Cultural Communication Characteristics and Student Connectedness in an Online Environment: Perceptions and Preferences of Online Graduate Students

Tim Green, Malia Hoffmann, Loretta Donovan and Nawang Phuntsog

Abstract: This multi-year exploratory research examined the perceptions of connectedness of students enrolled in an online cohort-based Master’s program in educational technology. The research specifically examined the level of connectedness the graduate students from low-context and high-context cultures felt towards their peers, the professors, and the program. Participants (n = 50) were surveyed on their perceptions of connectedness and what elements of the program and course design led to their level of connectedness. Fourteen participants agreed to follow-up interviews. The data were used to compare how students who identified as low-context culture differed in their perceptions of connectedness to students who identified as high-context culture. The findings suggest that no matter what cultural identification students indicated, the feelings of connectedness toward peers, the professors, and the program were strong. Participants indicated feeling most connected to program professors, primarily due to the intensity and methods of communication. Findings indicate other program and course design elements that led to student connectedness. Implications for online course and program design are discussed.

Keywords: online distance education, low-context cultures, high-context cultures, course design, program design, connectedness.

Résumé : Cette recherche exploratoire pluriannuelle a examiné les perceptions de la reliance des étudiants inscrits à un programme de maîtrise en technologie de l’éducation fondé sur des cohortes en ligne. La recherche a tout particulièrement examiné le niveau de reliance que les étudiants diplômés, provenant de contextes culturels de bas ou de haut niveau, ressentent envers leurs pairs aussi bien qu’envers les professeurs ou le programme. Les participants (n=50) ont été interrogés sur leur perception de la reliance et sur les éléments du programme et de la conception des cours qui influencent leur niveau de reliance. Quatorze participants ont accepté de participer à des entretiens. Les données ont été utilisées pour comparer la manière dont les étudiants identifiés comme provenant de contextes de bas niveau culturel avaient des perceptions différentes de la reliance de ceux identifiés comme provenant de contexte de haut niveau culturel. Les résultats suggèrent que, peu importe la catégorie culturelle des étudiants, le sentiment de reliance envers les pairs, les professeurs, et les programmes était fort. Les participants font part de sentiments particulièrement en lien avec les professeurs programme notamment en raison de l’intensité et des méthodes de communication. Les résultats pointent d’autres éléments de conception de programme et de cours favorisant la reliance étudiante. Finalement, la discussion porte sur les implications de ces résultats concernant la conception des cours et programmes en ligne.

Mots-clés : formation à distance et en ligne, contextes de bas niveau culturel, contextes de haut niveau culturel, conception de cours, conception de programme, reliance

Introduction
There has been a steady increase over the past decade in individuals with diverse backgrounds entering higher education. In the Digest of Education Statistics: 2015, the National Center for Educational Statistics (NCES) predicted that by the year 2025 the percentage of 18-24 years olds attending a degree-granting, post-secondary institution in the United States would increase for all
race/ethnicities except for Whites and American Indian/Alaska Natives (National Center for Education Statistics, 2016a, p. 537). This suggested trend was further evidenced in the report, Status and Trends in the Education of Racial and Ethnic Groups 2016, in which the NCES concluded that, “The total college enrollment rate for Asian 18- to 24-year olds has been higher than the rates for their White, Black, and Hispanic peers in every year since 2003” (2016b, p. 88). Additionally, in the same report, NCES states, “Total post baccalaureate enrollment also increased for each racial/ethnic group surveyed between 1990 and 2013…Hispanic student enrollment as a percentage of total enrollment increased from 3 to 9 percent, and Asian/Pacific Islander student enrollment as a percentage of total enrollment increased from 4 to 8 percent” (2016b, p. 98).

In addition to the increasing representation of minorities in higher education, the number of students engaged in post-secondary online distance education has steadily grown over the past decade. Allen, Seaman, Poulin, and Straut (2016) examined online distance education in the United States and found that the number of students taking at least one course at a distance grew at a rate of 3.9% between 2013 and 2014. This was an increase from the previous year’s growth rate of 3.7% (p. 4). Of the number of students engaged in higher education, Allen et al. (2016) reported that fourteen percent (2.85 million, or one-in-seven) of all higher education students in the United States in fall of 2014 were engaged in coursework completely at a distance (p. 9).

Unsurprisingly, as the amount of online distance education courses and programs has increased, so has the amount of research associated with it. This is not dissimilar to what was proposed by Roblyer (1985) in reference to literature on early technology integration in the 1980s. As more classroom technology was used, a shift occurred from literature exploring teacher and student perceptions along with pragmatic ‘how to’ literature, to a deeper examination of research-based practices associated with helping improve student learning and student satisfaction. A similar trend is occurring with online distance education. According to Gunawardena, Wilson, and Nolla (2003), however, a neglected element in the research literature is a focus on cultural elements associated with students enrolled in online distance education courses and programs. Our study fits into this research space.

Our experiences as online distance educators facilitating an online graduate program—that includes an increasing number of students from cultures typically considered high-context in their communication preference—has led us to deliberately and systematically consider their experiences in our program. Over the past three years we have regularly reflected on how to improve community within our program and courses, with the primary goal being to increase student connectedness—with a specific focus on students from high-context (HC) cultures. Research (e.g., Ivankova & Stick, 2005; Laux, Luse, & Mennecke, 2016) indicates that social connectedness in online distance education has been found to help improve student success and persistence. Findings like these led us to conduct this study.

The primary purpose of this study was to explore how graduate students enrolled in an online, cohort-based, Educational Technology Master’s degree program perceived their connectedness with the program. We explored their perceptions about their level of connectedness with their peers in the program, program professors, and the program in general. We were interested in better understanding what elements of the online program led students to feeling connected or not. In examining these elements, we were particularly interested in investigating how the graduate students who are considered to be from high-context cultures differed from, or were similar to, students who
are considered to be from low-context (LC) cultures. Two research questions guided our study. These were:

RQ1. What perceptions do students from high-context and low-context cultures have about being connected to the online Master’s program, their peers in the program, and the professors in the program?

RQ2. What specific elements about course and program design and implementation led students from high-context and low-context cultures to feel connected?

**Theoretical Framework**

The lens used to guide this research was influenced by the work of Hall (1976) regarding high-context (HC) and low-context (LC) cultures. Hall’s concept of HC and LC cultures provides a broad framework for explaining cultural differences among societies or groups. His framework includes five elements—association among individuals; interactions; view of one’s space or territory; time; and learning. Hall indicated that these elements influence how members of a society or group communicate. Hall suggested the contrast of high and low-contexts to describe the differences in communication styles associated with different culture. An individual from a specific culture will predominately use in their everyday communication either HC or LC messages that are based on the beliefs, norms, and rules of the culture. In observing communication among different cultures, he found that, “meaning and context are inextricably bound up with each other” (Hall, 2000, p. 36). Hall’s perspective provided a theoretical framework that allowed us to focus our exploration on cultural aspects of communication and the effect communication styles had on our graduate students’ perceived levels of connectedness within our online graduate program.

**Review of Literature**

One’s culture has tremendous influence on the way one communicates with others. There is a body of literature (e.g., Gudykunst, Matsumoto, Ting-Toomey, Nishida, Kim, & Heyman, 1996; Hall, 1976, 2000; Hall & Hall, 1990; Hofstede, 1980; Nishimura, Nevgi, & Tella, 2008) that describes frameworks for considering the role culture plays in communication patterns, preferences, and styles. This research helps to provide insight into how individuals from different cultures typically engage in communication. This research can also bring about an understanding of how cultural communication styles might impact student participation, sense of belonging, and overall connectedness in an online distance education (DE) environment. The review of the literature begins with Hall’s focus on cultural influences on communication. Research that concentrates on specific elements that correlate to student success—specifically persistence—in an online DE environment follows.

**Culture and Communication**

There are various perspectives that examine how culture impacts communication. In examining how culture impacts communication, we reviewed a variety of literature dealing with this construct. This section of the literature review focuses on cultural influences on communication behaviors, patterns, and preferences from the perspective of Hall’s framework of high-context (HC) and low-context (LC) cultures. Table 1 provides an overview of major perspectives from this framework.
Table 1: Summary of Communication Traits and Preferences of High-Content and Low-Context Cultures. (Adapted from Hall, 1976 and Hall and Hall, 1990.)

<table>
<thead>
<tr>
<th>High-Context</th>
<th>Low-Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication includes indirect and implicit</td>
<td>Communication includes direct and explicit</td>
</tr>
<tr>
<td>messages</td>
<td>messages</td>
</tr>
<tr>
<td>Non-verbal communication used often</td>
<td>Non-verbal communication used infrequently</td>
</tr>
<tr>
<td>Context and the individual are important in</td>
<td>Words are important in understanding a message</td>
</tr>
<tr>
<td>understanding a message</td>
<td></td>
</tr>
<tr>
<td>Intuition, feelings, and emotions are important</td>
<td>Facts, information, and evidence are important</td>
</tr>
<tr>
<td>elements of communication</td>
<td>elements of communication</td>
</tr>
<tr>
<td>Relationships are often long-term developed after</td>
<td>Relationships are often short-term and contextual</td>
</tr>
<tr>
<td>many interactions</td>
<td></td>
</tr>
<tr>
<td>Communication is often unplanned and without</td>
<td>Communication is often scheduled and</td>
</tr>
<tr>
<td>emphasis given to the amount of time involved</td>
<td>conducted quickly</td>
</tr>
<tr>
<td>Disagreement that occurs during communication</td>
<td>Disagreement that occurs during communication</td>
</tr>
<tr>
<td>is often personalized. Conflict must be solved</td>
<td>is depersonalized. The focus is on rational</td>
</tr>
<tr>
<td>before further interactions can occur.</td>
<td>solutions to a disagreement with explicit</td>
</tr>
<tr>
<td></td>
<td>discussion about the disagreement and troublesome</td>
</tr>
<tr>
<td></td>
<td>behaviors.</td>
</tr>
<tr>
<td>From regions such as Africa, Asia, Latin America,</td>
<td>From regions such as Australia, Western Europe,</td>
</tr>
<tr>
<td>Middle East</td>
<td>United States</td>
</tr>
</tbody>
</table>

**High-context cultures.** Hall explained that an individual considered HC typically interacts using communication patterns that are meant to engage someone rather than simply communicate a message. Messages being communicated are frequently implied and not directly stated—context is often more important than the words. Nonverbal communication is used as a method to engage with another individual. Of specific relevance to an examination of an online DE program, nonverbal elements such as body language, facial expressions, hand gestures, paraverbal cues (e.g., inflection, speech tone), and even silence, are highly important elements of communication interactions among HC individuals (Hall, 1976). Individuals who are HC will also rely heavily on feelings and allow conversations to evolve without referring to problems directly. According to Gudykunst et al. (1996), “Using HC communication involves using and interpreting messages that are not explicit, minimizing the content of the verbal message, and being sensitive to others” (p. 516). They indicate
that this type of communication may come across as indirect or ambiguous to individuals from a low-context culture.

Message speed and perceptions of time are connected elements that also influence communication preferences and behaviors (Hall, 1976). Hall and Hall (1990) wrote that, “A fast message sent to people who are geared to a slow format will usually miss the target. While the content of the wrong-speed message may be understandable, it won’t be received by someone accustomed to or expecting a different speed” (p. 4). Individuals from HC cultures typically use slow and methodical methods of communication with a focus on building relationships rather than solely communicating a message. Building relationships is done deliberately and slowly. The closer the relationship is between individuals who are communicating, the more likely the communication will take on HC attributes, such as relying on previous experiences and knowledge that individuals share (Wurtz, 2006).

**Low-context cultures.** Hall indicated that an individual considered to be LC will rely heavily on the message and what is directly being communicated when interacting with others. Messages, therefore, are direct and explicit. Context is less important than the words of the message; thus, background information to provide clarification is important to avoid message misunderstandings. Communication for LC individuals primarily focuses on the exchange of information, ideas, and opinions rather than on building relationships (Hall, 1976). According to Gudykunst et al. (1996), this type of communication may come across as impersonal to individuals from a high-context culture because it “involves being direct, precise, and open” (p. 516).

As mentioned, Hall and Hall (1990) indicated that message speed and perceptions of time impact how individuals communicate. For individuals from LC cultures, careful consideration is given to the time spent communicating and interacting with others. Interactions are often short and direct; they are typically scheduled and are focused on a specific message. Building relationships is not a primary objective of communication for LC individuals (Hall, 1976; Hall & Hall, 1990).

**Interpersonal Interactions and Student Success in Online Distance Education**

The research on student success in online distance education is quite comprehensive. While student success has been defined in different ways, we examined the literature that defined success as persistence in completing all course and program requirements (Hart, 2012). Consequently, the research we examined focused on factors that contribute to student persistence in online distance education (DE). There is a wide-range of factors that contribute to persistence, such as gender (Ross & Powell, 1990; Rovai, 2003), family support (Ivankova & Stick, 2007; Rovai, 2003), levels of satisfaction (Lim & Kim, 2003), interest in the content (Baker, 2010), sense of belonging (Hawkins, Barbour, & Graham, 2012; Johnston, Killion, & Oomen, 2005; Willging & Johnson, 2004), and time-management skills (Hart, 2012).

Rovai (2003) wrote that, “There is no simple formula that ensures student persistence. Adult persistence in an online program is a complicated response to multiple issues. It is not credible to attribute student attrition to any single student, course, or school characteristic” (p. 12). Rovai (2003), in examining student persistence in distance education, developed the Composite Persistence Model (CPM) that outlines factors that contribute to students completing DE courses and programs. The model is separated into “student characteristics and skills prior to admission and external and internal factors affecting students after admission” (p. 8). The CPM is an amalgamation of various researcher perspectives. As part of the CPM, Rovai includes the work of Workman and Stenard (1996)
who analyzed the needs of distance learners. Workman and Stenard identified five needs that influence the persistence of DE students:

- Clarity of online policies, programs, and procedures
- Self-esteem
- Connection with the school
- Social Integration
- Access to support services (as cited in Rovai, 2003, pp. 10-11)

In addition to the CPM factors, others (Smith Jaggars & Xu, 2016) examined course design elements and the influence these had on student performance. They indicate that the literature suggests four course design and instructional elements that “may influence students’ course learning outcomes” (p. 271). These are organization and presentation of content, learning objectives and assessments, interpersonal interactions, and the use of technology (p. 271). Smith Jaggars and Xu found that, “while well-organized courses with well-specified learning objectives are certainly desirable, these design features do not significantly predict student learning outcomes per se. Among the four design features examined, only the quality of interpersonal interaction with a course relates positively and significantly to student grades” (p. 271). Students who have success academically are more likely to persist in an online distance education.

While the research indicates several factors that contribute to student success in online distance education, a common theme found across the research is the importance of student interactions on student success which in turn, translates into students completing courses and programs (i.e., student persistence). Swan (2001) indicated that student interactions are an important factor in student success in online distance education courses. She also indicated that well designed courses that allow for increased access to instructors is an influencing factor in student success. She found that students who perceived they had a high level of interactions with an instructor reported higher levels of satisfaction with the course than students who believed they had less instructor interaction (Swan, 2001, p. 316). These interactions help students feel connected rather than feeling isolated (Hawkins, Barbour, & Graham, 2012). Further, Shea et al. (2005) indicated that feeling connected is an important element that students need to be successful. Online distance education students need to feel connected to their peers, instructors, and the program. This sense of community and feeling connected helps increase student academic success and persistence (Baker, 2010; Johnston, Killion, & Oomen, 2005; Willging & Johnson, 2004).

**Literature Review Summary**

There is a large body of research that examines student success in online distance education and the factors that contribute to this success. The work of Rovai (2003) and subsequent research (e.g., Gazza & Hunker, 2014; Lee & Choi, 2011; Park, Perry, & Edwards, 2011; Waugh & Su-Searle, 2014) that is influenced by his Composite Persistence Model describe factors that contribute to student success and persistence in online distance education courses and programs. One of the most common factors identified is the need for student interactions and communication that leads to students feeling connected. While research has examined cultural characteristics and traits associated with students
enrolled in online distance education courses and programs, few have directly examined how interaction and communication preferences impact student connectedness. Our research adds to the literature regarding cultural aspects of communication behaviors, patterns, and preferences that could contribute to online DE students feeling connected to their peers, instructors, and program, which the research indicates contributes to student persistence (Baker, 2010; Johnston, Killion, & Oomen, 2005; Rovai, 2003; Willging & Johnson, 2004).

**Methodology**

**Participants and Setting**

Alumni of a fully online Master’s Degree in Educational Technology at a large urban university in Southern California were invited by email to participate in the study. A prerequisite for admission into the program is for a candidate to have a teaching credential or at least two years equivalent experience. Application data indicates that approximately 90% of candidates in the program are located throughout California, with the remaining teaching internationally or in neighbouring states. The program is organized on a cohort model of 25 students per cohort on average. The program accepts applications for both fall and spring semesters; historically, fall semester enrolment is approximately four times larger than spring enrolment.

Faculty teaching in the program work as a development and instructional team. As a result, we have meetings to develop curriculum and learning experiences for our students, and the two full professor, co-directors of the program have mentored and co-taught courses with all adjunct faculty teaching in their first semester. In addition to the co-directors who both have educational technology expertise, a third full-time, tenure-track, faculty member has educational technology expertise. A fourth full-time tenured faculty member has expertise in curriculum and diversity. Of the adjunct faculty, all have doctoral degrees in either Educational Technology or Educational Leadership. One of the co-directors serves in both an instructional and advisory capacity, communicating with candidates throughout the application process as well as keeping students informed of program requirements, such as registration, textbooks, and university deadlines. Additionally, this faculty member checks in with students on a regular basis to help refocus them when it seems stress levels are rising.

The 30-unit program is designed to be completed in four semesters over 16 months; this includes a summer semester. Students take core courses, such as educational research, learning theory, and curriculum development, along with educational technology courses that focus on distance education, instructional design, web design and instruction, critical thinking and creativity, and technology professional development. Students complete a culminating course in which they develop a professional portfolio and complete a theory-into-practice project demonstrating research-based practices of technology leadership. PowerSchool’s Haiku Learning Management System (LMS) (an LMS designed for use in K-12) is used as the primary virtual instructional environment. This LMS was chosen purposefully for course delivery because we felt it was a way to model effective integration of a tool that is used in K-12 classrooms.

In addition to courses, students were invited to be part of social events twice a year—once at a national technology conference and once at a restaurant that was chosen due to a location relatively central to where most of our students live or work. Attendance at these events is voluntary. Approximately 75 students have attended each event per year for the past three years. The program also hosts a free, annual technology and creativity conference that is open to the public.
The participants were selected using a purposive sample approach. A total of 180 individuals (graduates from the past three years) were invited via e-mail to participate in the study. We went back three years because we had reliable access to these students’ current e-mail addresses. Sixty students agreed to participate in the study. Although 60 started the survey, only 50 completed all three parts of the survey (demographics, self-reported cultural identity, and reflection of sense of connectedness). Our study focuses on these 50 participants.

**Research Methods, Data Sources, and Data Collection**

The research method used was mixed-methods. Quantitative data using an online survey was gathered. Qualitative data was gathered through follow-up interviews that consisted of open-ended questions. Participants were invited via email to complete an online survey (Appendix) aimed at understanding their self-identified cultural orientation and perceived sense of connectedness to the online program, their peers, and program instructors. Additionally, participants were asked demographic questions such as gender, family college history, and ethnicity. To determine self-identified cultural orientation, we adapted a survey (Oddou & Derr, 1999) found online and used in the literature that asked participants to reflect on their cultural orientation. For example, participants were prompted to respond to Likert-type questions (strongly agree [5] through to strongly disagree [1]) on statements such as: “In my spare time, I am more likely to be found doing something by myself than with others” and “If I had some significant problems I needed help solving, I have any number of friends I could easily turn to for help.” We anticipated that the survey took between 20-30 minutes to complete. Participants were also invited to share their email addresses if they were interested in being part of an interview pool for follow-up questions.

**Data Analysis**

Data analysis was conducted using a multistep process. First, we identified participant self-reported cultural orientation. The scoring guide for the cultural orientation survey guided us to score responses from 1-5 based on the degree with which the participants agreed with the statement. For example, a response in which a participant marked strongly disagree (1) earned 5 points and a strongly agree (5) earned 1 point. It should be noted that half of the questions were worded such that the agree/disagree scores were in fact reversed. Totals were calculated and grouped in the following way: 80-100 points was considered a high-context individual; 60-79 points was considered a medium-context individual; and 40-59 points was considered a low-context individual. At this point of our data analysis, we found that we could not classify participants as being from a low-context or high-context cultures based on their responses to this survey. Consequently, self-identified ethnicity was used to determine cultural orientation. For example, individuals who self-identified as being of African, Asian, Latin American, or Middle Eastern descent were categorized as having high-context cultural orientation.

Second, we looked at the connectedness questions and simply aggregated the number of responses across the levels (strongly agree-strongly disagree). Because the focus of the study was to determine if our high-context students felt connected to the program, peers and instructors, we isolated the responses to any open-ended questions of the individuals who self-identified as being from a high-context culture. These were not coded but were used to provide specific examples of how participants felt about connectedness.
Lastly, because we did not have any individuals who scored in the high-context cultural orientation range, we emailed all individuals who agreed to be interviewed and asked them to complete the sentence, “I was initially apprehensive to join a fully online program because...”. We asked this question specifically to help us better understand what elements of a fully online graduate program might be prohibitive to individuals whose ethnic backgrounds are associated with high-context cultures.

Data and Findings

Of the approximately 180 individuals (graduates from the past three years) who were invited to complete the survey, 60 started the survey and 50 completed all three parts of the survey (demographics, self-reported cultural identity, and reflection of sense of connectedness). Of the survey completers, all but six were born in the United States. Three of the six were Asian, one was Hispanic, and two self-identified as being White.

The most striking finding of this study—one that impacted data analysis and how we considered our guiding questions—was that despite approximately one third (n = 18) of survey completers self-identifying as Hispanic or Asian (e.g., Chinese, Filipino, Indian, Japanese, Korean) all who completed had a total survey score of less than 60, which indicates having a preference for a low-context communication style. This finding prompted us to question if perhaps the reason no-one self-identified as having high-context communication preferences was because an online program does not attract this type of learner.

Consequently, we reached out to the survey completers who agreed to be contacted for follow up interviews and asked them to clarify their response to the question about apprehension for starting an online program. Fourteen individuals responded and all self-identified ethnicities were represented. Of these, two were apprehensive about workload while teaching full time, two were apprehensive about lacking technology proficiency, and 12 were apprehensive about joining an online program because they were not sure there would be enough social presence. Statements such as, “I was afraid I wouldn't get the same interaction with others as I would sitting in a classroom” (self-identified as Mexican-American), “I felt that I would be missing on the intimate experience of being able to have discourse with my professors and peers in a face-to-face setting” (self-identified as White), and “I enjoy working alongside others and felt that the online course may not afford me the opportunity to do this” (self-identified as Indian) are representative of individuals who value high-context communication. We explore this paradox more deeply through the two research questions.

RQ1. What perceptions do students from high and low-context cultures have about being connected to the online Master’s program, their peers in the program, and the professors in the program?

RQ2. What specific elements about course and program design and implementation led students from high-context and low-context cultures to feel connected?

Knowing that our survey completers were all categorized as valuing a low-context communication style, yet at the same time having traits and concerns more reflective of high-context cultures, we examined the data relevant to this question for all survey completers. We looked more closely, however, at those who potentially should be considered high-context.
When we consider the overall connectedness survey completers felt, it is important to consider this in relationship to the time since the students graduated. Of the survey completers, 14 graduated two years prior to survey completion, 32 graduated one year prior, and four had just completed the program. This indicates to us that the degree of connectedness extends beyond program duration. Participants were asked about both current (since graduation) and prior (during the program) levels of connectedness to the program. In sum, 46 of 50 survey completers felt connected or extremely connected while in the program. This number dropped slightly to 32 having this same sense of connection after one or two years out of the program.

To explore this more deeply and examine the impact of relationships on this feeling of connectedness, we examined how survey completers felt about being connected to peers and professors. Table 2 shows responses to questions asking more specifically about connections to peers and professors during the program.

Table 2: Summary of Participant Responses to Question about how Strongly they Felt they Knew their Peers and Instructors while in the Program.

<table>
<thead>
<tr>
<th>Q: I feel I knew my ____ in the program well.</th>
<th>Peers</th>
<th>Instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Agree</td>
<td>30</td>
<td>14</td>
</tr>
<tr>
<td>Neither Agree or Disagree</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

From Table 2, we can see that connections with faculty played a larger role in feeling connectedness to the program than did connections with peers. Table 3 compares this to survey completers’ sense of connectedness in their other educational experience.

From Table 3, we can further infer that the sense of connectedness to the program is dependent on the student sense of connectedness to the instructor and to a lesser extent their peers. Question two explores this in more depth:

*What specific elements about course and program design and implementation led students from high-context and low-context cultures to feel connected?*
Table 3: Summary of Participant Responses to Question about how Strongly they Felt Connected to Peers and Instructors while in the Program versus Other Programs they have been in.

<table>
<thead>
<tr>
<th>Q: I feel more connected to ____ than I have in other programs.</th>
<th>Peers</th>
<th>Instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Agree</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Neither Agree or Disagree</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Disagree</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

As we found from examining levels of connectedness to the program, survey completers felt connected to the program both during the program and after graduating. Over half indicated that they felt more connected to instructors and peers in this program than in face-to-face programs they had been part of. Data from the open-ended questions indicated that there were several contributing factors to this level of connectedness: communication, community, and course design.

A common theme in responses to the open-ended questions about connectedness to the program was communication. Students discussed the value of emails related to coursework and personal life (e.g., birthdays, family issues). Additionally, students indicated that being able to contact the instructors via instant messaging and Voxer gave them a strong sense of connectedness to the program.

Comments, like the ones that immediately follow, highlight ways in which the program purposefully considered high-context communication preferences.

- “The amount of communication avenues that were provided by the Faculty for students to connect with them and others in the program was phenomenal.” and

- “The amount of communication between instructor and student, and student to student created a strong sense of community.”

In addition to communication, a sense of feeling valued by professors made students feel connected to the program: “The type of feedback and communication between myself and the teachers made me feel valued—not just as a student but as a professional.” This comment reminded us of the importance of the role the professor plays in helping students feel connected.

A second theme that emerged regarding helping students feel connected to the program was something that we purposefully developed to promote community—extra-curricular events and an
online community. This was highlighted in the following student comment: “The elements of the program that made me feel most like I was part of the program community were the extracurricular events such as the TCS conference and the meetup at Dave n Busters.” Others discussed the Google Plus community (that students join prior to the first day of class) and other face-to-face events where they could “put physical names and faces to my peers in person.”

Finally, students commented on course design as an element that helped them have a sense of connectedness to the program. This was noticeable specifically in comments shared by individuals who identified as being from cultures that typically prefer high-context communication styles and are from what are considered as collectivist cultures. For example, a Korean survey completer stated, “The projects and the work we had to complete were highly collaborative and required a lot of communication with each other. I felt most connected with group work.” A Mexican-American also commented on the design elements of the courses and program:

I felt extremely connected with the consistency in the program. The grade alike groups and projects made me feel connected. Opportunities to discuss educational transient issues with participants and professors, made me feel connected. Utilizing video chat also made me feel connected to the online community.

Others confirmed this by commenting on specific elements that helped them feel connected to the program. Elements mentioned were explicit discussion board expectations and the active engagement of instructors, group projects, social media presence of the program and instructors, the cohort model, quality of instructor feedback, and the general interactive design of courses.

In sum, the data indicated that the role of the instructor, the interactive nature of the program, and the purposeful design of courses all contributed to the survey completers sense of connectedness to the program.

Discussion

The findings point to five major elements focused on course and program design that led to students indicating they felt connected to the program, instructors, and their peers. These elements were acculturation, interpersonal interactions, course and program level design elements, self-directed learning, and culturally-responsive teaching. These elements are related to communication preferences and practices associated with the work of Hall (1976) on high-context and low-context cultures.

Acculturation

We found that despite having students in our program who Hall would characterize as being from high-context cultures, all participants identified as being low-context on the survey we administered. Although this may seem counter intuitive, we believe that it can be explained as Gudykunst et al. (1996) indicated: “The culture in which individuals are raised influences the way individuals are socialized in terms of individualistic and collectivistic tendencies” (p. 511). Therefore, while we have students who are considered to be from high-context cultures (which are typically associated with collectivist cultures), because they have been raised in a low-context culture (i.e., the United States, which is generally considered to be an individualistic culture) they have become acculturated. We postulate that these students have adapted to or developed skills needed to communicate in ways that are considered low-context.
Interpersonal Interactions

Our findings suggest that during the program our students felt a high level of connectedness. They indicated feeling connected to the program, the instructors, and their peers. Additionally, many indicated that they continue to feel connected after graduation. Students indicated feeling connected to program instructors more than to their peers. In particular, many of our students indicated a high level of connectedness to the two program directors. This is not surprising considering that one of the program directors is the key contact for students during the application and admission process and throughout the program.

The primary reasons cited for student connectedness were the varied communication methods available, the regularity of communication, and the consistency of the communication—especially from the program directors. This finding is consistent with the research of Smith Jaggars and Xu (2016) who examined the impact that four online course design features (course organization and presentation, learning objectives and assessments, interpersonal interactions, technology) had on student performance. The researchers found that, “Among the four design features examined, only the quality of interpersonal interaction within a course relates positively and significantly to student grades” (p. 271). Smith Jaggars and Xu indicated that frequent and effective interactions between students and instructors encourages students to be more engaged and committed, leading to their success in a course. It is important to note that despite our study not focusing directly on student performance, research (e.g., Park & Choi, 2009; Rovai, 2003; Yang, Baldwin, & Snelson, 2017) supports the notion that student connectedness is related to student success and persistence. Students who persist in online courses and programs typically are those who feel connected; therefore, we believe that our findings are related to research on online student success and persistence.

Course and Program Level Design Elements

Although our findings suggest that frequent, varied, and effective interactions between students and instructors were a primary reason that our students felt connected, the data also indicated that other course and program elements were considered important by our students in helping them feel connected. Course design elements such as the inclusion of group projects, interactivity (e.g., discussions, use of audio and video, use of collaborative tools), use of various communication tools, and quality feedback from instructors were listed by students as elements helping them feel connected. Program design elements such as the cohort model and the virtual program community helped students feel connected. These findings are consistent with the research of Park and Choi (2009) and Yang, Baldwin, and Snelson (2017) who examined online student persistence and success in online courses and programs. These researchers indicated that proper program support, instructor support for students, and personal support for students all contributed to student success and persistence.

Self-Directed Learners

Our students’ responses indicate that they value the varied methods and opportunities for communication, engagement, and interactions provided throughout the program. These opportunities were deliberately designed because part of our program philosophy is to help students become self-directed learners. Knowles (1975) indicated that self-directed learning is “a process in which individuals take the initiative, with or without the help of others, to diagnose their learning needs, formulate learning goals, identify resources for learning, select and implement learning
strategies, and evaluate learning outcomes” (p. 10). Moore and Kearsley (1996) suggested that online students who can use a self-directed learning approach will perform better than those who cannot. We believe that the focus on helping students become self-directed learners through varied methods and opportunities for communication, engagement, and interactions using different tools is successful because students have the chance to communicate using a method they prefer. We discovered that our program and course design includes communication methods that meet the preferences of individuals from high-context and low-context cultures.

**Culturally-Responsive Teaching**

We found that students who indicated a high level of connectedness also felt that they were valued. The following is a student comment that typifies this:

The type of feedback and communication between myself and the teachers made me feel valued—not just as a student but as a professional. There were many times that myself and my fellow cohortians were given the opportunity to give our expertise and that to me is very special. This also tells me that they see and value our skills/knowledge.

We believe that our deliberate design of the program and courses to include opportunities for communication that meets the preferences of individuals from high-context cultures and low-context cultures has helped foster culturally-responsive teaching. Culturally-responsive teaching provides students from diverse cultural backgrounds with an environment in which to be successful (Banks, 2008; Gay, 2010, 2013; Ladson-Billings, 2014). Culturally-responsive teaching embraces student diversity, prior knowledge and experience, and learning and communication preferences (Siwatu, 2007). Researchers (Gay, 2010, 2013; Nieto, 1999; Villegas & Lucas, 2002) have indicated that culturally-responsive teaching can lead to learning environments where students feel that their cultural backgrounds are valued, which can enhance learning.

Additionally, we believe that the online learning environment provides an excellent space wherein culturally-responsive teaching can be integrated seamlessly because the nature of the environment can help reduce obstacles to communication generally associated with body language, gestures, and other nonverbal cues that often can hinder communication in face-to-face interactions. Although, the online environment is not completely free of nonverbal cues, they are often less prevalent due to the asynchronous nature of most online courses.

**Implications for Design and Practice**

Despite the limitations of examining one online graduate program, knowledge gained from this study could help improve the design of online programs and courses to help students feel connected. We have three major recommendations to consider. *First*, it is important to start the design process with the understanding that students from high-context and low-contexts cultures can have different communication and engagement preferences (Hall, 1977; Hall & Hall, 1990). However, it is equally important to understand that they will not exclusively communicate and engage using only a high-context or low-context approach; they will use a combination of both approaches. Additionally, students can learn to communicate and engage in ways that are not natural to them, if they are provided specific guidance on expectations, have communication modeled, and are provided with the tools and opportunities to communicate easily. Stated differently, students can become bicultural; thus, they become comfortable in high-context and low-context cultural settings. As a result, we suggest deliberate design and implementation of varied communication methods that meet the
communication preferences of individuals from high-context and low-context cultures. Our data indicate—as does other research (Smith Jaggars & Xu, 2016)—that frequent, varied, and effective interactions between students and instructors is crucial for helping students feel successful and connected.

Second, communication needs to take place throughout the program—not just during courses—for students to feel connected. Park and Choi (2009) discussed this idea, but specifically related to the teaching of a course. We feel it can be expanded to an entire online program. They indicated that for a course, “it is important to consider learners’ situations while managing or maintaining the course so that learners can get help if needed. In the event that an instructor knows that learners are not receiving enough support from their family and organization, he/she might help the learners stay in the course by paying extra attention, using appropriate motivational strategies, and providing additional internal support” (p. 215). Putting into place communication approaches that help students remain engaged and motivated will help students feel connected. These include elements at the program level such as consistent and individualized communication from program directors, the opportunity for students and potential students to communicate with program staff and faculty using different communication methods, and developing a virtual community for students to communicate outside of the classroom.

Third, it is important for online instructors to understand their communication and engagement preferences. We suggest that online instructors take the high-context and low-context communication preferences survey. The results can provide an instructor with insights into how the instructor prefers to communicate and engage. Having this understanding can provide awareness for the instructor as the instructor designs and implements an online course. Additionally, it can be helpful for online instructors to understand their culturally-responsive teaching knowledge and practices (Heitner & Jennings, 2016). This understanding can help instructors provide appropriate communication and engagement opportunities for their students that take into consideration their students’ cultural backgrounds.

**Conclusion and Future Research**

We set out to determine the level of connectedness our students from high-context cultures and low-context cultures—as defined by Hall (1976, 2000)—had to our program, instructors, and their peers. We first discovered that despite having students from what are often considered high-context cultures, all participating students self-identified as having low-context communication preferences. We found that most of the students who participated in the study felt a high level of connectedness to the program, the instructors, and their peers primarily because of the various communication methods and practices that have been thoughtfully and deliberately designed throughout our program. In examining the communication methods and practices we provide in our program, we observed that we included methods that fit the preferences for individuals from high-context cultures and low-context cultures. As a result, our courses and program have been designed to accommodate a wide-range of communication and engagement preference that help students feel connected. This has fostered robust online interactions amongst students and instructors resulting in a supportive network of engaged graduate students and instructors from varied backgrounds who feel connected.

Considering our findings, the field of online teaching and learning would benefit from additional research on exploring communication and engagement preferences of online students. Similar studies
with different student populations (in the U.S. and internationally) could bring additional insights into course and program elements that impact student connectedness. Research that includes undergraduates could be useful in determining if the elements of online courses and programs that lead undergraduates to feeling connected are different than those of graduate students. Finally, an exploration of the impact that online instructor communication and engagement preferences have on their students’ levels of connectedness could also provide useful insights into the design and implementation of online courses and programs.

References


Rovai, A.P. (2003). In search of persistence in rates in distance education online programs. Internet and Higher Education, 6(1), 1-16.


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Appendix

Online Graduate Student Perceptions of Connectedness to Program Community (F16)

Consent to Participate in Research

Introduction and Purpose
Hello! We are Drs. Loretta Donovan and Tim Green. We are professors at the California State University, Fullerton in the Department of Elementary and Bilingual Education. We are extending this invitation to you to take part in our research study that focuses on online graduate student perceptions about being connected to the community of an online graduate program. The study focuses specifically on the Masters Program in Educational Technology at the California State University, Fullerton that you are a part of as a graduate student.

Procedures
If you agree to participate in our research project, you will complete a survey using a Web-based survey tool called SurveyMonkey. We anticipate that the survey will take approximately 20-30 minutes to complete. In addition you may chose to be part of an interview pool at the end of your program. Interviews will be conducted via Skype, Google Hangout or telephone at a time convenient to you. We anticipate interviews to last approximately 10 minutes and the interview will not be recorded. The purpose of the interview is to gain deeper insights into your sense of belonging (or not) in the online graduate program.

Benefits
There is no direct benefit to you from taking part in this. It is hoped that the research will help identify elements that help promote community for online graduate students who graduate from online graduate degrees.

Risks/Discomforts
You are free to decline to answer any questions you don't wish to answer. You are also free to stop completing the survey at any time. As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk. The major precaution is to not ask for you to include your name in the survey.

Confidentiality
Your study data will be handled as confidentially as possible. If results of this study are published or presented, individual names and other personally identifiable information will not be used. Confidentiality will be provided to the extent allowed by law.

Only the research team (Drs. Donovan and Green) has access to the data stored securely online through a password-protected account on the SurveyMonkey site. When this research study is finished, we may save the survey data for use in future research done by our research team. We will retain the data for up to 2 years after the study is over. The same measures described above will be taken to protect confidentiality of this study data.

Compensation
You will not be compensated for taking part in this study.

Rights
Participation in research is completely voluntary. You are free to decline to take part in the project. You can decline to answer any questions and are free to stop taking part in the project at any time. Whether or not you choose to participate in the research and whether or not you choose to answer a question or continue participating in the project, there will be no penalty to you or loss of benefits to which you are otherwise entitled.

Questions
If you have any questions about this research, please feel free to contact me. I can be reached at idonovan@fullerton.edu or tgreen@fullerton.edu. You can also call 657.278.7614 or 657.278.8221.

If you have any questions about your rights or treatment as a research participant in this study, please contact the Institutional Review Board office at California State University, Fullerton. IRB email is irb@fullerton.edu

Consent
By selecting the button next to I give my consent to participate in this study, you are agreeing to take part in our study. This will be in place of your signature.

* 1. Please select one of the following:
   - [ ] I give my consent to take part in this study.
   - [ ] I do not give my consent to take part in this study.

2. Please share your email address if you would be willing to be part of an interview pool.

   

   Online Graduate Student Perceptions of Connectedness to Program Community (F16)

   Demographic Information

   Please answer questions honestly. Thank you!

* 3. When did you start the program?
4. Gender
   ○ Male
   ○ Female
   ○ Prefer not to answer
   ○ Other (please specify)

5. I am the first in my family to graduate from college with an undergraduate degree?
   ○ Yes
   ○ No
   ○ I am not sure.

6. I am the first in my family to go to graduate school?
   ○ Yes
   ○ No
   ○ I do not know.

7. I was born in the United States?
   ○ Yes
   ○ No

8. What is your ethnicity? Type in your answer.

9. What age range do you fall in?
   ○ 20-29
   ○ 30-39
   ○ 40-49
   ○ 50-69
   ○ 60-69
   ○ 70+
10. As a student, I have a documented disability.
   ( ) Yes
   ( ) No
   ( ) I prefer not to say.

11. To what extent did you engage in the G+ community prior to the first day of class
   ( ) I joined the community and introduced myself only
   ( ) I joined the community, introduced myself, and read about my classmates and professors
   ( ) I joined, introduced myself, and read about my classmates and professors and responded to a few people
   ( ) I didn’t join the community at all

Online Graduate Student Perceptions of Connectedness to Program Community (F16)

Technology Use and Community Building

The following questions are designed to determine what methods and strategies helped you the most in feeling part of the MS in Educational Technology Program community. There are no incorrect answers. Answer based on your own feelings and perceptions.

When you read the word Program, we are referring to the Masters in Educational Technology Program.

12. When I started the Program I was initially apprehensive about having it 100% online.
   ( ) I completely agree.
   ( ) I agree.
   ( ) I neither agree or disagree.
   ( ) I disagree.
   ( ) I completely disagree.
* 13. I believe that in my first semester in the program I was given opportunities to discuss and explore issues related to equality and equity with regard to educational experiences of students.
   - I completely agree.
   - I agree.
   - I neither agree or disagree.
   - I disagree.
   - I completely disagree.

* 14. How connected do you currently feel to the Program?
   - Extremely Connected
   - Connected.
   - Neither connected or unconnected.
   - Marginally connected.
   - Not connected at all.

* 15. I feel that I know my peers in the Program well.
   - Strongly agree.
   - Agree.
   - Neither agree or disagree.
   - Disagree.
   - Strongly disagree.

* 16. I feel that I knew my instructors in the program well.
   - Strongly agree.
   - Agree.
   - Neither agree or disagree.
   - Disagree.
   - Strongly disagree.
17. At the end of my first semester, I feel like a valued member of the Program community.

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

18. Please describe what elements made you feel part of the community and what elements did not make you feel part of the community.

19. During my first semester in the Program, I feel that my cultural background and experiences were valued.

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree

20. During the first semester, I was given opportunities throughout my courses to communicate with my peers using methods that were comfortable to me.

- Strongly Agree
- Agree
- Neither Agree or Disagree
- Disagree
- Strongly Disagree
21. During the first semester, I was given opportunities throughout my courses to communicate with my instructors using methods that were comfortable to me.

☐ Strongly Agree
☐ Agree
☐ Neither Agree or Disagree
☐ Disagree
☐ Strongly Disagree

22. During the first semester, I had multiple opportunities to be part of the Program community.

☐ Strongly Agree
☐ Agree
☐ Neither Agree or Disagree
☐ Disagree
☐ Strongly Disagree

23. What elements or aspects of the program made you feel most like you were part of the Program community? Please be specific.

☐ Strongly Agree
☐ Agree
☐ Neither Agree or Disagree
☐ Disagree
☐ Strongly Disagree

24. I feel like I was more connected to my peers in the Program than I have been with peers in other graduate or undergraduate programs I have been involved in.

☐ Strongly Agree
☐ Agree
☐ Neither Agree or Disagree
☐ Disagree
☐ Strongly Disagree
25. I feel like I was more connected to my instructors in the Program than I have been with instructors in other graduate or undergraduate programs I have been involved in.
   - Strongly Agree
   - Agree
   - Neither Agree or Disagree
   - Disagree
   - Strongly Disagree

26. During the first semester, I felt comfortable communicating with my instructors in the program.
   - Strongly Agree
   - Agree
   - Neither Agree or Disagree
   - Disagree
   - Strongly Disagree

27. During the first semester, I felt comfortable communicating with my peers in my cohort.
   - Strongly Agree
   - Agree
   - Neither Agree or Disagree
   - Disagree
   - Strongly Disagree

28. I feel like I continue to have multiple opportunities to be engaged in the Program community despite being finished with the Program.
   - Strongly Agree
   - Agree
   - Neither Agree or Disagree
   - Disagree
   - Strongly Disagree
29. What experiences or elements of the program made you feel like an engaged and connected member of your cohort? Please briefly explain. If you did not feel engaged or connected, please let us know this as well.


Online Graduate Student Perceptions of Connectedness to Program Community (F16)
Assessing Your Cultural Orientation

30. Read each statement and determine to what degree you agree with the statement.

<table>
<thead>
<tr>
<th>I typically find myself much more preoccupied with making short-term plans (i.e., what I'm going to do this weekend) than long-term ones (i.e., what I'm planning on doing or being in several days).</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>In my spare time, I am more likely to be found doing something by myself than with others.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>When someone is correcting me, I would rather the person just tell me what he or she doesn't like and make &quot;suggestions.&quot;</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>My natural work style is to finish one thing before moving on to the next.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>A commitment I have made to others is more likely to supersede one I've made to myself.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>I felt comfortable talking about subjects like my future, my family, and so on, with most people, even if I have only known them a short while.</td>
</tr>
<tr>
<td>I prefer having things completely spelled out from the beginning than to start operating without an overview of the situation.</td>
</tr>
<tr>
<td>I would feel more uncomfortable having a contract that doesn't list every detail pertaining to the agreement than to have some &quot;gray&quot; areas which would require negotiating later on.</td>
</tr>
<tr>
<td>Having a hedge or wall around my house would seem to confining to me.</td>
</tr>
<tr>
<td>It is usually better to call &quot;a spade a spade&quot; (be direct) than to hide a situation's &quot;true colors&quot; (be indirect).</td>
</tr>
<tr>
<td>It bothers me when I am late to an appointment.</td>
</tr>
<tr>
<td>If my boss or teacher were wrong, I would be more likely to tell her or him than to simply suggest there might be another answer.</td>
</tr>
</tbody>
</table>
31. Read each statement and determine to what degree you agree with the statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>I strongly agree</th>
<th>I generally agree</th>
<th>I am somewhat neutral</th>
<th>I generally disagree</th>
<th>I strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I probably feel more comfortable having a clearly defined place that is mine where I can control whom I interact with.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>If I had some significant problems I needed help solving, I have any number of friends I could easily turn to for help.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I dislike it when things don’t go according to plans.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have several really close friends who are friends for life rather than a lot of friends who come and go in my life.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Beyond knowing my first name, I consider my age, my family, my profession (or my parent’s profession) as private matters reserved for only a few close friends.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Changing plans—even at the last minute—is no problem for me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>A fair amount of my spare time is spent phoning, texting, or emailing friends I don’t see often.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>