compares to the standard of quality you expect when visiting a corporate website. Please rate the website in terms of content (the information and documents it contains), design (its layout, colors, images, fonts, etc.) navigation (the organization and structure of content and pages) and accessibility (the ease of locating, entering and using the site itself).

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<th>Exceptional</th>
<th>Exceeds Expectations</th>
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3. Please share any relevant experiences, in addition to geographic dispersion and different time zones, that have challenged your ability to communicate with coworkers residing in different locations or identifying with different cultures other than your own. ***If you mention encounters with other coworkers, please keep their names and all other information that could reveal their identities completely anonymous.***

4. Given the geographic dispersion of [the Emerging Markets team], it is difficult to meet and work in face-to-face settings. Therefore, we must use online tools to build a sense of community, share ideas, and collaborate with each other. Features like [Company X’s social network] and blogs are examples of online tools designed to facilitate this communication. Please take the space below to provide suggestions for ideas for any new tools that we could incorporate into [the Emerging Markets team] to achieve the same outcomes.

5. Can you recall instances where you felt that you lacked knowledge or involvement in your coworkers’ projects? If so, please discuss suggestions for how [the Emerging Markets team] can improve the features/applications/use of its
6. existing communication technologies (i.e. [Company X’s social network], website, email, calendars, [Company X’s instant messaging software]) to achieve a higher level of inclusion and collaboration.

Follow-Up Survey

Reliance on Employee Profiles

1. How frequently do you visit the employee profiles section of the [Emerging Markets team] website?
   a. I have never visited this website
   b. A few times per year
   c. A few times per month
   d. 1-3 times per week
   e. Most every day
   f. More than 3 times per day

2. Additional Comments:

3. On the occasions when you visit the employee profiles section of the website, how frequently are you motivated by each of the following goals?

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<tr>
<th>Motivation</th>
<th>Every Time</th>
<th>Often</th>
<th>Sometimes</th>
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<td>To research or find specific information/materials</td>
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<td>To satisfy my curiosity and absorb an understanding of what my colleagues are working on</td>
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<td>To deepen the social connections I have with my colleagues</td>
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4. Additional Comments:

Organizational Identification Scale (Mael & Ashforth, 1992), with 1 = “Strongly Agree” and 5 = “Strongly Disagree”

1. If someone from Company X criticizes [the Emerging Markets team], it would feel like a personal insult.
2. I am very interested in what other Company X employees think about [the Emerging Markets team].
3. When I talk about [the Emerging Markets team], I usually say “we” rather than “they.”
4. [The Emerging Markets team’s] successes are my successes.
5. When someone praises the [Emerging Markets team], it feels like a personal compliment.
6. If a story in the media criticized [the Emerging Markets team], I would feel embarrassed.
Perceptions of Design, Usability/Navigation, and Accessibility:

1. Take a moment to consider how [the Emerging Markets team Intranet] compares to the standard of quality you expect when visiting a corporate website. Please rate the website in terms of content (the information and documents it contains), design (its layout, colors, images, fonts, etc.) navigation (the organization and structure of content and pages) and accessibility (the ease of locating, entering and using the site itself).

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Frequency of Use:

1. How frequently do you visit the [the Emerging Markets team] Intranet?
   a. I have never visited this website
   b. A few times per year
   c. A few times per month
   d. 1-3 times per week
   e. Most every day
   f. More than 3 times per day