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Experiential Elements of High-To-Low-Context Cultures

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Abstract: *Intercultural design collaboration (IDC) is a cross-cultural exchange that can take place between visual, spatial, product and digital designers. IDC involves a shared approach to gathering information, making decisions, creative production, critique, and developing design solutions. IDC methodologies can provide designers with the cross-cultural experiences and competencies necessary to navigate an increasingly globalized landscape. This qualitative study combines Edward T. Hall's theories of high- and low-context cultures with Elizabeth Tunstall's 'Five Experiential Elements of Community' to explore the impacts and outcomes of IDC between two geographically distinct groups of students and faculty. The exploratory research in distance collaboration uses grounded theory to compare and analyse the experiences and interactions of independent groups of participants located in the United States and the Gulf Region over a period of four separate academic semesters. Findings indicate that a blended approach integrating 'communication' and 'design' into the methodology can increase cultural understanding, break down perceived barriers, and promote effective design outcomes. As such, this comparative analysis aims to share findings and recommendations with design educators while advancing IDC between students situated in seemingly disparate cultural contexts.*

Keywords*: Grounded Theory, Digital Community, Intercultural, Design Collaboration*

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Introduction

Communicating Across Cultures

According to anthropologists, culture revolves around human cognition and activities based on shared patterns of human behaviour learned from society. This learned information is rarely taught explicitly and is unique to each society's values, beliefs, and social norms (Monaghan and Just, 2000, p.50). Adam Kuper writes that culture is 'learned, adaptable symbolic behaviour, based on a full-fledged language, associated with technical inventiveness, a complex of skills that in turn depends on a capacity to organize exchange relationships between communities' (1994, p.90). Although these definitions of culture represent a holistic view of people, they simultaneously emphasize the differences between them. This polarizing aspect of cultural interpretation can lead to research agendas and intellectual traditions that feed into popular misconceptions about the 'other' or may contribute to an orientalist perspective.

Researchers and media channels commonly refer to the Middle East in terms of language, religion, or political ideology; however, the subtleties of culture are far more complex than the overarching term 'Arab' implies. Elie Wardini points to the diversity of the Arab world, characterizing it as a 'mosaic' comprised of a vast number of historical interactions and shifting socio-cultural realities (1991). This characterization expands the narrow perspective of Middle Eastern culture–often entrenched in political or ideological debate–into a more dynamic view that intertwines citizenship, literature, clothing, music, and ancestry into a cultural tapestry. Similarly, there is a need to characterize the diversity of Western culture in the Middle East, where mass media typically serves as the only means to represent Western ideals and cultural belief systems.

In his book, 'Visit to America,' Jawaharlal Nehru writes 'if we seek to understand a people, we have to try to put ourselves, as far as we can, in that particular historical and cultural background. Normally people do not make such an attempt at all' (1950, p.58). This notion underscores the importance of historical consciousness in communicating across cultures, but it applies in multiple ways: each culture must seek to unravel its own history, as well as that of the partner culture. Pushing past antiquated approaches to cultural understanding between the West and Middle East, therefore, could potentially lead 'to the establishment of effective and peaceful policies' (El-Aswad, 2012, p.4).

High- and Low-Context Cultures

Edward T. Hall's seminal work, 'Beyond Culture,' explores culturally determined attitudes and linguistic patterns that serve to shape communication, personality dynamics, and educational goals (1976). Hall explains the representative differences between cultures on a low- to high-context continuum that describes 'the degree to which one is aware of the selective screen that one places between himself and the outside world' (p.86). He further notes that the determining characteristics of these systems affect people's ability to build relationships and interactions with other cultures in the world. Therefore, recognizing the inner workings of culture and personality through self-reflection and active interpretation can contribute to improved cross-cultural relations (p.240).

Recognizing and unpacking the granite-like persistence of a culture's control system is fundamental to teaching and learning in a globalized educational environment. Not only does technology bind students to virtual social spaces like never before, but increased

exposure to diverse ideas also amplifies the connective capacities of these technologies. Regardless of their locale, students must learn to recognize their connections to a broader cultural landscape and their role within it. Introducing Hall's insights of high-low-context systems in an educational setting provides a starting point for overcoming culturally conditioned projective systems and the resulting mental maps that govern unconscious behaviours.

Based on Hall's work, a series of learning and assessment tools have emerged to help students and faculty interpret their personal disposition relating to high- and low-context cultures. These tools encourage internal reflection upon personal preferences and cultural behavioural systems in order to support cross-cultural experiences, such as study-abroad programs. For students unable to participate in such experiences due to time, distance, finances or cultural constraints, virtual collaborations provide opportunities for intercultural experiences that leverage Hall's analyses.

Intercultural Design Collaboration (IDC) and Experiential Elements of Community

Research of multicultural teaching and learning has appeared in numerous journals and publications over the last decade (Case, 2013; Gay, 2010; Banks and McGee-Banks, 2009; Powell, 2001; Gardner, 2001). However, far less literature exists on cross-cultural projects and activities between classes located in disparate geographical contexts (Wang, 2011; Blair-Early, 2010; Schadewitz, 2007). Most documentation dedicated to intercultural education primarily involves students who reside within the same city (Hooper & Springham, 2014; Buck-Coleman, 2010), or those temporarily involved in service learning or study-abroad programs (Beaverford, 2013; Froehlich, 2012).

At the same time, the benefit of cross-cultural educational experiences is resounding throughout the literature. 'A successful cross-cultural design experience can help young designers enter the profession with multicultural sensitivity and sensibility, along with collaborative experience' (Murdoch-Kitt & Emans, 2014). In categorizing the benefits, researchers note that these types of experiences have the ability to diminish conflict (Gay 2000, vii–viii), promote peaceful understanding and tolerance (Sánchez Sorondo, 2005), and encourage deep understanding and civic responsibility to address global injustices (Wang, 2011). The result, however, is a noteworthy gap between the significance of multicultural experiences and the lack of opportunity for the majority of students to participate due to financial, social, or scholastic constraints. Intercultural classroom experiences, mediated by virtual communication tools, could therefore empower more students to gain the interpersonal competencies needed for effective communication and creative collaboration with diverse team members.

According to Patton and Downs, the integration of diverse cultural backgrounds, value systems, and cultural norms into teamwork further expands teams' breadth of experience (2003, p.48). However, in order for cross-cultural communication to be effective, it is important for both parties to understand the perceptions, stereotypes, and 'subconscious cultural blinders' they bring to the exchange (Adler, 1991). Intercultural design collaboration (IDC) is the exchange of ideas, information, decisions, creative output, and critique to arrive at shared design solutions across different cultures. The aim of IDC at the university level is to encourage students to learn empathy and appreciation for other cultural perspectives through relationship-building activities in accordance with design

thinking processes. IDC interactions can also help encourage a broad conceptualization of culture as a diverse mosaic: a culmination of citizenship, literature, clothing, music, and ancestry (Wardini, 1991).

Design anthropologist and researcher Elizabeth (Dori) Tunstall's 'Five Experiential Elements of Community' frames the efficacy of collaboration between distinct team members within digital communities (2008). These experiential elements enable participants to recognize their individual priorities, those of their 'home' culture, and those of their partner culture. Tunstall originally combined Benedict Anderson's concept of 'imagined community' and Victor Turner's ideas of 'liminality' and 'communitas' with an earlier model she developed to explain the structure of workplace communities. Together, these approaches describe how the experiential elements of community—agency, historical consciousness, life goals, organizational structure, and relationships (Figure 1)—can support the digital communities of the networked era (Tunstall, 2008).

Tunstall's model is a natural fit for virtual IDC because it helps explain how different community values can shape interactions. Combining Tunstall's experiential elements with Hall's definitions of low-and high-context cultures is particularly useful for cooperative digital communities that must rely on mutual use of virtual tools and spaces in order to thrive. It is important for faculty leading IDC projects and the students participating in these activities to have a broad view of culture and its depth of complexity. Addressing stereotypes early on through open discussion formats and activities create an environment in which students feel more willing to face assumptions about 'self' and 'other' head-on.

> In knowing yourself, you gain power over your perceptions and reactions; you can control your own behaviour and your reactions to others' behaviour. Cross-cultural awareness complements in-depth self-awareness. A lack of self-awareness negates the usefulness of cross-cultural awareness (Adler, 1991, p.14).

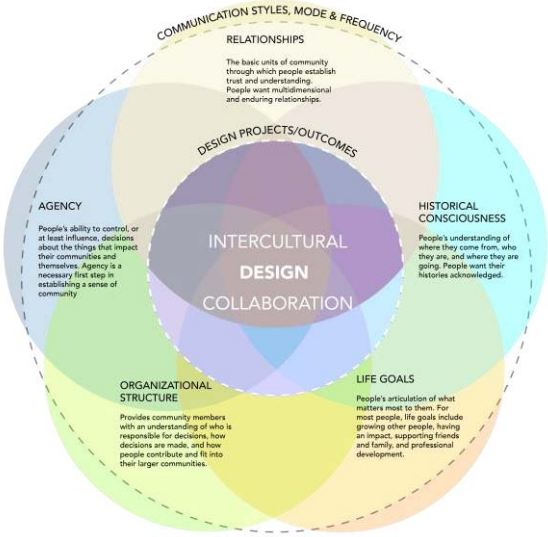

Figure 1 Tunstall's Five Experiential Elements of Community, adapted by Murdoch-Kitt and Emans.

Research Methodology

Grounded Theory

Grounded theory is a framework for qualitative research encompassing a 'constellation' of methods that include inductive logic, comparative analysis of data, theoretical analysis of findings, and informed practice (Charmaz, 2014, p.14). An approach anchored in analytic writing, grounded theory is a flexible process that allows clarity to emerge from numerous comparisons of collected data. The methodology allows researchers to construct theories from their data in a manner that is 'grounded' in the findings. Barney Glaser further positions the researcher within this framework as someone who can conceptualize data, cope with uncertainty, and 'tolerate confusion's attendant regression.' He further states, 'these attributes are necessary because they enable the researcher to wait for the conceptual sense-making to emerge from the data' (2010, p.4).

Within an educational context, grounded theory supports a process where substantive findings can emerge through comparative analysis and analytic realizations, leading to a 'conceptual handle on the studied experience' (Charmaz, 2014 p.4). Grounded theory enables design educators to analyse the benefits and challenges of IDC through comparison of qualitative findings, including structured pedagogical environments, student collaborations, and design scenarios. Data collected for analysis may consist of written or visual documentation, statements from interviews with students, studied scenes or settings, interactions and observations of students, or any combination of these approaches. Studies further indicate the value of grounded theory in relation to virtual environments, noting that it is 'particularly well-suited to the study of virtual teams' (Sarker et al., 2000, p.1).

For this research, grounded theory supports a method of comparison and analysis from a series of collaborations between virtual design teams located in low- and high-context cultures. Documentation of cross-cultural design projects exists, but research remains limited. Most documented projects primarily involve students who are physically collocated either as residents within the same community or through study abroad programs. Moreover, IDC between Western and Middle Eastern students remains largely unexplored due to divisive attitudes perpetuated by the media; socio-political restrictions; and the difficult terrain of time, distance, and tools needed for effective communication.

This study involves data gathered from four semesters of virtual collaborations between students at Zayed University (Dubai, UAE) and University of San Francisco (San Francisco, CA, USA); and students at Virginia Commonwealth University Qatar (Doha, Qatar) and Rochester Institute of Technology (Rochester, NY, USA). Two of the collaborations compared within this paper (San Francisco and Dubai) utilized asynchronous communication methods such as email across 11- to 12-hour time differences. The other two collaborations (Rochester and Doha) utilized a combination of asynchronous and synchronous methods (video chat, instant messaging, SMS) across 7- to 8-hour time differences.

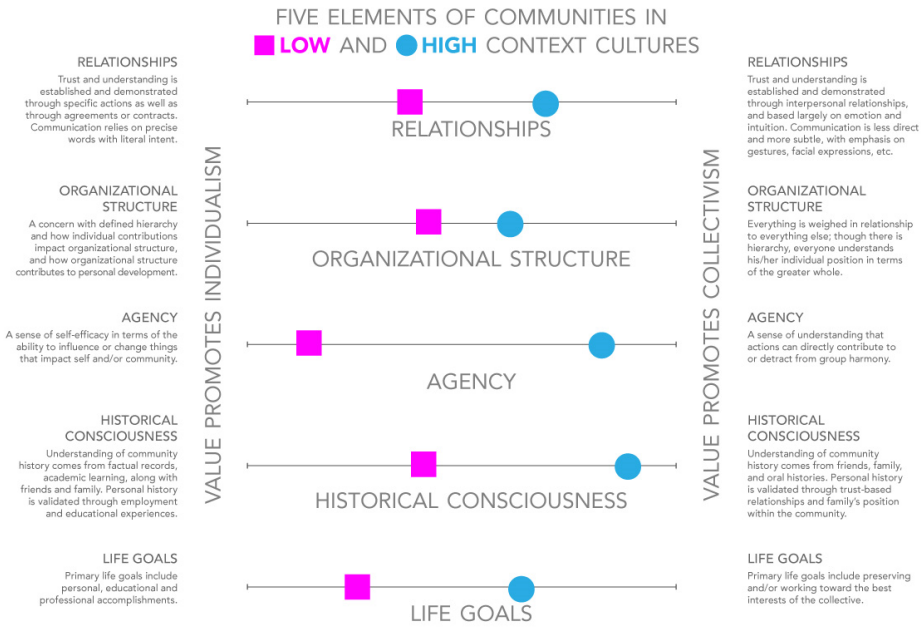

Figure 2 *Tunstall's Five Experiential Elements of Communities interpreted in terms of Hall's Low- and High-Context Cultures, adapted by Murdoch-Kitt and Emans.*

IDC in the Classroom

Tunstall's experiential elements of community, combined with Hall's definitions of low- and high-context cultures, are particularly useful for comparing and analysing cooperative digital communities (Figure 2). Findings from these four virtual IDC exchanges between participants located in the United States and the Arabian Gulf Region suggest best-practice approaches concerning learning outcomes, timing, tools, and planning. All collaborations experienced varying degrees of successful communication between the two classes, final design outcomes (projects), and students' perceived value of the exchange. The following section will discuss each element within Tunstall's experiential elements as a lens to assess its particular successes and shortcomings within this IDC study.

Relationships

Relationships are described as the basic units of community, through which people establish the trust and understanding needed to rely upon each other. People evaluate relationships based on their (1) Depth, whether one-dimensional or multidimensional; (2) Time, their frequency and duration; and (3) Tools, the modes of communication and the spatial environment in which they take place (Tunstall, 2000).

Based on Hall's definitions of low- and high-context cultures, there exist significant differences along the continuum with reference to the establishment of relationships in the community and between individuals (Hall, 1976). In low-context cultures such as North America, trust and understanding are demonstrated through specific actions as well as through agreements or contracts. When individuals communicate, they interpret others' words at face value and with literal intent. On the other hand, in high-context cultures, such as the Middle East, trust and understanding are built through interpersonal relationships based on emotion and intuition, rather than direct communication. Gestures, facial expressions, and other subtle, non-verbal cues enrich communication and may be more important than spoken words, according to Hall.

Within this study, the duration of the collaboration, modes of communication, and different methods of pairing students influenced the dimension of the relationships formed across IDC. The longest collaborations led to stronger relationships between students due in part to duration, but also due to decreased time difference, different communication tools, and pairing students based upon topical interest. For instance, the collaboration between students in Dubai and San Francisco involved an 11 or 12-hour time difference (depending on North American seasonal time change) that required asynchronous communication methods, while more recent collaborations between Doha and Rochester (7 or 8-hour time difference) involve a great deal of real-time videoconferencing.

For the first exchange within this study, Digman's five-factor model of personality (1990) assisted the process of assigning intercultural partners by matching students' complementary characteristics, resulting in strong connections between students. Although this cohort worked together almost exclusively via email, there was high enthusiasm for the collaboration from the start, fueling relationship-building activities and design outcomes. Partners completed a series of four distinct projects together, and, in spite of the time difference that made it difficult to meet via video chat in real-time, they worked diligently as a unit to fulfil their goals. However, while many pairs established trust by working collectively to meet deadlines and move forward with their projects, conversations often remained at a surface-level. In this regard, fear of insulting other team members stalled design critiques between the classes and impacted pairs' ability to form deeper relationships.

During the second iteration of this study, among students located in San Francisco and Dubai, personality characteristics also helped determine partnerships. However, this attempt at cultivating relationships was far less successful because of the limited time to conduct the IDC project. The three-week project, conducted mid-semester, did not give team members enough time to establish trust or foster interpersonal connections. Furthermore, from the onset of the collaboration, students were confused about the project goals and the purpose of the exchange, and, therefore, less enthusiastic about engaging in IDC.

The subsequent exchanges between students in Rochester and Doha have led to the most successful relationships in the study for several reasons. Pairings in both classes were established based on students' topical interests related to their project, instead of personality characteristics. Both of these collaborations ran the duration of the semester, but there was also less time difference between the groups: 7-8 hours instead of 11-12 hours. The biggest shift, however, was in tools. Not only did a decrease in time difference enable more real-time communication via video chat and messaging, but cloud-based common spaces for the groups were also formally established. Students used Google Drive to share their files and a private Google Plus community to post findings, progress, engage in discussion and request or participate in critiques.

By personifying both classes in an online representation, team members felt accountable for project progress and were more responsive to virtual critique. These combined factors undoubtedly led to more multi-dimensional relationships between IDC partners, particularly in the most recent iteration of the exchange, when the students were able to video chat almost weekly during scheduled class time. Observations revealed that these conversations not only centered around the project at hand, but reached further to include broader discussions of culture, as well as more personal details and interests.

While this analysis focuses primarily on peer-to-peer relationships across distinct classrooms and cultures, it is important to note that many other relationships are at work within these collaborative ecosystems. For instance, the relationship between instructors leading such collaborations is incredibly important, as they face similar challenges with time and tools in order to establish trust, depth, and effective communication. Additionally, the relationships between faculty and students are equally important, both within the same classroom and across cultural boundaries. In order to foster a relationship with the instructor in the collaborating classroom, virtual discussions, lectures, and critiques promote trust with students. The ability to meet on numerous occasions throughout the semester enhances relationships between instructors and fosters a sense of community between the two classes.

Organizational Structure

A mental map that provides people with an understanding of how they fit within and contribute to the greater whole. Often in groups, it outlines who is responsible, or what and how decisions are made (Tunstall, 2000).

Considering Tunstall's organizational structure via Hall's low-high context continuum, low-context cultures, like the United States, are concerned with defined hierarchy. It is important for people to realize how individual contributions impact organizational structure, and how organizational structure contributes to personal development. However, organizational structure in a high-context culture is relational: everything is weighed in relationship to everything else. Though there is still a sense of hierarchy, each

person recognizes his or her individual position in relation to the greater whole, and may prioritize organizational efficacy over one's personal achievements (Hall, 1976).

The organizational structure necessitated by IDC presents a challenge to many students, as evidenced by all four semesters discussed in this analysis. While most students have a mental model for the traditional design classroom's typical hierarchy and roles, adding another classroom to the course organization is disorienting and many express uncertainties relating to functionality. One way to support the new organizational structure of the digital collaborative community is to assign a collective project that relies on each member playing a role in its successful completion. This research implemented a collective project approach with varying degrees of success.

The most successful collective project within this study occurred during the first collaboration, when students worked together on a formal process book that encompassed all of the work generated by the teams in both classrooms. The class in San Francisco started the book layouts, creating a system and populating it with text and images to communicate their side of the story. Next, they passed their files to their partners in Dubai to add their own materials, refine the overall design, and finish the book. After the term, the book became available to all students as a web-based publication and via print-on-demand publishing for those interested in purchasing a hard copy.

This project was successful because both classes shared a mental model for a book design project and what it might entail. Clearly defined division of labour helped students determine their roles, and partners were able to work sequentially on the same set of design files. The final book captured the work all partners had done together, offering a celebratory retrospective of their shared efforts, reinforcing their experience of cooperative partnership. Student satisfaction with final design project outcomes is most evident in the success of the formal process book—in contrast with subsequent collaborations that focused on collective approaches in a less concrete manner.

During the third virtual IDC exchange, students in Rochester and Doha focused on the topic of water sustainability, producing three collective exhibits. Student feedback was positive toward this collaboration: students were excited to share with others what they had learned from their partners. The clarity of the virtual classroom's organizational structure and its unifying theme of water sustainability helped students appreciate and readily accept the rationale behind a mutual exhibition of their diverse projects. Even though, on some level, they were still beholden to their individual classrooms and somewhat different project plans, they were willing to initiate extra work to share their ideas with a variety of external audiences.

During the fourth exchange, however, a much broader approach to sustainability topics (specifically, how design can promote behaviours that support various forms of sustainability) seemed to promote agency while stymieing the classes' sense of organizational structure. Students were encouraged to explore and select topics under the umbrella of sustainability before the formation of teams, and had to make connections between partners' projects. Because the structure promoted open selection of topics, some teams ended up with highly compatible themes, while others struggled to see connections between their selected topics. The number of students in each course also influenced the overall sense of structure: 14 students in Doha, 5 in Rochester. Initially, there were more students in the Rochester course, but the unexpected withdrawal of several students late in the semester left some students in Doha without international partners. This breakdown of

student relationships and organizational structure contributed to a disconnected impression of students' final project outcomes and overall sense of accomplishment within the course, even though the individual projects reflected learning and growth.

In addition to issues related to divergent project topics and the disparity in student numbers, allowing students to self-define their project medium seemed to decrease their interest in a collective project. With a focus on experiential and spatial design in Doha, students prioritized their exhibition outcomes, with only a few making an effort to incorporate their partners' work and ideas into their personal installation. As a result, most Rochester projects ended up as posters in exhibition panels separate from partners' experiential design work. In Rochester, students created an online exhibition website to display course outcomes, including interactive prototypes, the built exhibition in Doha, and a collection of interactive books created by both classes. While the process of creating a website ensured that the Rochester students became familiar with the Doha exhibition designs, the students in Doha felt separated from the process due to the fact that their semester ended earlier. Even further, some partnerships were burdened by course requirements, with individual learning outcomes prioritized over partner requests for project feedback or other contributions.

Along with a lack of appreciation towards the potential benefits of collective projects, students in the fourth exchange had difficulty understanding how they could support mutual progress considering their different topics or design approaches. Students' dismissive attitude was particularly disappointing because this was the only virtual IDC cohort within this study able to regularly converse via real-time video chat. As previously mentioned, consistent synchronous communication supported the development of more multi-dimensional relationships between these students, but functional communication was not enough to overcome deficiencies in organizational structure.

Figure 3 *Mohammad Jawad and Abdul Rahman of Virginia Commonwealth University Qatar (class of 2015) give a videoconference presentation with their partner, Rochester Institute of Technology student Liz V. Wells (class of 2015).*

Course timing, tools, and planning are critical areas for faculty to take into account when devising IDC projects. Virtual IDC between students with more than an 8-hour time difference may necessitate increased use of asynchronous communication methods such as email to facilitate discussion. As the time difference decreases, the introduction of synchronous communication (video chat, text chat, SMS) can improve relationships between participants. The learning outcomes embedded within each course also play a significant role in the collaborative possibilities of collective projects, as well as the added strain upon students. IDC between different courses is certainly possible and worth the effort, but clarity of project parameters and organizational structure directly impact whether students feel burdened by the collaboration or empowered by its possibilities.

Agency

People's ability to control, or at least influence, decisions about the things that impact their communities and themselves (Tunstall 2000).

According to Hall, in a low-context culture, 'agency' could translate to a sense of self-efficacy in people's ability to influence or change things that affect their communities and themselves. In a high-context culture, 'agency' is a way to describe how actions as individuals can directly contribute to, or detract from, group harmony (Hall, 1976). In examining the four exchanges of this study, there is a strong correlation between students' sense of individual agency and the organizational structure of both the combined community as well as the individual courses. Several instances illustrate how students' individual actions affect the larger group and the level of awareness regarding the impacts.

During both collaborations between students in San Francisco and Dubai, students received very detailed project briefs. While students had some creative choice, and exploration was encouraged, subject matter and media were predetermined and assigned. Because both collaborations occurred between groups of introductory-level design courses, limiting students' agency in terms of selecting subject matter and form reinforced the overall organizational structure of the course. Removing project ambiguity enabled intercultural pairs to comprehend, communicate, and cooperate with each other immediately.

Simplifying some of the challenging guesswork of project formats enabled students to focus on the inherent logistical complexities of the exchange. Managing an asynchronous interpersonal connection and challenging themselves to be creative within the imposed guidelines was difficult, but rewarding. Although two exchanges shared this common approach, the full-semester collaboration was more successful than the single-project collaboration. The single-project collaboration felt rushed to some students and did not allow the same amount of time to cultivate relationships between partners. However, surveys assessing the collaboration's effectiveness revealed that students who participated in single-project collaborations also valued the exchange; students noted that it increased

their knowledge and awareness of their partners' country. If the project parameters had been more vague or open to interpretation, these single IDC projects would have likely been ineffective from an educational perspective and far more frustrating for the participants.

Unlike the previously described courses, the IDC projects between Rochester and Doha involved senior-level students in elective courses. Because they were working at an advanced level, seniors dealt with more ambiguity. Their sense of design agency is more developed than that of underclassmen, indicating that course parameters should challenge them accordingly. Advanced students not only conducted research before selecting specific topics, but were also compelled to leverage topical, contextual, and audience research to determine appropriate design interventions. Meanwhile, the organizational structure of the individual classes prompted physical exhibition designs (Doha) and digital interaction designs (Rochester). The instructors saw this as a fantastic opportunity for students to cross over and explore virtual and physical realms; to challenge preconceived notions of 'exhibition' and 'interaction' design. However, students' perceived limitations of the course descriptions seemed to hinder their sense of agency in their inability to reinterpret existing definitions.

One positive outcome of the seniors' enhanced agency was in response to self-defined subject matter and media. Although this approach resulted in some challenges when creating teams across the two classes, on an individual scale, most students seemed engaged and satisfied in their subject matter. Most appreciated the learning experience afforded by working to determine an appropriate format for their design concepts. Moreover, insights gained from collaborative approaches encouraged partners to explore design solutions they would not have otherwise considered.

Historical Consciousness

People's understanding of where they come from and who they are. Their ability to openly express their history and to find themselves in the public image of their community affects the degree to which they feel they belong to that community (Tunstall, 2000).

In Tunstall's model, historical consciousness plays an important role in explaining how each culture views itself, and the other, through personal and community history. Cross-cultural collaborative opportunities provide a chance for university students to begin a dialogue, collectively demystifying topics such as clothing and physical appearance, family relationships, local cuisine, and cultural traditions. By overlaying Hall's cultural translations with Tunstall's model, historical consciousness in a low-context cultural setting (such as North America), points to a community history constructed through factual records, academic learning, and knowledge imparted from friends and family. Individual achievements, such as employment and educational experiences further validate personal

history. In high-context culture settings (like the Middle East), however, trust-based relationships with friends and family members primarily validate one's interpretation of community history.

A continuum of course-oriented historical understanding plays a vital role in building trust and knowledge between teams. As mentioned in the discussion of relationships, creating a shared online space to bring the two classes together is beneficial to building trust and accountability between partners. These communal spaces have a positive impact on students' sense of historical consciousness and contribute to a holistic view of the community, rather than a collective framed by two separate halves. During all four collaborative experiences within this study, students struggled with varying degrees of comfort in uncovering personal and collective community histories. Creating an online representation of the combined community prompted a shift in perspective from the abstract idea of collaboration to a more concrete representation of partnership.

Projects that support exploration into the historic implications of community can also encourage a mutual recognition of students' sense of belonging. For instance, one team-building activity within this study asked partners to photographically define their city based on assigned word pairings such as 'historic/modern.' Each team was required to defend their choices in writing, exchange their thoughts and visuals with their partners during a 'trade' of resources, and share their outcomes with both classes using blogs. This activity was successful in that it emphasized definitions of space and place, but also worked to encourage descriptive storytelling between team members. The visual outcomes sparked dialogue between cultures and highlighted mutual interpretations that worked to lower the imagined barriers between students.

Life Goals

People's articulation of what matters most to them. These are often things like helping other people, having an impact, supporting friends and family, and professional development (Tunstall, 2000).

Low-context cultures count personal, educational and professional accomplishments among their primary 'life goals,' whereas high-context cultures find preserving and working toward the best interests of the collective as an important life accomplishment (Hall, 1976). Within IDC, cultural differences are often diminished due to shared educational and design goals of assigned projects. Given these parameters, students are somehow more willing to look past differences, even between cultures that conventionally seem at odds. Graphic design's common processes, methods, and outcomes support similar life goals and organizational structures. These common lenses through which to view a project encourage students to align across kindred goals while learning to work in a multinational professional environment.

Even further, when high- and low-context cultures work together in a classroom setting, their seemingly disparate life goals often align when working in the area of sustainability, social design, or public interest. Cultural needs are satisfied on both ends of the continuum by fulfilling a desire for honing professional skills while working towards the best interests of the collective. Therefore, faculty who integrate projects for the 'greater good' with tangible outcomes that enhance students' portfolios can often support meaningful life goals for all participants.

Conclusion: Expanding the Model & Next Steps

Tunstall's 'Five Experiential Elements of Community' provides a useful structure to examine critical components of two distinct classrooms and the digital community formed during virtual IDC. However, there are two important factors to consider as additional elements for structuring and evaluating this unique type of collaboration in an educational setting: communication and design outcomes. These considerations are important both in explaining the value of collective projects to students and in enhancing activities to prepare the two classes to work together.

The Role of Communication Competency

Communication plays a strong role in establishing and conveying all of the elements of community; without it, the element of 'relationships' would not exist. In the course of this study, one particularly effective approach for facilitating communication is to address such potential barriers out in the open at the very beginning of the collaboration.

Within each distinct classroom, students engage in a stream-of-consciousness brainstorming session, during which they write a series of ideas and impressions of the other culture. Using sticky notes and a whiteboard, they are prompted first to write facts (what they know factually, and where or how they learned it). Next, they write out their assumptions. Finally, they write other people's opinions—what they believe others think of that culture. The session is fast-paced, encouraging students to aim for volume so that they do not take too much time to overanalyze what they write before putting it on the board.

Figure 4 Design students at Rochester Institute of Technology organize sticky notes after a brainstorming session.

As opposed to gathering suggestions aloud from students and writing them on the board, a sticky-note approach enables a level of anonymity. With numerous ideas on the board, it is difficult to discern which student wrote which notes, enabling participants to feel less afraid to write unfiltered thoughts. Once all the facts, assumptions, and opinions are posted on the wall, the class categorizes and analyses the notes. This activity is often an eye-opening process that leads to fruitful discussions within (and across) both classes. An interesting follow-up is to repeat the activity after the classes have a chance to meet and converse, enabling students to examine how their impressions and opinions may drastically change within a brief period.

Figure 5 An array of sticky notes created and sorted by design students at Virginia Commonwealth University Qatar.

In many cases, the sticky-note exercise permits students to confront and quickly move past their initial assumptions and opinions of the other culture. Using this exercise at the beginning of the third and fourth exchange put students at ease with the idea of the collaboration and encouraged IDC partners to establish a rapport. Students immediately took interest in talking to their partners, perhaps because they had already confronted the spectre of stereotype. Certainly, however, there are logistical impacts upon successful communication as well. Recognizing and appreciating the way another culture communicates, including the importance of agency and organizational structure to relationships, is paramount to creating a successful connection. Individual characteristics such as introversion or extroversion also play a role, and in some cases when two introverted students end up working together, communication can be especially difficult.

The Language of Design

In addition to students' specific concepts and communication strategies, the value of design in facilitating cross-cultural learning and understanding is underscored in this study. Although visual communication design curricula vary greatly, most are inherently aligned in their attention to the importance of typographic, imaging, and interaction design skills for

professional readiness. Designers share a basic familiarity with design methods, research and processes in formal terms, as well as strategies to making meaning with respect to audience, semiotics, theory, and history. Students with similar lexicons can, therefore, communicate immediately based on shared professional vocabulary and training. A common lineage in design education was a unifying factor across most students in this study, and although a few reported that they did not find working with a cross-cultural partner useful or beneficial, feedback was generally positive.

The popularization of 'design thinking' as a system of inspiration, ideation, and implementation provides equal footing for conversation and teamwork between students. Applying processes of design thinking within a collaborative classroom environment can further encourage students to develop new levels of proficiency with communication methodologies. Challenging students to consider audiences and users in different cultural contexts better prepares them for future collaborations designing with (and for) other cultures.

Future Research: A Classroom Tool

The integration of 'communication' and 'design' into Tunstall's experiential elements of community are two important additions to consider when approaching IDC in the classroom. Attaching these approaches to the model can increase effective communication, work to break down perceived barriers, and promote the shared goal of effective design outcomes. For future research, the practical application of these combined methodologies within the classroom environment could be a useful addition to IDC. The approach could be modified for use as a classroom tool prior to collaborations, not just a retrospective analytical lens to evaluate the effectiveness of different exchanges. Before class introductions, students in each class could define each element and track how definitions and values shift as the classes work together to create their new imagined community.

As a next step, the instructors hope to create a tool to help students assess their cultural predilections prior to working together. In this manner, students can start thinking about the partnership—and the two distinct classrooms—based on a high- and low-context continuum as well as core digital community elements. An appreciation of the basic units of community from the perspective of relationships, organizational structure, and historical consciousness can guide discussions on attitudes towards life goals and agency with respect to the classroom, education, and IDC. This may be a more successful way to match partners across classes than teams based on personality types, interest in subject matter, or random selection. It could also serve to give individuals a better sense of their own priorities, strengths, and weaknesses before embarking on a cross-cultural collaboration.

In Summary

At the university level, IDC can encourage students to learn empathy and appreciation for different cultural perspectives through relationship-building activities supported by design thinking. With the introduction of Edward T. Hall's high-low-context cultural continuum, students may gain insight into their contextual relationship to communication, thought, feeling, and behaviour systems. Framed by Tunstall's 'experiential elements' of digital communities (2008), in combination with 'communication' and 'design,' these types of interactions aim to provide students with the multicultural sensitivity needed to navigate diverse audiences and partnerships. Design students should emerge from the IDC

experience with increased knowledge about themselves and what it means to communicate and work together with someone positioned elsewhere along the cultural continuum.

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