GETTING TO KNOW YOU: USING MUSIC TO GAIN AWARENESS OF INTERCULTURAL PERSPECTIVES THROUGH TECHNOLOGY

A Dissertation by

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The following faculty members have examined the final copy of this dissertation for form and content, and recommends that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Leadership.

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DEDICATION

To the students and teachers
who inspired this work and
took a risk by embedding this project
in their music coursework;
to all those who
support and follow their progress,
and to those with the insight
and courage to carry it further.

ACKNOWLEDGMENTS

It is with the deepest of gratitude that I wish to thank my dissertation chair, Glyn Rimmington. His support and guidance throughout this process has allowed me unprecedented experiences, I once thought would never happen. Also recognized are the contributions of my dissertation committee, both prior to and during the dissertation process. Without their collective wisdom and support, this journey would not have been conceived or realized.

The giving nature of so many who touched this dissertation project in some way is also celebrated. By nature of the profession, teachers want their students to succeed and often give all they have to that end. This is true for the teachers who agreed to take a chance on a global project, using technology they had not previous used. Special thanks to Travis, Susana, Cristina, Juan, Paco, Ms. Onchi, Guenter, and over 70 students who were willing to listen to an idea and said "yes" to this project without knowing what the outcome might bring. Though outcomes were varied, the connections and learning along the way created irreplaceable learning experiences and memories.

Finally, to those who inspire, teach, and give me courage to learn and teach others. With heartfelt gratitude, I thank you all.

ABSTRACT

Access to mobile communication technology is a characteristic that makes today's learners different and presents challenges and opportunities to develop twenty-first century skills in a globalized society. This qualitative study involved students and teachers using synchronous and asynchronous web-based social networks and recording software to communicate and compose music. Dialogue was captured and analyzed for levels of interaction and mindsets to determine if such a collaborative could cultivate an awareness of others' perspectives and the feasibility of using social networks in K-12 educational settings for this purpose. There were strong indications that global reach projects using technologies in K-12 education do have the potential for students to become aware of others' perspectives; however changes in educational policy are needed.

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CHAPTER 1

INTRODUCTION: ACCESS TO THE WORLD

Since the late twentieth century, the ability to connect and communicate with others has been available through a variety of Information and Communication Technologies (ICT). While technologies exist and are being used, overlooked factors in using communication technologies are the sharing and taking of multiple perspectives. Uncertainty about communication competencies exists when working with people from other, as well as one's own culture. Into the twenty-first century, the increasingly numerous modes of how people relate to one another has become increasingly evident (Prensky, 2001; Sessa, Kabacoff, Deal, & Brown, 2007; Westerman & Yamamura, 2007; Yu & Miller, 2003). From 2001 to 2005, the number of the world's cell phone subscribers increased by 24% each year (Chafe, 2007). On average of ten to fifteen million people communicates on Skype, the world's leader in one-to one videoconference service. Skype has over 370 million registered users around the world, including users in South Africa, the Netherlands, and Malta, with the ability to provide connections at no or little cost (Skype, 2009). Not only has technology made the world available, it has nurtured a culture of immediacy. Each poses opportunities and challenges in today's classrooms. Access to information and entertainment is immediate and mobile, making the twenty-first century learner different from those of previous generations. Younger generations are used to using a variety of devices for these purposes.

Using technology to broaden perspectives

A recent focus for some educators has been the characterization of the twenty-first century learner. The Partnership for 21st Century Skills (Kansas State Department of Education,

2008; Vockley, 2007) have identified twenty-first century skills as creativity and innovation, effective communicating and collaborating, critical thinking and problem solving, flexibility and adaptability, social ad cross-cultural skills, ICT and media literacy, initiative and self-direction, productivity and accountability, leadership and responsibility, and employment and career development. These process skills are important in the twenty-first century due to globalization factors, often involving these skills in conjunction with technologies to understand and work with each other.

Embracing the opportunity to learn through disorienting experiences when sharing perspectives, within or outside of one's culture, is possible in the classroom context. However, this is not to imply that the availability of ICT means they are used without structure and purpose in classrooms where students may be most knowledgeable (Cummins & Sayers, 1995; Kreijns, Kirschner, & Jochems, 2003). Prensky (2001) introduced the term *digital native*, to describe a generation of people born during the 1990s, a time of rapid technological change. Digital natives are largely unaware of the world as it existed without modern communication technologies. Prensky labeled prior generations, *digital immigrants*, drawing the analogy between geographic migrants and those born in the host country, in that the immigrant faces significant challenges as they try to assimilate into a different culture. Digital immigrants, who were born in the first half of the twentieth century, also known as the G.I. 1916-1925, Silent 1926-1938. G.I. and Boomer 1945-1960 generations (Strauss & Howe, 1991), will most likely struggle with relating to digital natives. Some people born later, Boomer and Generation X 1961-1981, born in the mid-1940s to 1981 (Strauss & Howe, 1991) have invested time in learning this new culture. Such an investment involves gaining competence in the use of an array of technological tools and the associated terminology. Modern communication technologies diminish geographical barriers and

bring together people from far-flung parts of the planet. The same technologies enable new ways of learning. Millennials 1982-2010 or Generation Y 1971-1995 (Strauss & Howe, 1991) ranging in age from 18 to 35 in 2009, tend to be most adept at communication technologies use; however younger teens and adults, including adults beyond 73 years of age, use communication technologies for different reasons. This younger generation has grown up connected to the world through texting, social networks and gaming while older generations use the Internet nearly as often for the purposes of shopping, paying bills, and e-mail (Baron, 2004; Chalkiti & Sigala, 2008; Chang, Lee, & Kim, 2006; Ogan, Ozakca, & Groshek, 2008; Williams, Duray, & Reddy, 2006). These differences challenge educators to keep up with their abilities to use technologies. Teachers are often accustomed to being the knowledge providers. When students are able to assume the knowledge provider role for the use and application of technology, teachers experience a shock to their identity as knowledge provider. In this context the roles are reversed, challenging the teacher's mental model of their role. Teachers use technology for different purposes than their students and may not be as adventurous in their attempts to apply technological skills (Cuban, Kirkpatrick, & Peck, 2001; Greenhow, Robelia, & Hughes, 2009). Differences in technology adeptness, particularly in the classroom, can create disorienting experiences, unknown cultural or social interactions. Disorientation can occur when students are more technologically savvy than their teachers, who are used to being the knowledge providers. Tensions can arise from disorientations when teachers see their role as being the knowledge provider. Students have become so proficient with using technologies or figuring out how to use technologies that some teachers avoid using technology due to their discomfort with understanding how to use it and the feeling they will somehow damage the technology. These barriers create classroom situations in which students find it easier to communicate with students

in another country than they do communication with someone of another generation. Teachers who are willing to expand their thinking about their role as a teacher, to that of teacher and facilitator are able to shift their thinking enough to take risks. When teachers are open with their students about trying new approaches, students often support their teachers and classmates, making the learning experience one of value and community. When risks are taken to use technology for global reach interactions, teachers can learn as much from the learning experience as their students. Although ICT is often structured and purposeful, its use to reach beyond geographical boarders poses many opportunities and challenges. While the potential to learn from others is made available, a culture's nationalistic ideals and students' lack of cultural knowledge can impair intercultural communications. Such awareness is important for the ability to successfully share and take perspectives with people from other, as well as one's own culture. With this awareness intercultural communications have a greater chance to be successful, opening communications for working and supporting ideas and ideals, both within a culture and on a global scale. Global and intercultural interactions are a way to bring about an awareness of multiple perspectives in the classroom. Global reach interactions are possible for all grade levels and in any discipline (Harrison & Huntington, 2000; Rimmington & Alagic, 2008; Yershova, Dejaeghere, & Mestenhauser, 2000).

Internet-based videoconferencing allows students to converse with people living in places that previously they could only read about in books (Mcmillan & Morrison, 2006; Ziegler & Dickerson, 1993). This phenomenon, called *global reach* (Rimmington, 2003; Schroeder, 2008; Walters & Adams, 2001; Wang, 2004) provides opportunities for teachers and students to develop *multiple perspectives,* understanding points of view different from their own (Chen & Starsota, 2000; Southworth & Klemm, 1985; Ziegler & Dickerson, 1993). Being able to see the

world from multiple perspectives is an important part of having a *global mindset,* the automaticity of thinking from multiple perspectives (Bowen & Inkpen, 2009; Rimmington & Alagic, 2008).

Ethnocentrism

Enthnocentrism, the tendency to view one's own culture as superior to other cultures and to judge the behaviors and beliefs of others by one's own standards can be a barrier to being aware of the perspectives of others (Dong & Day, 2009; Nills & Shultz, 1997). It is likely that all humans have some degree bias. By contrast, others support the idea of cultural relativism, where one tries to understand another culture in its own context, relative to their own values and beliefs (Dong & Day, 2009). Differences between these two ideologies portray the binary struggle (Adorno & Horkheimer, 1944; Baker, Jensen, & Kolb, 2005; Bhabha, 2008) that dialogue can bring together through an awareness of attitudes and beliefs. Throughout history, the world has seen numerous examples of binarism that have caused great strife. Positive outcomes have resulted through dialogue to gain common viewpoints. Opposing views often breed controversies, as witnessed in civil rights issues and the underpinnings of war. These are examples of the binarism involving ethnocentrism and cultural relativism. Through dialogue, awareness of cultures can provide some equilibrium to intercultural perspectives (Fox, 2003; Geertz, 1984).

Cultural Competence

The term *cultural competence* is widely used in the United States in the fields of health care, medicine, psychology, and education in the context of diversity, referring to cultural subgroups classified by gender, ethnic origin, religion, sexual orientation and age (Ka-yee, Maddux, Galinsky, & Chiu, 2008). Frequently cited definitions (Barrera and Kramer 1997;

Hains, Lynch and Winton, 2000; Giachello, 1995) states, "Cultural competence is a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals and enables that system, agency, or those professionals to work effectively in cross cultural situations." Therefore, cultural competence helps create an effective work environment. It is communication that indicates one's level of awareness of others' perspectives which makes awareness assessable through analysis of communication.

> Chen (1989) defines Intercultural Communication Competence (ICCC) as:
>
> the combination of effectiveness and appropriateness of intercultural communication, where effectiveness relates to personality, worldview, cultural awareness, and behaviors; and where appropriateness related to a demonstrated knowledge of the appropriateness of communicative behavior specific to the verbal, relational and environmental context (p. 118).

Applied to the educational setting, one could conclude that application of appropriate and effective skills within the learning environment (Chen, 1997, 2005; Chen & Starsota, 2000), creates an awareness of ICCC that may lead to a global mindset (Chen, 2005). Each person's experiences are unique and interpretations of experiences influence how a person acts or reacts depending on the context and content of the situation. Therefore, developing intercultural competence is an life-long process as we progress from fixed mindsets associated with narrow contexts to growth and global mindsets associated with the global context (Bainbridge, Lasley, & Sundre, 2003; Lee, 2008).

Intercultural Competencies through Music

Just as one makes assumptions and inferences about people and everyday events, through the arts, one is free to interpret what is seen, heard, and felt based on other life experiences.

Visual arts, drama, and music evoke emotions from ecstasy to suffering, presenting the perspectives of the observer and the observed (Barry, 1996). An individual's genuine interpretation of art opens thinking and acceptance of ideas, transferable outside the arts (Kreber, Klampfleitner, McCune, Bayne, & Knottenbelt, 2007; Mansfield, 2004). Supporting this idea, Nettl (1992) a visionary in the field of ethnomusicology, spent four decades teaching how listening and participating in world music experiences can lead to cultivation of a broader worldview of music that transcends music-cultural descretism (Campbell, 1994, 1997) or the progression from assimilationist to dynamic multiculturalist music education (Elliott, 1989).

Research Questions

Because music is both universal and culturally unique, it could be possible for this medium to bring people together with emerging awareness of perspectives, beyond musical interests. This study will construct meaning of the following questions using inquiry methods aligned with a social constructivist perspective (Blanton, Moorman, & Trathen, 1998):

A. How will global music collaboration create an awareness of intercultural perspectives?
B. How feasible is using technology to connect students for the purpose of creating an awareness of others' perspectives?

The three pieces of interrelated criteria often cited for awareness of others' perspectives are skills, attitude, and behavior (Chen, 1997, 2005; Chen & Starsota, 2000). Although for decades studies have been measuring ICCC, agreement on consistent measures has not been established (Chen, 2005; Chen & Starsota, 2000; Fritz, Mollenberg, & Chen, 2001; Spitzberg, 1993). Due to the emergent nature of this study it was considered open-ended and not fixed in design or presumed results. To lead the dynamic nature of the study, processes for monitoring and observing dialogue were created, implemented, and enhanced (Cavallo, 2004; Hoadley,

2002; The Design-Based Research Collective, 2003). Applying critical reflection, a reflective process used to improve practice (Chiu, 2006; Mezirow, 1998), assisted in recognizing awareness of others' perspectives. The conditions and processes essential to developing an awareness of multiple perspectives are partially captured in the internal set of catalysts of *Third Place Learning*, (Rimmington & Alagic, 2008) where it is noted, there is still much to learn about taking and sharing perspectives. In this case, the focus of the study was on the early stages of creating an awareness of intercultural perspectives by designing a learning environment in which an awareness of intercultural perspectives can be observed through music collaborations (blogs and posts to a ning site) and performance (contributions to an online music recording site) between students in Granada and Madrid, Spain; Graz Austria; and Tokyo and Osaka, Japan; and Wichita, Kansas. For teachers and others to be willing engage in global communications, their mindset or way of thinking about the purposes, risks and benefits play and important part in the success of their efforts.

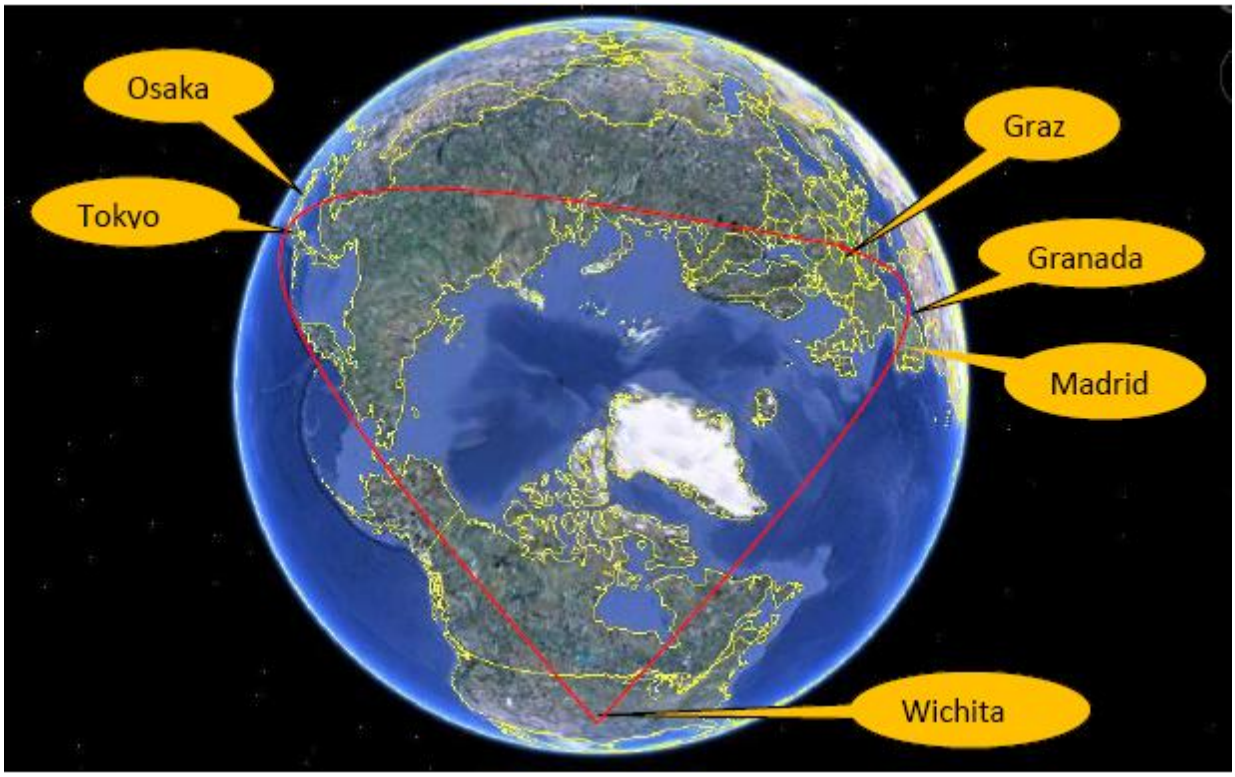

Figure 1: Participant sites (Austria, Madrid, Granada, Tokyo, Osaka, and Wichita)

Mindsets

Mindset is defined as a frame of reference or thinking based in beliefs, favoring particular characteristics along a continuum (Dweck, 2006; Sampson & Smith, 1957).

Fixed mindset, introduced by Carol Dweck (2006), describes the mindset of a person who focuses on proving their capabilities or the worthiness of their position or status. People with a fixed mindset tend to be content with set routines and thinking in set routines.

Growth mindset is an anti-thesis of a fixed mindset. Those with a growth mindset are likely to be interested in improving, learning to do something because they are interested in learning and doing, even if they are not experts. People with a growth mindset are usually creative, flexible in their thinking, and often involved with music (Dweck, 2006).

Global mindset is an extension of a growth mindset. A global mindset is broadened growth, favoring a worldview, a wide world perception of humanity and mankind's challenges. It

is referred to as world-mindedness, internationalization or having a global mindset (Bennett, 1993; Chen, 2005). Possessing a global mindset means having sensitivity to the customs of other people and being able to join one's habits with those of others in an agreeable, appropriate fashion. It also means having the ability to simultaneously see the larger context, as well as components and relationships (Levy, Schon, Taylor, & Boyacigiller, 2007). The person with a global mindset can more easily adapt to new situations based on continual negotiation and renegotiation of meaning by unlearning and relearning (Bandura, 1977; Chen, 1997, 2005; Kitchenham, 2008; Merriam, 2004; Mezirow, 2004; Ormond, 1999; Schechter, 2008; Walker & Shuangye, 2007). A global mindset and worldview bear similarities to ICCC in the areas of cultural awareness, accommodation and contextualization (Chen, 2005). This broadening in mindset, the aptitude to understand multiple perspectives, is a way of thinking that has implications beyond formal education. A global mindset, may be seen as essential to resolve issues common to different cultures such as poverty, health care, and caring for the environmental (Erard, 2006). Ostrom (2007) describes a variety of socio-ecological systems in which the global environment is deteriorating due to human activities (Anderies, Janssen, & Ostrom, 2004; Ostrom et al., 2002; Pirages, 1991; Sneddon, 2000). Reversal of this deterioration will require international cooperation and collaboration. The notion that a single nation or even a super-power is capable of solving global-scale environmental problems (e.g. depletion of the Ozone layer) (Amin, 1996) is false. Failure to achieve solutions through global collaboration could result in irreversible collapse of socio-ecological systems before the end of the twenty-first century (Cwerner, 2000; Rice, 2007, 2009; Zimmerer, 2006).

Direct dialogue, creative thinking, and an understanding of how world cultures are interrelated, are some of the competences that are essential for recognizing and being aware of

multiple perspectives. Innovative global learning experiences can engage students in authentic collaboration that potentially leads to the awareness multiple perspectives and the eventual development of a global mindset. This provides one way to prepare for twenty-first century learning and the global collaboration needed to solve the global problems humanity now faces.

One's development of a global mindset can be observed through the analysis of dialogue, in this case between globally distributed individuals. An individual does not tend to acquire a global mindset without first gaining awareness that others have similar or differing perspectives depending on the context. Here the context is specifically between globally distributed participants. However the same general approach may have utility in the diverse classroom. Analysis of principal identifiers in the development of a global mindset include awareness and experiences of disorientation (Jones, 1995; Lock, 1983; Saavala, 2001); some degree of cultural competence; the awareness and attempt to minimize power relationships; physical, mental and emotional awareness; critical reflection; active listening; perspective sharing; and perspective taking that results in ones' perspective being broadened or a deeper change in the underpinnings of one's values and beliefs (Fox, 2003). Each of these conditions was considered during this study of a global music project.

Global Learning Projects

Innovative programs are available for students around the world to connect and discuss many global issues. External connection providers such as the Global Nomads Group (http://www.gng.org/) (Global Nomads Group, 2008), facilitate programs via video conference connections and intercultural dialogue for teachers and students. Such connections and dialogue can raise awareness of the culture and life of people in other parts of the world therefore cultivating global mindset and multiple perspectives. Connected learners have the opportunity to

speak directly with peers or experts in the field and to learn first-hand about situations, conditions, and perspectives. Consideration of these issues from a variety of perspectives can aid in positive relations while collaborating on the solution of challenging global-scale problems. Videoconference-based interactions are of necessity synchronous and therefore have small windows of opportunity during which students can be engaged due to time zone differences, lack of semester alignment, and differences in activities and sequencing of programs. Single, short-duration communications alone would not provide sufficient time to develop an awareness and appreciation of other's perspectives. Some further challenges in globally distributed programs may be the need for multiple languages and some experience with teaming, even within students' home cultures. These brief synchronous classroom connections can be supplemented by more frequent and autonomous small group videoconferences, e-mail, chat, blog and threaded discussions over a longer period of time. This is of course contingent upon accessibility and compatibility of the required communication technologies. A new variety of connection is via social networking sites (e.g. MySpace, Facebook, LinkedIn, and Ning). As teachers become more confident with the technology and expand their personal and professional networks globally, there is increased likelihood they will work directly with international peers and develop new global learning programs (Salomon & Almog, 1998).

Some examples of how students have been developing twenty-first century competencies as part of global learning projects in Kansas will now be described. In the spring of 2004 Kansas high school students interacted with their peers in Kigali, Rwanda (Goodvin, 2008). These students participated in a series of eight videoconferencing sessions facilitated by the Global Nomads Group (GNG) (2008) and were able to discuss topics such as the 1994 Genocide, the Acquired Immune Deficiency Syndrome (AIDS) epidemic, the culture of the indigenous Ba'Twa

people and to visit Mountain Gorillas in the wild. While local students had the technology at their disposal, GNG travelled to Rwanda to provide cable-based and satellite-based Internet videoconference links. It was interesting to note that for the Kigali students, English was their third language, after French, Kinyarwandan and sometimes Kiswahili. Being able to fluently communicate in languages other than one's own is strong evidence of having a global mindset. Had the Rwandan students not been able to speak in English, the students in Kansas would have had less of an opportunity to participate in this experience and may not have been able to directly communicate with the Rwandan students.

In other, timely GNG programs, student groups in Kansas connected in with groups of students, who were displaced by the Indian Ocean Tsunami in December 2004, Hurricanes Katrina and Rita in August and September 2005, and in the refugee camps that surround the Darfur region of Sudan (Global Nomads Group, 2008).

Genocide in the Darfur region of the Sudan was another topic that GNG facilitated. High school students participated in this videoconference in the fall of 2008. This group of Kansan students has become committed to bringing about an awareness of genocide and the humanitarian efforts toward this crisis for the previous two years. Kansan students organized a run during the summer from Wichita, Kansas to Washington D.C. in order to raise awareness and financial support for this region, where the lives of between 200,000 and 400,000 people have taken since 2003. Working through the Global Nomads Group (2008), Kansan students were able to video conference with Sudanese refugees from the Breidjing Refugee Camp in Chad (Lutz & Niessen, 2008) As part of their social studies and science content, some middle school students studied how ground water is accessed in remote areas where no surface water is available. They learned about play pumps (http://www.playpumps.org), how they work, and

about the quality of water and sanitation available to people who have to access water in this manner. They watched three video clips of play pumps in action throughout remote areas in Africa. Their dialogue was with other students throughout the U.S. and water experts who had worked in the regions being observed. Many questions were asked about the value of water, both environmentally and financially, who has the right to water, and if water was not available, what might it be worth to a community to gain access.

In another example, Kansas high school students in upper level Spanish courses connected with farmers in Bolivia over a period of six days. The dialogue was conducted in Spanish and students learned about vegetable farming practices in Bolivia and how they were similar or different to farming practices in the U.S., particularly in Kansas (Lutz & Niessen, 2008). Occupations outside of farming were discussed.

As global learning experiences have expanded, classes have been able to take virtual field trips. Some field trips are as close as the Garden City Zoo, and as far away as an Alaskan aquarium and a Minnesota Timber Wolf Refuge (Lutz & Niessen, 2008). Teachers have also involved students in written communications through other global learning providers such as the international Education and Resource Network (iEARN, 2008) learning circles projects. In the iEARN (http://www.iearn.org/) projects, students share about their cultures, things they like to do and what they study in school through these projects with some communications with students in Russia, Australia, Israel, and Thailand. High school students also had the opportunity to learn Mandarin via interactive distance learning. In two years, the program has more than doubled as students learn the language, culture, and traditions from their teacher and fellow students who are native speakers of Mandarin (Lutz & Niessen, 2008).

Teachers often begin with enrichment activities through a connection facilitator such as GNG and eventually create their own global learning experiences for students. Teachers use collaborative tools such as CAPSpace (Collaborations Around the Planet, http://projects.twice.cc/) (Porter, 2008) to seek other teachers around the world, who are interested in having classes collaborate on projects and ideas related to the curriculum. These projects usually take several weeks, making the awareness of intercultural perspectives, to some degree, more likely than during single, brief virtual field trips. While the virtual field trips can help students to understand other cultures, it is unlikely that they will develop sustainable relationships. Classroom-to-classroom conditions provide the opportunity to build awareness of multiple perspectives through a mixture of social and academic interactions and as part of critical thinking to explore the dialectic flow of thinking (Fox, 2003; Wong, 2006).

Although many of these classroom connections were not sustained over time, they did provide opportunities to conditions present that indicated an appreciation of how one's culture and experiences influences the perceptions of people and regions of the world. However, due to the limitations of synchronous interactions, some these opportunities provided a controlled superficial glimpse of twenty-first century skills and ICCC. These limited risks could indicate differences between generations and some growth mindset in the willingness to take a risk involving ICCC. The Rwanda project and the water quality lessons in Africa exemplified a growth mindset on the part of the teacher and some students who participated in the Rwanda project. Although their interactions had been asynchronous, their context and duration evolved toward cultivating and awareness of intercultural perspectives. Four years after the project, some students remained in contact and had plans to visit their Rwandan friends in Africa. (Global Nomads Group, 2008).

Purpose of the study

This study was part of a progression of events toward how collaboration associated with music composition might influence the awareness of multiple perspectives. Motivation for this study was rooted in efforts to provide a classroom model for being aware of people of other cultures in such a way that assumptions, gross generalizations, and stereotypes were diminished. There were two purposes of this study. The first was to observe how working collaboratively in an educational setting on the high interest topic of music, could facilitate an awareness of intercultural perspectives among secondary and early post-secondary students. The second purpose was to determine the feasibility of using technologies to facilitate global collaboration in a high school educational setting. Technology offers various tools for these efforts. Therefore, the focus of the study was how an awareness of multiple perspectives can grow from social interactions and cognitive processes associated with global interactions that incorporate music composition and performance. Modern communication technology can enable interactions and co-reflections by students and teachers, as well as provide means for capturing Online Asynchronous Dialogue (OAD). This data collection provided a picture of how participant's interactions fell along a continuum of emerging mindedness, indicating levels of interaction and mindsets toward awareness of other's perspectives. Explicatory instruction for growth mindedness has potential to transform how we relate with the world.

Learning Environment

How we learn and relate to the world has changed as a result of advances in media and technology. However schools have changed little (Christensen, 2008; Rimmington & Alagic, 2008; Schoen & Fusarelli, 2008). Many schools rest unnoticed in communities separated from the realities of the rest of the world (Wallis & Steptoe, 2006). It is common for students to have

less access to technology in the classroom than they are familiar with outside of the classroom (Clark & Berge, 2005; Partnership for 21st Century Skills, 2007; Salaway, Caruso, & Nelson, 2008). It has become critically important for students to learn how to take a more active part in today's globalized society. Some necessary competencies cited for success in the twenty-first century remain the same skills from past decades (e.g. problem solving, teamwork, critical thinking and communication) (Christensen, 2008; Kansas State Department of Education, 2008; Partnership for 21st Century Skills, 2007; Squire, 2007). It is the application of these competences in the globalized context of the twenty-first century that is different from previous decades. Many school systems emphasize innovation and creativity, critical thinking, problem solving, communication and collaboration. Formation and demonstration of these competencies can be enhanced with the aid of technologies. For instance, technology can allow people around the world to more freely, communicate and share information in a timely manner. It is possible for more people around the world to have a voice. To some extent, technology can diminish the effects of power differences (Bochner & Hesketh, 1994; Cohen, 2007; Shackleton & Ali, 1990; Spencer-Oatey, 1997). This produces opportunities for innovative learning with and from others through experiences that connect people of varying cultures. Such opportunities provide the potential to increase the awareness of other perspectives that is needed to develop a global mindset. Higher levels of awareness, understanding, appreciation, and transformation of self can result from this technological interconnectedness and allow more meaningful contributions.

Schools have had to adapt to rapid changes in the needs of the workforce. However, unless schools become more adaptive and proactive in educational reinvention, they will struggle to keep up with the demands that globalization and technology have placed on formal education (Beverly Cabello, 1995; Blanton, et al., 1998; Jacobson, 1996; Zenger & Zenger, 1999). For

many reasons, few educational entities implement methods of teaching and learning that incorporate global reach or aspire to the awareness of intercultural perspectives or, global mindset as an outcome. Sustained global experiences in the classroom can support awareness of cultures, openness to others' perspectives and ideas, and expansion of the students' and teachers' worldviews. *Worldview* is the way in which people see and experience the world based on their context. Context includes an individual's culture, their perceptions and beliefs based on their life experiences (Leontiev, 2007; Swartz, 2009).

Significance

This study is significant in its intention to inform the re-envisioning of education within a globalized context. Much of the literature about the preparation of graduates for the twenty-first century focuses on economic factors and high school reform. Although these are important topics, they do not fully inform the improved preparation of students to live and work successfully in an adaptive globalized society; a society marked by ever increasing interconnectedness, interdependence and diversity. The heart of this study was focused on intercultural interactions among music students through heuristic, experience-based methods (Bloom, 1984; Brown, Collins, & Duguid, 1989; Campbell, 1997; Colwell & Davidson, 1996; Greeno & Collins, 2008; Kaiser, 2004; Macgregor, 1992; Miller & Coen, 1994; Sela-Smith, 2002) and emergent design, including *naturalistic inquiry* and *hermeneutics*, and *constructivist* processes of interpretation based on participant experiences (Bentz & Shapiro, 1998; Erlandson, Harris, Skipper, & Allen, 1993; Guba & Lincoln, 1994; Lincoln, 1995; Lincoln & Guba, 1985; Tjora, 2006; Trotman, 2006). Experiences and interpretations were accompanied by reflections. An explicit awareness of the strategies for self-monitoring, and reflections, are important in dealing with disorientations and taking other perspectives (Bentz & Shapiro, 1998; Driscoll &

Wiebe, 2007; Griffiths, Camic, & Hutton, 2009; Hodges, 2009; Marshall, 2004; Peacock & Harrison, 2008; Tjora, 2006; Trotman, 2006). Analysis of student dialogue and co-reflections between international peers assisted in awareness of other's perspectives.

One's worldview can play a large role in considering others' perspectives; create awareness of intercultural perspectives, and enable development of a global mindset. There are numerous factors that affect the willingness or ability to take others' worldviews or perspectives. However, barriers that inhibit awareness of worldview perspectives exist in school settings due to high power distance between administrators, teachers and students (Bochner & Hesketh, 1994; Cohen, 2007; Hofstede & Bond, 1984; Shackleton & Ali, 1990; Spencer-Oatey, 1997). School policies often perpetuate barriers. Students are often prohibited from using technology to support their learning, the tools they are used to using to express their ideas and communicate with others. Other reasons include a lack of cultural competence (Lee, 2007; Lindsey, Robins, & Terrell, 2003; Robins, Lindsey, Lindsey, & Terrell, 2002); an absence of dialectic thinking (Adorno & Horkheimer, 1944; Bird; Desmond, 2000; Mason, Leschly, Feinberg, & Smith, 1982; Merriam, 2004; Raju, 1983; Spitzberg, 1993); active listening (Grover, 2004; Humphrey, 2007), critical reflection (Emery, 1996; Mezirow, 1998; Smyth, 1989; Sparkes, 1991; Whipp, 2003), and discomfort with communicating in order to work through cultural disorientations (Ainsa, 2006; Reid & Yanarella, 1974; Rimmington & Alagic, 2008; Schwandt, 1999). Teachers who expect students to sit quietly and listen to their lectures day after day are barriers to developing a worldview because interactions to share perspectives are not encouraged. Rimmington and Alagic (2008) emphasize the importance of dialogue between individuals. This dialogue is essential for establishing collaborative goals, and is significant to an environment conducive of sharing and taking multiple perspectives where misconceptions can only be overcome through

dialogue. Being unaware of other perspectives can be a hindrance in the resolution of disorientations when interacting with people from other cultures and prevents efforts toward growth and global mindsets (Dweck, 2006; Hannafin, Land, & Oliver, 1999; Perkins & Unger, 1999). The significance of using a global music project in this study was to create a learning environment in which interactions on a global scale were encouraged and supported for the purpose of becoming aware of other's perspectives for working together in a globalized society. Other significant observations were made toward the recognition of infrastructures within educational systems that sustained or prevented the pursuit of twenty-first century learning. As evidenced by the researcher's experience, power relations can be embedded in situations in which one interlocutor is perceived as having more expertise on a topic of discussion. For example, when a teacher controls the interactions in classrooms by lecturing, this oppresses students' thinking and dialogue, therefore creating a power difference (Freire, 2000). Not realizing these power relation circumstances may immediately remove any possibility of a collaborative atmosphere, and thus create disorientation (Taylor, 1994).

The use of technology enables many adaptable structures for sustaining intercultural relations resulting from global learning experiences. Sustaining global relationships is becoming the norm in twenty-first century schools (Senge, Laur, Schley, & Smith, 2006). Global learning experiences are a way to gain an awareness of other's perspectives, and ultimately develop intercultural communication competence and openness of worldviews that can support the needs of adaptive twenty-first century graduates.

Twenty-first century schools call for students to be able to think their way through abstract problems, work in teams, distinguish reputable sources from those that are not and fluently communicate in languages other than English (Demont-Heinrich, 2007; Magnin, 2002;

Wallis & Steptoe, 2006). The current generation, the Millennials (Lancaster & Stillman, 2002), often develop these attributes independently, since the required technologies and opportunities are not available in the school classroom. As reported in the triennial Program for International Student Assessment (PISA) survey of knowledge and skills for 15 year-olds, students in many countries, including Finland, Canada, and Japan, continue to out rank students in the United States in science, math, and reading (OECD, 2007; Schleicher, 2005). The result is U.S. students are now competing in a global market for jobs or business opportunities, in which students of other countries speak more than one language. This is not common in the United States. English is spoken in many areas of the world and nearly twice as many people outside the U.S. are native speakers of Mandarin, and just as many people speak Spanish and Hindi (Lewis, 2009). Academic courses are commonly taught in isolation, rather than being integrated across content areas. The latter would help students relate to the connectedness of concepts (National Center for Education Statistics, 2000). Meaningful consideration of how people learn in the twenty-first century context will require shifts in thinking, dialogue, and a willingness to embrace sustainable change. Often constructivist in nature, global learning experiences can serve as student centered learning environments that are facilitated by open-ended questions, which provide students with the opportunity to learn in small collaborative groups or one-to-one. Scaffolded learning with well crafted questions can facilitate students becoming self-directed, creative, problem solvers (Hmelo-Silver, Duncan, & Chinn, 2007; Marincovich, 2001), and global thinkers.

Regardless of location, education is typically subject to the discourse of the region's dominant culture. This is more pronounced in a mono-cultural context (Kovbasyuk, 2005). While possessing an awareness of intercultural perspectives is not a formal requirement of public

education, it is vital for life in the twenty-first century as are communication, collaboration, and creative problem solving (Rhem, 1998) that are extended by modern technology.

Global Music Project Context

OAD took place for several months between the researcher and university professors of education and music in Spain, Austria and Japan. Descriptions of the study, potential participants and a proposed timeline for the study were discussed via OAD and documents that were provided by participants. Contacts at each university, outside the discipline of music; business, education, technology, helped to find potential collaborators. In Spain, the University of Granada's department of International Relations played a key role in arranging meetings with interested participants. Word of mouth about the project proved valuable in finding interested participants in Spain and Austria. In Japan, one particular professor arranged meetings and e-mail communications with potential collaborators. After several months, visits lasting one week to each of the sites led to arrangements for collaboration between students in each country with students in Wichita, Kansas. Visits to each country in the summer of 2009 were used to explain the project to interested teachers and seek their support as collaborative partners. The researcher maintained a daily blog and book journal, including still photos and video to document experiences and exploration of the communities and cultures of each location. Important aspects of the project that were discussed with teachers included using technology for connecting high school aged students to communicate and collaboratively compose and record music. It was important for teachers to understand the two-pronged approach to the study. For students the focus was collaboration around music composition; while the purpose of the research was to determine if these collaborative efforts would support students in gaining awareness of intercultural perspectives. Technologies can optimize opportunities for communication and in

turn can create space and time for dialogical co-construction, where each informs the other; therefore each person extends their awareness of the other's context and in the case of this study, content through collaborative music compositions (Bakhtin, 1984; Blair, 2009; Holquist, 1981; Palincsar & Brown, 1984). An objectivist approach to learning is indicated by passive student behavior and largely teacher directed and controlled transmission of knowledge. By contrast, a constructivist takes a cognitive approach by nature of individual reflection and social interaction. In the constructivist approach, context and content are often unknown variables. The teacher is a facilitator, coach, and learner as students are making meaning of their experiences using context and content, therefore this study was by definition, constructivist. Constructivist studies may be approached as a translation from an epistemology to a learning theory, and from a learning theory to practice (Bruner, 1996; Bruner & Goodman, 1947). Conceptual development and abstraction can significantly affect how one sees the world and how one behaves within it (Brown, et al., 1989).

Participants

This study involved students ranging in age from thirteen to twenty. All students attended an educational institution and most were under the supervision of a teacher. Those supervised by a teacher were evaluated by their music teacher based on their participation and performance in a course in which global music project was embedded as part of the curriculum. Performance evaluation of participants was not part of this research study. Participants included approximately fifteen junior and senior high school students from a high school class in Wichita, Kansas, in the Mid-West of the United States, a college student and four high school students in Graz, Austria, one student from an Osaka Japan high school, and fifty-four students in Madrid,

Spain, ranging in age from thirteen to nineteen. Osaka, Graz, and Wichita each had one supervising teacher. There were three supervising teachers in Madrid, (Fig. 1).

With enrollment of 1,800 students, nearly 35% of the students at the participating school in Wichita were African American, 31% White, and 18% Hispanic. The other 16% of students have Asian-Pacific Islander or Native American backgrounds. Teachers at the participating Wichita school had a span in years of teaching experience from recent college graduates to some with over thirty years, however the participating teacher in this research project was a third year teacher. The ethnicity of teachers in the Wichita school was not as diverse as the students who attend this high school. Gender ratios among students and staff were 50:50. Enrollment in the participating music class in this research project was indicative of the school's ethnicity, with about 38% of the students coming from higher socio economic homes. Seventy-two percent of the students at the participating school in Wichita graduate after four years of attending the high school. This school's graduation rate is 17% lower than the state's average graduation rate. Outside of the participating Wichita school, none of the other participating schools record ethnicity and socio-economic status data.

The students from Spain who participated were attending high school in Madrid. Three teachers supervised them; each music teacher was an accomplished musician and educator. With participants' musical experiences and interests varying from classically trained pianists, singers, electric guitar bands, and novice recorder players, the teachers in Madrid worked to put students in groups of three to four for collaborating with a student or two in Wichita. The Madrid school originated in 1997 and had enrollment of nearly 800 students in the 2009-2010 school year. On average, less than 10% of the school's enrollment repeats a course.

In the Styria region of Austria the participating high school students and teacher were from a music gymnasium (high school) in Graz where music education was emphasized along with their other academic subjects. This suggests that these students either possessed extraordinary talent in music and/or they had sufficient financial means that allowed them to attend specialized school. The teacher and students participating in Austria were all male. However this was not representative of the teacher and student populations in their school. Four students from the conservatory joined the project although the teacher from this school did not have the students for class. An Italian-born university student in Graz also participated, hearing about the project via word of mouth from a professor.

Citizens of Japan, the teacher and student participating in Japan were both female and were from a public high school in Osaka. The school had approximately 800 students enrolled between the ages of 16 to 18. Founded in 1906, the school was co-educational with two faculties: one established in 1995 for music, and the other for general education studies. The student participant was a second year high school student who began to play the piano at age three and started music composition at age ten. This student was also learning to play in a string quartet with plans to enter college to pursue further study in music composition.

In Wichita, the music course, Commercial Music, through which this project was conducted, was in its second year of infancy. The Commercial Music course was conceived by an instrumental music teacher in Wichita, Kansas. He had read about a course in another state that focused on the students' personal connections to music. This concept initiated the organic evolution of the Global Music course. Throughout its first year, the teacher worked to make the course applicable to music in the real world, practical, and a place for talented students to showcase their musical works. Students worked throughout the year on creating musical groups,

making music, performing, producing, and organizing music events. In its second year, the course will expand the focus initiated in its inception and broaden students' experiences on a global scale by adding collaboration with students from other countries through the use of technology tools.

The research will concentrate on the process of creating a learning environment for nurturing awareness of multiple perspectives during the intervention, or project. The theory, methods, data collection, analysis and interpretation will concentrate on the process of developing an awareness of multiple perspectives toward a global mindset through a constructivist approach.

CHAPTER 2

METHODOLOGY

The methodology, or theoretical framework, represents the way in which the researcher views their context and therefore, the context of the study. Understanding the position of the researcher is important in considering the interpretation of the research data and findings (Merriam, 2001).

Qualitative Bricolage

Recognizing the limitation of a single theory, an interdisciplinary bricolage (Freeman, 2007; Kincheloe, 2001), of theories was used by the researcher to pursue multiple perspectives and dimensions of knowledge (Hatton, 1989; Kellner, 1995). The researcher defined *bricolage* beyond a mosaic of theories to include new ways of looking at existing ideas to inform new ideas. This bricolage of theories includes pieced underpinnings of naturalistic inquiry, hermeneutics, critical social, researcher as participant, and social constructivist learning to frame the project development and analysis of the data to provide insights to the research questions. The bricolage of these theories was intertwined throughout the study, with less emphasis on the parameters of the theory and more emphasis on how they informed the context of the study. Qualitative research is a concept based in a design of inquiry to explain constructed meaning with minimal disruption of the natural setting using naturalistic inquiry (Merriam, 2001). The focus of the study was an emergent design, creating learning environments where stakeholders engaged in experiences that enabled them to learn, unlearn, and relearn to restructure their thinking and ultimately, their practices. Shared construction of contexts through dialogue and communications were central to the learning environment and the potential for bringing about an awareness of perspectives (Cavallo, 2004; Erlandson, et al., 1993). These conditions called for a qualitative naturalistic approach. Although the researcher facilitated the design of the context and

provisions for collaborative work, naturalistic inquiry proved to be appropriate for the interactive online and classroom conditions. The researcher was able to observe and be involved in ongoing interactions. A qualitative approach was chosen to allow the researcher to study the purposive sample of participants in depth. Patton (2002) asserts, qualitative methods enable the researcher to approach fieldwork without the constraints of predetermined categories of analysis. The qualitative emergent design provided an open and unconstrained inquiry-based environment. Qualitative methods can yield detailed accounts of interactions and perceptions and thus, facilitate better understanding of the context being studied (Patton, 2002). On this topic, Merriam (2001) stated that a goal of the qualitative researcher is to understand the meaning that people construct in their personal context and broader context of the world in which they live. This methodology is supported by the constructivist approach and hermeneutics included in the study's bricolage of theories

Constructivist Epistemology

The theoretical framework for this study emerged from an underlying epistemology of constructivism held by the researcher. The framework was based on the premise that a nurturing learning-research environment would provide times and spaces where perspectives are dialogically negotiated (Gadamer, 1987; Palincsar & Brown, 1984; Popkewitz, 1998; Sullivan & McCarthy, 2005). In other words, each person's experiences influence their interpretations, or meaning making. Through dialogue one's interpretations are verified, clarified, or new meaning emerges. This implies people from differing perspectives who engage in collective dialogue may emerge from the conversation with awareness of others' contexts. From such collective dialogue, awareness may eventually lead to understanding. While experiences are unique, the learning-research environment supporting dialogue for awareness of perspectives can be replicated

(Cavallo, 2004; Cummins & Sayers, 1995; Hoadley, 2002). However, for centuries there have been criticisms of constructivism.

Whether it is Socrates, Descartes, Piaget, von Glasersfeld or others, the main debate around constructivism is constructing meaning that translates to reality (Olssen, 1996). In particular, the idea that reality is rooted in logic and construction of meaning based on prior experiences may not include what is considered to be known truth. This debate could be considered contradictory to a pure constructivist approach. For the purposes of this study, the researcher's point of view of constructivism in an educational setting is based on a balance of supports with gradual release and confronting misconceptions deemed to be truths by today's society. True to constructivism, the student constructs meaning based on prior experiences and the current learning environment, causing students to learn, unlearn, and relearn as new information and experiences are reflected upon and processed. The constructivist pedagogy used to frame the study and employed throughout the project is described in the research design.

The concept of developing an awareness of intercultural perspectives does not fit with an objectivist epistemology since the former will vary, by definition, with individuals and contexts, while the latter seeks an absolute intercultural perspective, independent of individuals' contexts. The notion of an absolute intercultural perspective is contrary to the notion of sharing and taking of multiple perspectives and social negotiation. Similarly, by definition, a subjectivist epistemology would not be consistent with socially negotiated meaning and shared perspectives. The perspectives of others are undefined within a purely subjectivist epistemology. Other cultural perspective studies have been based on a constructionist epistemology (Baraldi, 2006; Bolden & Kirk, 2009; Campos, 1998; Hay & Barab, 2001).

Diffusion and Disruption Theories of Innovation

Within the constructionist epistemology a number of theories were considered for this study. Among them were: diffusion theory, disruption theory, social constructivist learning theory, critical social theory, hermeneutics, and naturalistic inquiry. Initially, the researcher was considering the process and conditions of change required to provide a curriculum to prepare graduates for the twenty-first century. *Diffusion theory* (Rogers, 2003) was considered to be unsuitable since it assumes passive introduction of innovation. This led to investigation of *disruption theory* associated with the effect of major innovations (Christensen, 2008). This theory was not pursued since this type of change, even in a well-resourced intervention, was not practical or feasible. Understanding of the effects of global learning interventions requires inquiring at a deeper level.

Naturalistic inquiry

Naturalistic inquiry (Erlandson, et al., 1993; Ford, 1987; Franklin & Lowry, 2001; Lincoln & Guba, 1985; Miller & Fredericks, 2002; Scagliarini, 2009) requires the researcher and to remain open to possibilities as they emerge, therefore this aspect of naturalistic inquiry was appropriate for the ebb and flow of activity throughout the project and the context of the students' music classroom in which their collaborative projects were embedded. Contrasting of experimental controlled studies, another applied piece of naturalistic inquiry is a closely held belief that the study of groups takes place in their natural settings (Patton, 2002). In this naturalist's framework, the researcher had long-term exposure to an observed group (Bowen & Inkpen, 2009; Bushe & Marshak, 2009; Chen, 1997; Chen & Starsota, 2000; Lincoln, 1995; Mamman, Baydoun, & Liu, 2009; Marshak & Bushe, 2009; McBrien, 2004; Nills & Shultz, 1997; Penn & Kiesel, 1994; Southworth & Klemm, 1985; Thomas, 2006). Throughout this study,

the researcher was in the field, in this case a high school music classroom, studying real time and asynchronous interactions via online messaging as they unfolded. Study conditions were not manipulated or predetermined. The project and its outcome were unpredictable, flexible, and emergent.

Hermeneutics

The data gathered in this project comprise online dialogue and co-reflections as text. A *hermeneutic approach* to interpretation of these data (Barry, 1996; Bentz & Shapiro, 1998; Bowie, 1999; From & Holmgren, 2001; Georgii-Hemming, 2007; Montuori & Purser, 1995; Patomaki, 2002; Phan, 2006; Sullivan & McCarthy, 2005; Trotman, 2006; Wang & Humphreys, 2009) allowed systematic analysis of the project that involved significant researcher intervention. Data analysis was conducted using a continuum of descriptive categories, the Emerging Mindedness Continuum (EMC). The continuum depicts levels of dialogue and mindsets. Analysis and interpretation of texts within their contexts, *hermeneutics,* were used to interpret if students' dialogue showed evidence of awareness of perspectives other than their own through their communications and music collaborations.

Researcher as Participant

Due to the researcher's role in several aspects of the project, *researcher as participant* was also part of this study. Researcher as participant includes positive interpersonal relations between the researcher and the participants (Guillenmin & Heggen, 2009). The researcher should be sensitive to the context and all its contributing variables (Merriam, 2001). In this study, the researcher participated in the study as a promoter and as an organizer of the project. As the organizer, the researcher traveled to Spain, Austria, and Japan to meet with teachers interested in supporting their students in participating in the project. As participants joined the project the

researcher also helped teachers to think about ways to manage how students could work together in groups for successful collaborations. As the project progressed, the role changed to that of an observer and researcher.

Critical Social Theory

Critical social theory was considered since the dialogic negotiations were affected by a complex network of power relations. The power relations and distances among participants (students, teachers, researcher and cultural differences) were expected to significantly affect the efficacy of dialogic negotiation and construction of meaning and identity. Other circumstances in the project posed the potential for additional power relationships. Some students had the opportunity to work face-to-face on a regular basis, while others only meet virtually; the possibility existed to create a feeling of isolation for some. For example, one teacher communicated that since students were long distances away that they did not seem to be real people.

Ning posting from #9 on December 2009 to researcher: i still DO think that this is a very interesting project, but there is so much regular work for me to do that i just cannot find enough time for this extra work, and i think this is also the problem of my students. they are so busy working for school, practicing their instruments and making music with REAL people that recording for your project is the one thing they would do, if there were no tests, no concerts, no homework, no girlfriend.

The statement about students not being perceived as "REAL people" prompted the researcher to communicate with participants as soon as they joined the social network to let them know real people were communicating with them. Separation by long distances meant the researcher had

more face-to-face contact with some students; however the larger number of participants in Spain. Either of these situations may have created a feeling of power imbalance.

Critical social theory (Adorno & Horkheimer, 1944; Deacon, 2002; Devine, 2008; Hastings, 1999; Hofstede & Bond, 1984; Karnieli-Miller, Strier, & Pessach, 2009; Shackleton & Ali, 1990; Siegel, 1970) was anticipated to aid understanding of complex webs of power relationships, especially among teachers, students and the researcher in 4 different countries. Attempts to minimize the effect of power relationships were made, however the larger number of participants was in Spain. Some studies suggest asynchronous text-based communication greatly lessens social context cues and allows participants to reflect and refine responses, therefore providing more equitable opportunities to join conversations and eliminate the traditional teacher or adult oriented learning experiences, creating a more learner-centered environment in which collaborative learning is encouraged (Johnson, 2006; Poole, 2000; Salmon, 2002; Vrasidas & Zembylas, 2003; Yildiz, 2009).

Social Constructivist Learning Theory

Since the study involved many unknowns that were constructed through dialogue and trial and error, *social constructivist learning theory* (Gergen, 1985; Katzko, 2002; Vygotsky, 1978) was incorporated into the bricolage. Social interaction through OAD was used to establish a social presence, which informed the participants about each other, and was how participants organized collaboration for composing of music together. Based on personal interests, participants organized their collaborations toward eventually performing synchronously and asynchronously. Their reactions and interactions constructed an evolving study of dialogue, reiterating the social constructivist cycle. The project developed and unfolded based on social constructs, an emergent learning environment design (Cavallo, 2004), therefore using such a

theoretical bricolage approach for data analysis was important so predispositions were not imposed on the research findings.

CHAPTER 3

Research Design

The research design is determined by the purpose of the study. Triangulation of the researcher's theoretical framework, the purpose of the research and the means by which appropriate data will be gathered and analyzed in response to the research questions is important criteria in the design. This study used a qualitative design and a variety of data collection strategies.

Methods

There are logical connections between the researcher's bricolage of theories and the data collection techniques used in this study. Data was collected using a variety of techniques. Technologies provided a means to collect written and verbal interactions, as well as record music collaborations. As described by Patton (2002), qualitative results become known through the gathering of extensive, open-ended interviews, direct observation, and document analysis. Such collections detailed the experiences, behaviors, and processes that influence the results of this study. Open-ended interviews were held with groups of participants. Due to their uncontrolled nature, participants' online interactions were also considered open-ended interviews. The researcher made regular visits to the classroom in Wichita to observe students interacting with one another, creating and performing music, answer questions, gather ideas about the project, and provide encouragement for the work they were doing. Though remote, the researchers provided the same positive interactions for participants through OAD. Posted dialogue was organized as several documents for analysis. The electronically posted music collaborations were considered auditory documents to be included in the analysis.

Concepts, such as "perspectives", "values", "beliefs", and "experience" are abstractions and cannot be described quantitatively. Therefore, measurement of one's perspectives and the awareness of others' perspectives are not congruent with quantitative methods (Bogdan & Biklen, 2007; Harlos, Mallon, Stablein, & Jones, 2003; Lincoln, 1995; Maxwell, 2004; Morse, 1999). For these reasons, open ended, qualitative methods appropriate for making meaning of an awareness of intercultural perspectives in an interactive context were chosen for this study.

Participating students used Internet based communication technologies. Technologies included blogs, online messaging, video conferencing, and music networking software and allowed students, teachers, and the researcher to communicate, share ideas and perspectives and collaborate with each other. Students used software for synchronous and real time music collaboration. The use of this kind of technology resources was relatively new for the participants. The availability of such resources can facilitate the interdependence and interconnectedness of the culturally diverse participants, The intent was to create a learning environment that allowed autonomy for students (Anderson & Garrison, 1995; Bates, 2005; Chen, 2005; Chizhik & Chizhik, 2005; Galvan, 2006; Hill, 2006; Moloi, Gravett, & Petersen, 2009; Walker & Shuangye, 2007).

Semi-structured interview

Patton states that interviews provide us the opportunity to see the world from another person's perspective (Patton, 2002). Using the semi-structured interview approach allowed the researcher to ask the questions to be explored during the interview. These questions allowed the researcher to be free to explore beyond the questions with spontaneity as needed, still focusing on a particular subject (Patton, 2002). Pre-study and post-study semi-structured interviews took place with students. The following are examples of the open-ended questions that were posed to

the participants for their reflection and response in semi-structured video conferences, written reflective responses, and a project exit focus group:

What do you know about the countries and regions participating in the project?

What would you like to know about the countries and regions participating in the project?

How do you think about what is happening around the world?

How does the music you listen to influence the way you think about yourself and others?

How might your music influence how you think about people in other places?

How might your music make others feel who have different experiences than you?

What music genre do you consider to be the most appealing?

Why do you think it is the most appealing?

Technology was used at most sites to allow students and teachers to communicate both synchronously (e.g. video conferencing) and asynchronously (e.g. online messaging, blogs and discussions).

Online social networking

Students and teachers were able to communicate openly using technology tools to share information and communicate. Students communicated their ideas and set their goals and tasks to be completed using a social network, Ning.com.

Videoconferencing

Student interactions and performances were captured using audio video equipment. Video captured dialogic interactions, non-verbal language, content and context. These data collections were data open to interpretation by participants and the researcher and provided for analysis (Merriam, 2001).

Observers journal

The researcher maintained a journal of observations, reflections and co-reflections (Merriam, 2001). Record of the researcher's introspective account or interpretations of experiences throughout the study were aligned with the researcher's role as participant. The journal contained the researcher's analysis and interpretation of the observed experiences. The journal was a data source.

Timeline

This study formally began with the Institutional Review Board's approval in October, 2009. Initial expectations were that students would begin participation with their initial introductions and communications through video conferencing, and asynchronous online dialogue in September 2009. However, there were delays in making arrangements due to unforeseen factors, such as disconnects between teachers and students who were anticipated to participate in the project. By late October, students from Austria and Wichita were engaged in OAD, mainly making introductions.

There was a video conference between Wichita students and a student in a school in Japan during October. The teacher and student in Osaka became aware of the global music project as a result of the researcher's visit to The Japan Forum in Tokyo in July, 2009. The purpose of the video conference was make introductions. Differences in written and spoken Japanese and English proved to be a challenge for communication. Although there is a fourteen hour difference in time, students in Wichita stayed at school until 6 p.m. for the videoconference that connected with the school in Osaka at 8 a.m. the following morning. This first videoconference was a brief fifteen minute visit in which the students in Wichita each made introductions to the three teachers in Osaka, Japan. The student in Osaka had taken ill and was

absent from school that day. Videoconference participants could see and hear each other; however neither group could speak the others' language. The Japanese teachers could understand what was spoken in English. Later in October, the researcher met with a student from Tokyo, Japan, who was attending a local university in Wichita. The student agreed to assist with a videoconference and translate for the teachers and student in Osaka, and the classroom in Wichita.

Through October and November, intermittent OAD continued between a few students in Wichita and Austria. One student in Austria, a college student who joined the global music project through his own initiative, had heard about the project from a professor in Graz. Other high school students in Austria were working with a teacher at their school who incorporated the project into his class on international music.

In November, the Wichita and Osaka sites held another video conference. The visiting Japanese university student in Wichita assisted with communications between the researcher and participants in Osaka by translating e-mail communications back and forth to set up the video conference. The second videoconference lasted nearly an hour. Students made their introductions and the student in Japan was able to ask some questions. Some of the students in Wichita played folk songs on acoustic guitar. The Japanese student did not know what this was, so after the videoconference introductions were made, two Wichita students played their acoustic guitars and sang *California Dreamin'*. The Japanese student hadn't heard this kind of music from the United States. Another group of students had each recorded their music tracks earlier that day, playing a *Metallica* song. When they played the recording and the classically trained Japanese pianist remarked with excitement, "I can play the piano to that!"

There had been potential plans for a global music collaboration to take place in December, however this is did not materialize and communications dwindled as the New Year approached when the Austrian high school students would no longer be meeting for class. Then, on December 25, 2009 there was new communication from Madrid, Spain. A university professor heard about the global music project from a colleague in Wichita. The researcher sent information to the professor in Spain who wanted to share the project idea with his son's teacher. The teacher and professor decided to share the idea of the project with all of the teachers at a high school. The teachers wanted to participate and opened the project to their students. The teachers in Madrid had interest from forty students. With this many students, they needed parameters set and asked the researcher to set a new timeline. The teachers in Madrid wanted the project to be a successful experience for their students. Once criteria and a new timeline were posted, the teachers felt comfortable and moved ahead with the project. Within a month, over fifty students in Madrid had joined the global music project. Students began creating pairs or groups and making plans for what they wanted to play together, who would play which instrument, and who would sing. From this coordination they and recorded their work using the web-based software, BOJAM (http://www.bojam.com), to record each track and mix their musical works, (see Fig. 2).

Figure 2: Bojam.com web-based recording software

As the collaborative projects progressed, benchmarks were established for performances in the spring of 2010. The researcher interacted and co-reflected with Wichita and Madrid students on a regular basis by face-to-face or OAD communications while incorporating focus questions into the dialogue. Based on these interactions, the researcher reflected weekly using blog posts and a journal. Analysis of these data provided insights on the influence of collaborative music work and the dialogic processes of perspective sharing and taking toward an awareness of perspectives.

CHAPTER 4

ANALYSIS: AWARENESS OF PERSPECTIVES

Qualitative analysis of Blog postings and transcripts of interviews relied upon using the researcher's judgment and creativity to derive, research findings and informed recommendations. Patterns and themes were considered, framed in unique context and narrated by the researcher (Bogdan & Biklen, 2007; Merriam, 2001; Patton, 2002).

Coding

The text from Blog entries and other OAD was categorized according to particular patterns associated with the research questions. The OAD were read carefully before they were sorted to identify a purposive sample. A purposive sample is one in which the most can be learned, it is selected to insightfully expand the account and its study will enlighten the research questions (Bogdan & Biklen, 2007; Merriam, 2001; Patton, 2002).

Data in the form of text from OAD, video conferencing and records of reflections and co-reflections, both face-to-face and online asynchronous dialogue, were captured in a spreadsheet, verbatim, sentence-by-sentence. Each sentence was indexed by date, participant (student, teacher or researcher), country of participant, an anonymous participant code, gender and the kind of posting on the ning. Some postings on the ning were from individual to individual. These were coded using both participants' anonymous identification number. Other postings were broadcast to all participants on the ning using Twitter, Blog, or the discussion board and coded as such. Participant sentences were coded, classified into each of seven categories that are defined in the next section, (Appendix A and B).

Emerging Mindedness Continuum

The *Emerging Mindedness Continuum* (EMC) is a graphic representation of mindsets and their influence on dialogic fluidity toward global collaboration through awareness of multiple perspectives and contexts. The continuum is a synthesized adaptation of Murphy's (2004), collaboration model, (Fig. 3), and Dweck's (2006) approach to defining mindsets. Murphy's collaboration model was developed from a web-based learning module known as *Solving Problems in Collaborative Environments* (SPICE) (Murphy, 2004) used to analyze OAD to assist social workers, nurses or teachers in advancing their practice through a process of collaborative problem solving.

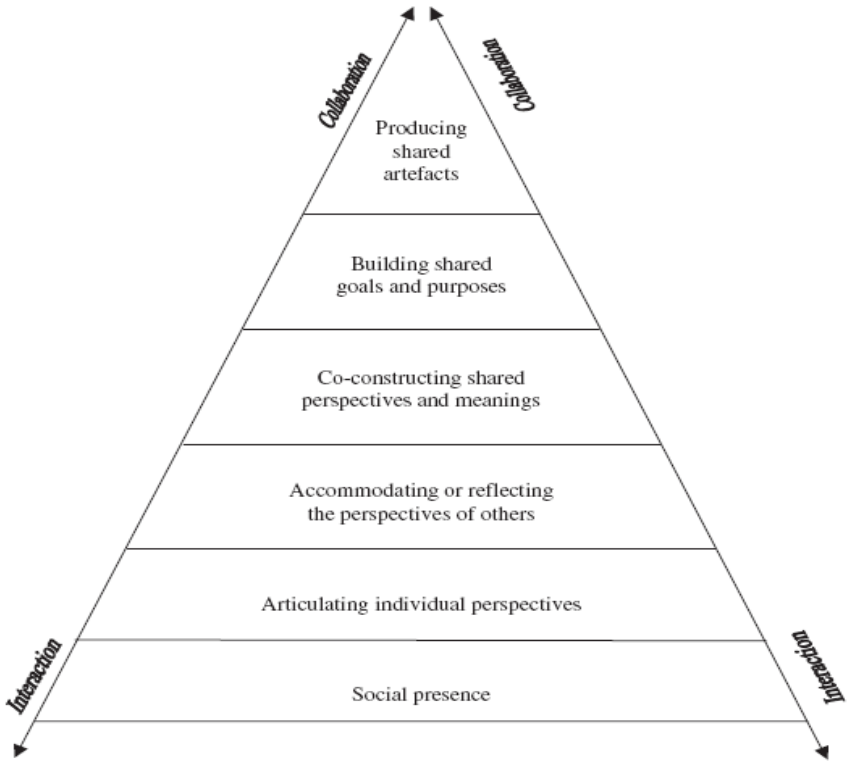

Figure 3: Collaboration model. Murphy (2004)

Dweck's (2006) fixed and growth mindsets place people in one of two groups: proving or improving. The EMC is organized on the notion of emergent categories or conditions. The continuum is meant to exhibit the fluidity within which a person may attain based on a situations content and context. Because a person is able to achieve at a point along the continuum in some circumstances, does not necessarily mean they will perform at the same level in all circumstances. However, it is reasonable to suggest that as one thinks and interactions regularly at a place along the continuum, the likelihood of sustaining performance at that place on the continuum is probable. Although, maintaining position along the continuum is not a guarantee, nor is it suggested that a fixed position along the continuum is desirable.

Seven categories describe the continuum, which is framed by subsequent relational continua of dialogue and mindsets, (Fig. 4).

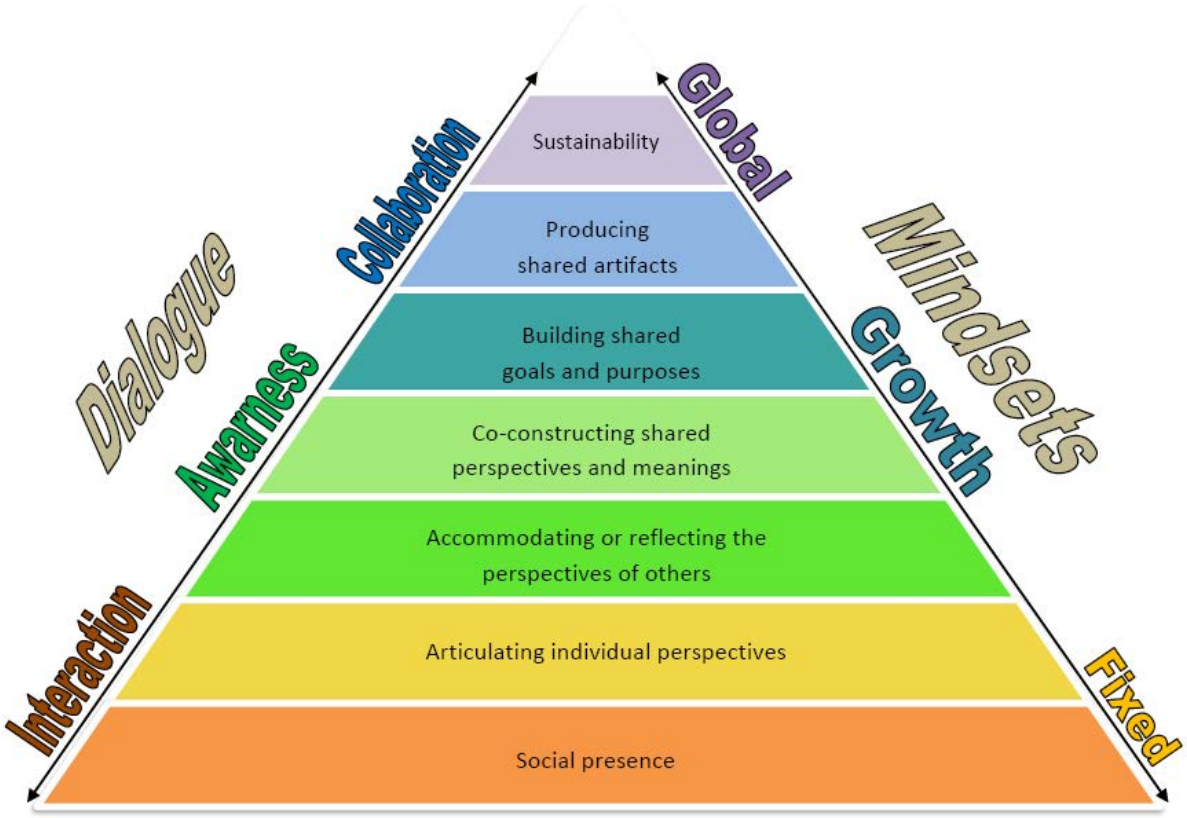

Figure 4: Emerging Mindedness Continuum (EMC)

Derived from Murphy (2004) (Fig. 2), Dweck (2006), Chen (2005) and Salmon (2002)

EMC illustrates a continuum of relationships between interactive processes and the development of mindedness from an egocentric fixed mindset (Dweck, 2006) toward multiple perspectives and contexts with a global mindset (Chen, 2005). EMC indicates potential progression of cognitive processes toward *growth mindedness* during introductions. Lack of such progress indicated *fixed mindedness.* As interactions continued, some individuals shared and reflected on shared perspectives, signaling an awareness of others' perspectives. Some began to form new and shared perspectives. Growth mindedness emerged as other perspectives were considered and current perspectives altered or new perspectives were created. The next step in

the progression was collaborative work toward shared and mutual goals that resulted in a shared artifact, in this case, a musical collaboration. Working at the collaborative end of the continuum was a work in progress that entwined cognitive, interpersonal, and mindedness processes. At the far end of the continuum, sustainability marks the broad context of formed relationships continuing to be supported and the creation or innovation generated from this context being extended to new and different concepts (Salmon, 2002).

Life experiences that provide awareness of intercultural perspectives tend to be non-linear and complex processes for sharing and taking personal perspectives. This is captured in the continuum aspect of EMC. Delving into perspectives can stimulate the evolution of broader thinking and scope of responsiveness among participants. Experiences with intercultural interactions and strategies for coping with disorientation may aid in the development of an awareness of others' perspectives. However, because each person's unique experiences and contextual circumstances shaped their awareness of multiple perspectives. Such awareness is co-constructed through the dialogue between individuals of varying backgrounds. Studying the development of this awareness of perspectives requires research methodology that supports collecting and analyzing data on an individual level in an interactive setting.

Using a bricolage of theories, statements of participants' dialogue were categorized within the EMC. Figure 5 is an example of the coding format used to identify the participant, there role as student, teacher or researcher, their location, gender, date the statement was made and the type of posting to identify to whom the statement was made. For example, statements posted using a Blog was coded as a Blog to indicate the statement was broadcast to all of the members of the Ning.com group. If the interaction took place between two individuals, the type of posting identified the person, using the identification number assigned to them to show the

interaction was between two specific individuals. When individuals communicated in a language other than English, the original text was copied into Microsoft Word's translator and translated to English. The statement, in both languages, was then placed in the column corresponding to the category on the continuum for which it was interpreted to represent. Statements were then separated by characteristics along the continuum. Characteristics were differentiated by description and color with in broader categories of dialogue and mindsets. Statements were placed along the continuum to note evidence of characteristics labeled: *social presence*, indicative of self introductions; and articulation of *individual perspectives,* sharing of personal perspectives. Statements remaining within these characteristics were coded to indicate basic interactions and a fixed mindset. When statements showed evidence of *accommodating or reflecting on others' perspectives*, interests or questions about what others thought; and the *co-construction of shared perspectives and meanings*, when participants came together with their ideas and developed shared meaning on a topic, they signified an awareness of others' perspectives and a growth mindset. For purposes of this study, characteristics within this range on the continuum were considered evidence that a collaborative project of this scale could support students' awareness of others' perspectives. Seventy-five percent of the purposive sample showed evidence of characteristics in the awareness and collaboration, and growth mindset range, (Appendix C). Further along the continuum were characteristics of collaboration and transition from a growth mindset to a global mindset. These characteristics included *buildings shared goals and purposes, producing shared artifacts, and sustainability.* Evidence of these characteristics for the global music project, were often distinguished by collaborative dialogue to establish roles and responsibilities within the project that eventually produced a music mix, using Bojam.com, (Fig. 5).

							Fixed Mindset		Growth Mindset			Global Mindset		
							Interaction		Awareness		Collaboration			Level
ID #	Name	Role	Country	Gen	Date	Post	Social Presence	Individual Perspectives	Accommodating /Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	Sustain-ability	EMC

Figure 5: Coding spreadsheet

Application of the Continuum

At the base of the continuum is the establishment of *social presence*. Social presence was recognized when a participant made an introduction to the group that often included their names, age and a few other things about them, acknowledging that others where present in the social network. These introductions of self represented the beginning of social networking between participants. Examples of dialogue among students that were identified as establishing a social presence included:

#2 on Blog: My name is (name). My playing style mostly reflects around heavy metal, however I listen to every genre from the 70's/80's. I spent 3 and a half years playing bass guitar, i also play electric and acoustic guitar as well, but I only spend about 1/3 the amount of time playing guitar compared to bass.

#2 to #11: hey (name), my name's (name), I'm primarily a bass guitar player but i play a bit of regular guitar too. Been playing for bout 3 and a 1/2 years now.

#47 to #26: hola me llamo (name) soy de belgica" (Hello my name is (name) I am of Belgium)

Social presence and the next level on the continuum, *articulating individual perspectives* often occur during the same interaction. At this point on the continuum, one's own perspectives are referenced; however others' perspectives are not yet being sought (Murphy, 2004). Examples of participants offering their perspectives included:

#12 on Blog: My musical interest is to be able to compose music thats pleasing to others and to myself and to be able to be known at least throughout the country as famous bass player. For the global music performance, I think it'd be pretty neat and interesting if I were to do heavy metal songs with others who share the same interest in the world.

#2 to #11: well perhaps we should start by doing a some sort of cover song.

#5 to #58: ximena sarinana? wow jaja, pues la verdad me daria igual, claro que seria mucho mas facil hacer un cover, aunque yo tengo algunas letras pero la verdad no soy muy bueno para hacer la musica, tengo que apoyarme en musica que algun otro haya hecho en guitarra o algo asi,...(ximena sarinana? does wow jaja, because truth I give equal, clear that would be much more easy to do a cover, but I have some letters but the truth I'm not very good for music, I have to support me in music that some other made on guitar or something like that.

#11 to #5: ciao! sei bravo con l'italiano..dove l'hai imparato?:) tu puoi registrare in qualche modo il basso o la batteria?cosi se me lo mandi mi faccio qualche idea e potremo registrare qualcosa insieme...ciao (Hello! are you good with Italian ...where have you learned? :) you can register somehow down or the battery? so if I send me some idea and we will be able to record something together ... bye

When interactions remain in this range of the continuum, it may indicate a fixed mindset.

The third of the seven points on the continuum marks a transition from focusing on *self* to inquiring about *others' perspectives*. As individuals progress past this transition, perspectives are challenged and refined. This is an important clue that participants are transitioning from fixed to growth mindsets. Dialogue interpreted in this category included:

#2 to #11: Something we may both enjoy playing, any ideas?

#74 to #48: Well no. Whatever you want. He had thought of a song that is against the war in Iraq. It is a version of the song Zombie from the chamberries. The version is done by a group called Breed 77. You was thinking of doing A little piece of heaven by Avenged Sevenfold. Have you thought about? Any group in particular?

#5 to #58: pero ustedes deciden y despues me avisan ok?" (you choose and then let me know, ok?).

#47 to #26: que musica te gusta? (what music do you like?)

As interlocutors progress further along the continuum, dialogue may reflect collaboration toward shared goals and purposes and the production of shared artifacts, or at least the potential for shared artifacts (Garrison, Anderson, & Archer, 2000; Murphy, 2004). When a student recorded a music track and uploaded it using bojam.com, in this study it was coded as an artifact because the track was made available worldwide for collaborative mixes. Dialogue indicative of shared goals included:

#2 to #11: you can do the drum part first, then once thats up on bojam, i'll lay down the bass track"

#11 to #2: hi! what about our song? did you find a way for putting it on bojam? in the meanwhile i recorded another drum line (song: chop suey) for 2 spanish students. i saw, that they asked you to play the bass...are u interested?

#10 to #24: do u have a facebook?

Shared artifacts using the web-based collaborative recording software at bojam.com could be physically seen and heard. These are dialogue interpreted as being related to artifacts:

#2 to #11: i'll upload the drum track (which by the way was awesome) to bojam when i have time, then i'll make the bass track, and hopefully a guitar player will see it and collaborate his part into the mix.

#7 to #67: Could you just send it through the link over the inbox here? Or send your email through the inbox on here?

The agglomeration of collaborative dialogue and experiences has the potential to sustain a *global mindset*. Statements reflecting notions of sustainability were not found in this data.

It was common for statements containing several sentences to be divided into smaller data units in accordance with the characteristics on the continuum. For example, the interpretation of content from one's dialogic exchange may indicate an introduction of self, one's perspectives on music, and one's inquiry about another's perspective on music, (Fig. 6).

							Fixed Mindset		Growth Mindset				Global Mindset	
							Interaction		Awareness		Collaboration			Level
ID #	Name	Role	Country	Gen	Date	Post	Social Presence	Individual Perspectives	Accommodating /Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	Sustain-ability	EMC
7		S	USA	F	3/2/2010	67		Hey! :) I play piano and guitar...but mostly I just like to sing :) And P.S. I absolutely LOVE Evanescence	How are you? Do you play any instruments?					3

Figure 6: Coding spreadsheet with content

When students communicated in a language other than English, the text was captured as well as its interpretation to English and placed as interpreted by the descriptions on the continuum, (Fig. 7).

							Fixed Mindset		Growth Mindset			Global Mindset		
							Interaction		Awareness		Collaboration			EMC
ID#	Name	Role	Country	Gen	Date	Post	Interaction	Individual Perspectives	Accommodating/Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	Sustain-ability	Level
5		S	USA	M	2/17/2010	24	Que pasa soy daniel estudiante de intercambio en Kansas (Happens I am daniel exchange student in Kansas)		que música te gusta? (what music do you like?)					3

Figure 7: Coding spreadsheet with content in more than one language

CHAPTER 5

FINDINGS

The primary goal of this research was to determine how working collaboratively in an educational setting on the high interest topic of music, could facilitate an awareness of intercultural perspectives among secondary and early post-secondary students. A secondary goal was to determine the feasibility of using technologies in an educational setting to provide learning experiences that support critical thinking, problem solving, and effective communication skills necessary in today's technology rich and interconnected society. Two research questions were posed to ascertain insight on these matters.

The first research question was: How will global music collaboration create an awareness of intercultural perspectives? High school music students in four countries (Spain, Austria, Japan, and US) were involved in conversations about their musical interests with the intention of collaboratively developing music compositions. Student dialogue was collected and coded using the Emerging Mindedness Continuum (EMC). On this continuum, dialogue that indicated an interest in others' perspectives was an indicator of minimal success.

The second research question was: How feasible is using technology in high school classrooms to connect students for purposes of creating an awareness of others' perspectives? Co-reflections between teachers and the researcher shed some light on this question.

Context

The most similar teacher and student environments were in Madrid, Spain and Wichita, Kansas, USA. Students were directly connected to a particular teacher, who supported them through their efforts to collaborate with other students outside their school. Because the participating teachers had no prior experiences with online music collaborations, they were co-

learners with their students, which is indicative of a social constructivist approach to learning. This project was consistent with naturalistic inquiry because the OAD involved share interests and observations of the participants and integration of the researcher's questions and co-reflections.

Participants in Osaka, Japan also shared a similar teacher and student environment with Wichita, Kansas. Communication between participants in Osaka and Wichita was primarily by videoconference, with each session lasting nearly an hour. Both teachers and students were very attentive during the videoconference. The interactions were slower paced due to language differences and the need for translation. However, with perseverance, this challenge was overcome. The support for this student to be successful was evident as was the willingness to work with others.

In each of the three participant locations, (Madrid, Osaka, and Wichita), the teachers provided the necessary scaffolding for social constructivist learning. The music teachers in Madrid sought the assistance of a technology teacher so students would have the support they needed to navigate the technology tools used in the project (Ning.com, Bojam.com, Skype.com). There was evidence in the OAD of these participants assisting one another with technology questions.

The anticipated level of participation in this project did not eventuate in Graz, Austria or Granada, Spain for a variety of reasons. Participants in Austria differed from those in Madrid, Osaka, and Wichita in that the teacher contacts did not have the participating students in their class during the project. Without direct teacher involvement, it was not possible to establish as support the participation of high school students in collaborative music composition. The music collaboration was as "extra work" because it was not an integral and assessable part of the

regular class. An exception in this case was a college student who became involved out of personal interest. Personal interest led to a commitment to an on-going dialogue and planning over a seven month period. This collaboration continues. The student participant from Graz and the researcher shared co-reflections about trust and associated risk taking. Risk and trust are two indicators of a growth mindset.

Emerging Mindedness Continuum

Use of the Emerging Mindedness Continuum to analyze participant dialogue provided insight and raised questions for further study. There was clear evidence within participant dialogue of intention and somewhat of their role. Teachers and the researcher interacted with student participants on a regular basis for purposes of establishing a social presence, encouragement, and organization.

The EMC captures a wide range of dialogue and mindsets, ranging from not establishing a social presence, to creating collaborative artifacts. From the purposive sample of thirty-five participants, two did not establish a social presence, a few produced collaborative artifacts, and three (9%) showed indications of a global mindset. Twenty-six (75%) inquired into the perspective of others. Students in Madrid interacted with peers at their school whom they did not know well. They made introductions and inquired about working with one another using OAD. There were data that indicated a fixed mindset, particularly when individuals contributed unsolicited criticisms of others, based on his/her perspectives, (Fig. 8). Each interaction by participant #25 is charted in Fig. 8 to display the dialogue pattern of ten interactions. Dialogue patterns were plotted for purposes of observing longevity in dialogue types, potential relationships between the time making introductions and how far on the continuum one might

progress, the identification of mindsets, and noting when interactions change from one person to another.

Fixed		Growth		Global		
Interaction		Awareness		Collaboration		
Social Presence	Individual Perspectives	Accommodating /Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	Sustainability
X						
	X					
	X					
	X					
	X					
	X					
	X					
	X					
	X					
	X					

Figure 8: Dialogue of participant #25, indicating fixed mindedness

Other data were indicative of individuals being task-oriented and frequent contributors. However the focus of these participants was on completion of the task. Therefore, most of the associated dialogue provided clarification from the individual's perspective and sought clarification of the other individual's perspective. This indicated transition from a fixed mindset toward a growth mindset, (Fig. 9).

Fixed		Growth		Global		
Interaction		Awareness		Collaboration		
Social Presence	Individual Perspectives	Accommodating /Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	Sustainability
X	X					
	X	X				
X	X					
	X	X				
	X	X				
	X	X				
	X					
		X				
	X					
	X					
	X					
	X					
	X					
	X					
	X					

Figure 9: Dialogue of participant #67, mindedness emerging toward a growth mindset

Others spoke more freely about topics within the context of music. These individuals illustrated a wide range of variation along the continuum, which is indicative of a growth mindset, (Fig. 10).

Fixed		Growth		Global		
Interaction		Awareness		Collaboration		
Social Presence	Individual Perspectives	Accommodating /Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	Sustainability
	X					
X						
X	X					
	X	X				
	X	X				
				X		
	X		X			
		X				
	X	X		X	X	
X	X	X				
X	X	X				
X		X				
X	X	X				
	X	X				

Figure 10: Dialogue of participant #2 suggesting growth mindedness

Patterns in Fig. 10 indicate an ongoing dialogue with a participant over time through to the production of an artifact, mixing music. The markings clustered to the left then show the beginnings of dialogue with new participants, where the interactions go to introductions and establishing a social presence with two individuals new to the project. These interactions took place over a time span of 7 months. Some participants for whom several criteria were observed in a single conversation may need to be studied further. As seen in Figs. 9 and 10, dialogue that meets more than one criterion may determine whether the individual exhibits a growth mindset. Another way participant dialogue was analyzed using the EMC was to consider the number of interactions at each category. Appendix D shows these patterns for each of the 35 participants in the sample.

Observations from Appendix D include long periods of interaction in introductory categories, some categories are skipped, and the potential for some relationship between spending longer periods of time at the introductory categories and how far a person reaches on the continuum.

The growth mindedness of some participating teachers made a difference. Dweck contends that significant effort carries the biggest risk, especially for those with a fixed mindset, effort is only for those with deficiencies (2006). Teachers with growth mindedness tend to be risk takers and understand the perspective of having to work harder to achieve goals that they values or consider to be the most important. These teachers were willing to take a chance on a project that they couldn't fully envision and yet put considerable efforts into supporting their students in meaningful learning experiences. To do this, teachers must interact with their students, mirroring the dialogue criterion on the EMC and put it into practice, all of which take considerable effort. This is not to say that effort alone ensures success, however it does enhance the likelihood of potential being fulfilled.

Another consideration in this study was the degree to which participants were aware of his/her perspectives and those of others. Based on co-reflections with a focus group of twelve, it was evident that participants were aware of each others' perspectives and his/her own. Most spoke of how they consider other's feelings in various situations and wanting to understand different their perspectives based on past experiences.

Technology

The use of selected technology tools throughout this project was most often considered feasible in a high school classroom, based primarily on feedback and co-reflections with the teacher participants. Two problematic technology issues arose. One was having access to Skype

or videoconferencing software and hardware. In two locations, Graz and Madrid, the school leadership or governing body would not to allow schools to have access to these tools. The other technological issue was the lack of flexibility in the language interface of open source software, in particular for the Osaka participants.

Considering the use of social networks as a means of data collection is recommended. This data collection method assisted with organizing qualitative data by group and individual. Transcriptions are minimal depending on the variety of languages that may be used to contribute to online dialogue. The two types of social networks used in this study, http://www.ning.com housed all online interactions and http://www.bojam.com housed the collaborative music recordings and no cost. Theses tools were valuable to the study because they provided the conduit for the collaborations to take place, easy access to the data by the researcher, and a means for sustainability of the current work and application of what participants learned in other venues for a variety of purposes (Salmon, 2002).

Calendar

School calendars did not always align, causing some collaboration challenges. For example, just as students began collaborating through OAD and deciding songs, instruments, and singers for beginning their projects, the Wichita school was out of school for a week. A week after Wichita was back in school, the Madrid schools went on holiday break for nearly two weeks. Although technology provides opportunities for collaboration, the interruptions in school attendance suggest students may have needed the encouragement and supervision of their teachers to continue collaboration, or students may not have had the access to technology they needed to continue collaborations during the time school was not in session.

Language

Language and communication were important factors in this study. In the cases where participants shared different backgrounds, used or were exposed to different languages, or provided evidence of linguistic flexibility tended to have less of a sense of risk than for other participants. Students with linguistic flexibility seemed to have more potential for a growth mindset than those with less linguistic flexibility. Of the thirty-five in the purposive sample, fifteen spoke more than one language. The language of nine of these fifteen participants indicated a growth mindset and the co-construction of shared perspectives and meanings in their OAD. This observation suggests that English language learners (ELL), when permitted to speak their native language can thrive in a global reach project (Olsen, 2000).

Viral Diffusion

Though the researcher thought it was important to travel to the participant locations to make contact with teachers interested in participating with their classes, participation in Granada, Graz, and Osaka did not occur as envision. Instead many of the participants who joined the project, particularly in Madrid, did so because they had heard about it from someone in their social network. The *word of mouth* phenomena emerged early in the project and was recognized as an important factor in the study. An early indication was the number of people following daily blog posts during the researcher's travel to the Spain, Austria, and Japan to set up the project. Later, as people joined the Ning social network they would mention they had heard about the project from someone. The initial contact that connected the school in Spain to the project also came about from someone who knew someone who shared information about the project. This diffusion was experienced as Rogers (2003) has described an innovation spreading through a social system. Recently evidence of a viral diffusion experiment using social networks to rapidly

mobilize information was conducted. The Defense Advanced Research Projects Agency released 10 red balloons and offered a financial award to the first person who could accurately identify the correct location of all 10 balloons. Social networks were used to track and report locations. This experiment demonstrated how difficult social problems could be solved with immediacy by using social networks to diffuse information (Dugan, 2010).

Observations

Gender bias may need further exploration in collaborative projects. Female students in Wichita did not seek to collaborate with males in other countries, nor did they respond to males from other countries who contacted them. They did, however work with males they knew in their class and sought collaboration with females from other countries. Males contacted other males and females or were more generic with requests for collaboration by asking for someone who could play a particular instrument or someone who could sing a specific song. Females in Madrid did not typically initiate dialogue with males in other countries, however they did respond to male students who communicated with them. In the video conference with the teacher and student in Osaka, all students participated and reciprocated dialogue. However, the Japanese student was more inquisitive than the students in Wichita.

Summary

In summary, the findings informed the research questions as follows:

How will global music collaboration create an awareness of intercultural perspectives? Using a social network, (http://ning.com) enabled students to engage in online asynchronous dialogue over time. Three-fourths of the participants in the global music project had indications of an awareness of others' perspectives in their interactions.

How feasible is using technology to connect students for the purpose of creating an awareness of others' perspectives? Using technology to connect student for the purpose of creating an awareness of others' perspectives is feasible. However, some barriers included language differences that made communication difficult, technical difficulties beyond participants' control, and access to technology tools.

CHAPTER 6

SUMMARY AND RECOMMENDATIONS

Results of coding high school participants' dialogue using the EMC, revealed differences in student attitudes and commitment based on several factors. Students had greater success with their interactions with others progressing to co-creating an artifact when their teacher approached the project with growth mindedness, meaning he/she were willing to take a risk and put effort into learning with his/her students and integrated the project into their regular curriculum. High school students not directly supervised by a teacher did not participate, even after some dialogue was exchanged. These conditions compromised the initial establishment of a social presence and the recognition of other OAD participants as real people. Therefore, given mindedness of the teacher and the context in which collaborations are framed, it is possible to embed optional learning experiences into highs school courses in which students are able to: use technologies; seek awareness of the their own perspectives and those of others. This awareness can emerge from collaborative problem solving, critical thinking, creativity, effective communication, and enjoyment of relevant learning experiences.

Recommendations for future projects include: a) spending time with teachers to establish a clear understanding of how to use relevant technology tools; b) using resources such as CAPSpace, The Japan Forum, and Global Nomads to find other classroom teachers who are interested in these kinds of projects, since travel is not always an option, to set up global reach collaboration; c) understanding of how the scaffolding of learning experiences in the arts is the application of what is taught in others academic areas.

Recommendations include future study of: a) participants over two to three years in order to distinguish patterns and conditions that support sustainable collaborative working relations;

b) the relationship between social presence, and individual and shared perspectives on sustainability; c) the influence linguistic flexibility has on mindsets; and d) the knowledge of educational leaders for how the arts enrich all aspects of life and deserve equitable support as core curriculum available to all students, e) how global reach projects that encourage ELL students to participate in their native language corresponds with school connectedness.

Recommendations for state and district educational policy include: a) easing of restrictions making communication technologies accessible and open to teachers and students, b) integration of global perspectives in all content areas, c) student and teacher foreign exchange program opportunities, d) expansion of world languages offered at all grade levels, e) credit requirements of languages increased in K-12 education, f) seek teachers of languages for alternative education within the community, g) collaborate with universities to include foreign language learning and teaching in teacher preparatory programs, h) language immersion programs in schools at all levels, i) for schools to support the application of twenty-first century skills and have students working together globally, policies providing access to technology tools for this purpose needs to be considered.

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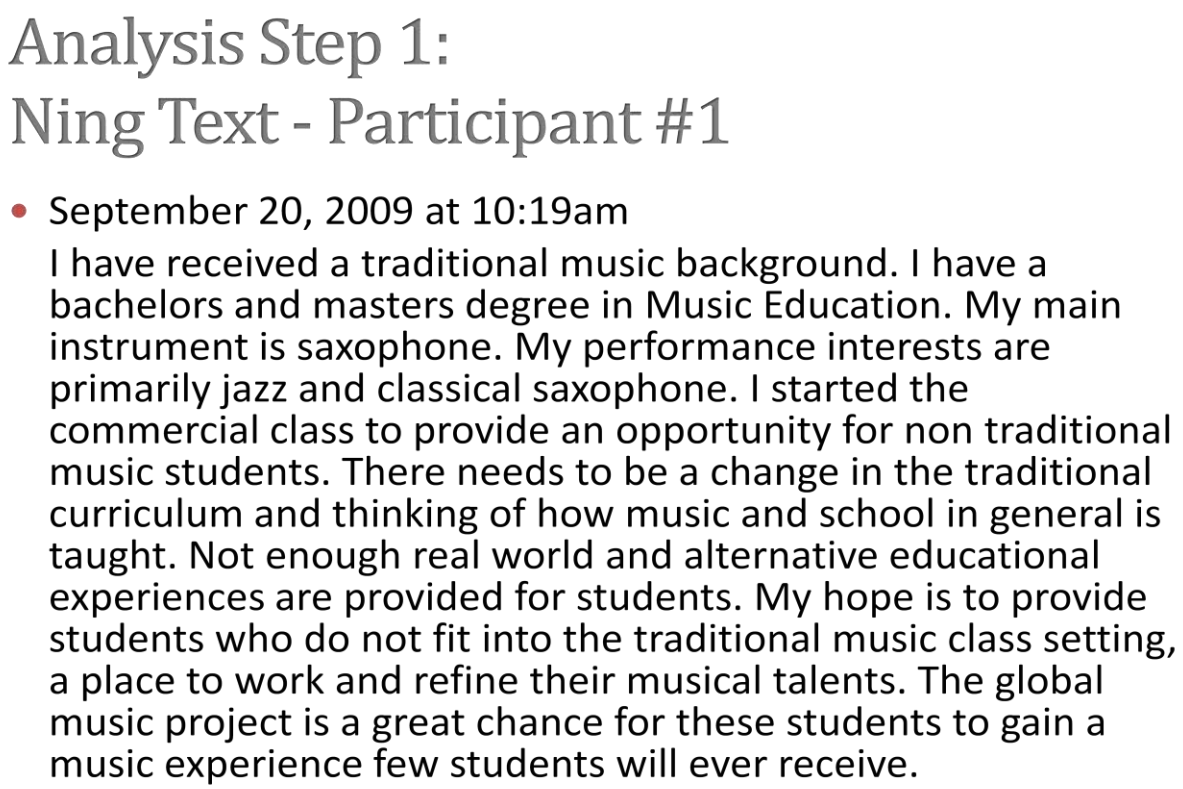
APPENDICES

Appendix A

Analysis Steps:



Copy Ning text to Excel spread sheet one participant at a time, one interaction at a time. This required following interactions from the participant's Ning page to the Ning page of the person with whom they were interacting to find their connecting post.

Analysis Step 2: Coding participant and text identification

							Fixed Mindset		Growth Mindset		Global Mindset		
							Interaction		Awareness		Collaboration		Level
ID #	Name	Role	Country	Gen	Date	Post	Social Presence	Individual Perspectives	Accommodating /Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	Sustain-ability	EMC

assigned to participant

Participant's name

Participant's role - (T) teachers, (S) student

Participant's location

Posting – (on Ning), Blog all group members, ID# of correspondent, (VC) videoconference, (R) researcher

Date of the interaction

Participant's gender

Analysis Step 3: Text to Emerging Mindedness Continuum

							Interaction		Awareness		Collaboration		Level
ID #	Name	Role	Country	Gender	Interaction Frequency	Posting type	Social Presence	Individual Perspectives	Accommodating/ Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	EMC
1	XXXXXXX	T	USA	M	9/20/2009	Blog	I have received a traditional music background. I have a bachelors and masters degree in Music Education. My main instrument is saxophone. My performance interests are primarily jazz and classical saxophone. I started the commercial class to provide an opportunity for non traditional music students.	There needs to be a change in the traditional curriculum and thinking of how music and school in general is taught. Not enough real world and alternative educational experiences are provided for students. My hope is to provide students who do not fit into the traditional music class setting, a place to work and refine their musical talents. The global music project is a great chance for these students to gain a music experience few students will ever receive					

Copy and paste text from Ning into the continuum.

Text from Participant #1 on 9/20/09, separated by categories in the EMC as appropriate.

Analysis step 4: Patterns in interactions

Fixed Mindset		Growth Mindset		Global Mindset		
Interaction		Awareness		Collaboration Global Collaboration		
Social Presence	Individual Perspectives	Accommodating /Reflecting perspectives of others	Co-constructing shared perspectives & meanings	Building shared goals and purposes	Producing shared artifacts	Sustainability
	X					
X						
X	X					
	X	X				
	X	X				
				X		
	X		X			
		X				
	X	X		X	X	
X	X	X				
X	X	X				
X		X				
X	X	X				
	X	X				

Appendix B

Text examples by category

Social presence:
#2: My name is (NAME). My playing style mostly reflects around heavy metal, however I listen to every genre from the 70's/80's. I spent 3 and a half years playing bass guitar, i also play electric and acoustic guitar as well, but I only spend about 1/3 the amount of time playing guitar compared to bass. My musical interest is to be able to compose music thats pleasing to others and to myself and to be able to be known at least throughout the country as famous bass player. For the global music performance, I think it'd be pretty neat and interesting if I were to do heavy metal songs with others who share the same interest in the world.

Individual perspectives:
#11: hi! thanks for adding!! i mainly work with cubase and various plugins and at the moment i find it very funny to record electronic funky/jazzy music

Accommodating/Reflecting the perspectives of others:
#74: Well no. Whatever you want. He had thought of a song that is against the war in Iraq. It is a version of the song Zombie from the chamberries. The version is done by a group called Breed 77. You was thinking of doing A little piece of heaven by Avenged Sevenfold. Have you thought about? Any group in particular?

Co-constructing shared perspectives & meanings:
#5: If you already are in English but I am Mexican, milk? No, that is not is what it is(jaja not known had European any that you like the Latin music =)

Building shared goals and purposes:
#2: i'll upload the drum track (which by the way was awesome) to bojam when i have time, then i'll make the bass track, and hopefully a guitar player will see it and collaborate his part into the mix

#11: Producing shared artifacts: (evidenced by a collaborative product/mix on Bojam)
hi! what about our song? did you find a way for putting it on bojam? in the meanwhile i recorded another drum line (song: chop suey) for 2 spanish students. i saw, that they asked you to play the bass...are u interested

Appendix C

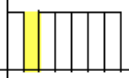
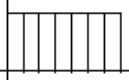
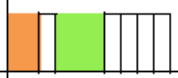
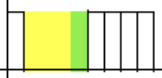
GMP Participants: Characteristics reached on the Emerging Mindedness Continuum

ID#	Continuum Characteristic	Role	Country	Gen
1		T	USA	M
2		S	USA	M
3		S	USA	M
4		S	USA	M
5		S	USA	M
6		S	USA	M
7		S	USA	F
8		S	USA	M
9		T	Austria	M
10		S	USA	M
11		S	Austria	M
12		S	USA	M
13		T	Spain	F
14		S	USA	M
15		S	Austria	M
16		S	Austria	M
17		S	USA	F
18		T	Spain	F
19		S	Spain	F
20		S	Spain	F
21		T	Spain	M
22		S	Spain	F
23		S	Spain	M
24		S	Spain	F
25		S	Spain	M
26		S	Spain	F
27		S	Spain	M
28		T	Spain	F
29		S	Spain	F
30		S	Spain	M
31		S	Spain	F
32		S	Spain	M
33		S	Spain	M
34		S	Spain	M
35		S	Spain	M
36		S	Spain	F
37		S	Spain	F
38		S	Spain	F
39		S	Spain	F
40		S	Spain	F
41		S	Spain	F
42		S	Spain	M
43		S	Spain	F
44		S	USA	M
45		S	Spain	M
46		S	Spain	M
47		S	USA	M
48		S	USA	M
49		S	Spain	M
50		S	Spain	M
51		S	Spain	M
52		S	Spain	F
53		S	Spain	M
54		S	Spain	M
55		S	Spain	M
56		S	Spain	F
57		S	Spain	M
58		S	Spain	F
59		S	Spain	F
60		S	Spain	M
61		S	Spain	M
62		S	Spain	F
63		S	Spain	F
64		S	Spain	F
65		S	Spain	M
66		S	Spain	M
67		S	Spain	F
68		S	Spain	F
69		S	Spain	M
70		S	Spain	M
71		S	Spain	M
72		S	Spain	F
73		S	Spain	F
74		S	Spain	M
75		S	Spain	M
76		S	USA	M
77		S	Spain	M
78		S	Spain	F
79		S	Japan	F
R		R	USA	F

Not included in the data set
No evidence of social presence
Social Presence
Shared Individual perspectives
Reflection on the perspectives of others
Co-construction of shared perspectives/meaning
Shared goals and perspectives
Produced shared artifact

Appendix D

Patterns of interaction and mindsets

ID	# furthest response on EMC							visual representation of # of furthest responses on EMC	Mindset indicated by dialogue		
	SP	IP	PO	CC	SGP	SA	S		Fixed	Growth	Global
#79	2	7	4	0	0	0	0			X	
#76	2	4	1	2	1	0	0			X	
#74	0	7	4	0	0	0	0			X	
#67	0	3	7	0	0	0	0			X	
#66	0	4	0	0	0	0	0		X		
#65	0	1	0	0	0	0	0		X		
#63	1	5	1	0	0	0	0			X	
#61	3	1	3	0	0	0	0			X	
#54	0	0	0	0	0	0	0		X		
#48	1	2	3	0	0	0	0			X	
#47	2	0	3	0	0	0	0			X	
#42	0	3	1	0	0	0	0			X	
#27	2	3	0	0	1	0	0			X	
#26	3	0	5	0	0	0	0			X	
#25	1	9	0	0	0	0	0		X		
#24	2	4	1	0	0	0	0			X	

#19	4	2	2	0	0	0	0			X	
#18	1	4	5	0	1	0	0			X	
#17	4	3	1	1	0	0	0			X	
#16	2	0	0	0	0	0	0		X		
#15	0	0	0	0	0	0	0		X		
#14	4	5	0	0	0	0	0		X		
#13	2	3	1	0	1	0	0			X	
#12	2	0	4	0	0	0	0			X	
#11	2	17	0	0	1	0	0			X	
#10	5	2	0	1	0	0	0			X	
#9	1	3	1	0	0	0	0			X	
#8	1	0	1	0	0	0	0			X	
#7	9	2	8	0	0	0	0			X	
#6	0	1	2	0	0	0	0			X	
#5	3	16	13	4	1	0	0				X
#4	2	0	0	0	0	0	0		X		
#3	5	3	1	0	0	0	0			X	
#2	3	3	8	4	2	0	0				X
#1	2	5	0	0	0	0	0		X		