

21st CENTURY LEARNING SKILLS:
GLOBAL LEARNING IN AN URBAN MIDDLE SCHOOL

A Thesis by

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Submitted to the Department of Curriculum and Instruction
and the faculty of the Graduate School of
Wichita State University
in partial fulfillment of
the requirement for the degree of
Masters of Education

May 2008

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The following faculty have examined the final copy of this thesis for form and content, and recommend that it be accepted in partial fulfillment of the requirement for the degree of Masters of Education with a major in Curriculum and Instruction.

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ABSTRACT

The purpose of this research was to experience firsthand how the integration of global learning and 21st century skills would logistically work, and what the experience would be like both for the teacher and for the students involved. The research was conducted in an urban middle school in a classroom void of curricular standards, and without mandated assessments. This narrative inquiry has two parallel strands; that of the researcher/teacher, and the stories of the students told by the researcher. Through the combined stories themes of teacher transformation, new teacher-student relationships, and global awareness both for the teacher/researcher and students begin to emerge.

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CHAPTER 1: THE PROBLEM

Rationale

Many challenges confront teachers of the 21st century, one of which is the need to educate the learner to ensure they develop the knowledge and skills needed for global competency (Jackson, 2004). Shifting the educational paradigm from a major emphasis on core subject knowledge, to 21st century learning implies a significant change in teaching tools and methodologies. What makes this paradigm shift difficult is that all interested parties have their own theory of what defines education. School districts in the United States are held accountable by policies such as No Child Left Behind (NCLB) and implied Annual Yearly Progress (AYP). This accountability is transferred to the teachers who are held accountable by district mandated tests, which are created to prepare students for higher-stakes tests. Moreover, most U.S. companies expect the majority of their growth to be in overseas markets, which means they will increasingly require a workforce with international competence (Stewart, 2007).

The inspiration for this study presented itself after researching the idea of globalization and skills necessary for the 21st century. After the need to increase 21st century skills surfaced in the research (Adams & Carfagna, 2006; NCREL, 2003; Newman, 2001), it was necessary to better understand how to incorporate these ideas into the middle school classroom. It was necessary to experience first hand how the integration of these concepts would logistically work and what the learning experience would be like both for the teacher and for the students involved.

Overview

Since lived experiences of the teacher/researcher and her students are the subject of this research, the narrative inquiry research methodology is selected with an objective of understanding the outcome of interpretation rather than explanation (deMarrais & Lapan, 2004; Jackson, 2004; Stewart, 2007). The literature review explicates this kind of inquiry as research methodology, as well as what recent research reports reveal about global learning, project based learning, differentiated instruction, and the integration of 21st century skills. Results of this study follow a narrative format that includes my experiences implementing the new teaching strategies and observations of my students during the implementation of projects facilitated through two different global learning agencies.

Analysis is given based on where each started at the beginning of the research period and any transformations they have undergone, in three emerging themes, due to the activities sponsored by the global agencies. Suggestions for further examination in the area of 21st century skills and global education in the middle level classroom are given. Two specific foci of further investigation include research in a standards based classroom with structured curriculum, as well as the measurement of student academic growth in areas such as reading, writing and arithmetic.

CHAPTER 2: REVIEW OF LITERATURE

Introduction

Henry Adams, writer and historian, once said, “Nothing in education is so astonishing as the amount of ignorance it accumulates in the form of inert facts.” (Adams & Carfagna, 2006, p. 158). The back to basics movement in education brought with it a myriad of inert facts. While some of the skills, such as reading comprehension, writing skills and basic math knowledge are always valuable; many of the content specific facts, which are scattered throughout a student’s educational career, are overly specialized. With advancements in technology-based literacy, owning inert facts is not as important as it used to be. (Adams & Carfagna, 2006)

Three foci of the field of education considered in this study are project based learning, differentiated instruction and 21st century learning. Reference to these can be found in a variety of educational literature such as the Association for Supervision and Curriculum Development’s (ASCD) publication, *Educational Leadership* and International Society for Technology in Education’s (ISTE) publication, *Learning & Leading with Technology*. Are these ephemeral or are they becoming a permanent feature of education? If they are a permanent part of the educational landscape, then how can they be integrated into a system already over-burdened with many other demands, such as satisfying core content standards? It is essential that they not be dealt with in isolation, but integrated into current practices so as to have meaning in a new curriculum. (Jackson, 2004)

Before focusing on the literature review of the three mentioned practices necessary for successful teaching, I elaborate on the two additional topics, based on existing literature: Narrative inquiry as the research methodology used to capture research events and the need for global education, which is closely related to the consideration of 21st century skills.

Narrative Inquiry

Narrative depictions have been around since ancient man documented some of histories most famous events, only later to be analyzed for connection to social or cultural undertakings. Clandinin and Connelly (2000, p.121) found that their (a) narrative inquiries are always strongly autobiographical and (b) research interests come out of their own narratives of experiences, and (c) experiences shape their narrative inquiry plotlines. As a research technique, the study of experience is through the story (Merriam, 1998, p. 157). Narrative inquiry continually seeks to answer the “what’s” and “how’s” as a way of understanding experience. At the heart of narrative analysis is “the ways humans experience the world” (Connelly & Clandinin, 1990, p. 2).

Since there is no set formula for analyzing narrative inquiry, interpretation of narrative poses the problem of how to analyze “talk and text”. How to interpret stories and, more specifically, the texts that tell the stories, is at the heart of narrative analysis (deMarrais & Lapan, 2004, p.118). During analysis of the text, interconnected themes will begin to appear; therein lays the meaning of the research and the data collected. This identification of themes within each story and those common to all is what Polkinghorne (1995) called an “analysis of narrative” (deMarrais & Lapan, 2004, p. 119).

Global Education

Global education has always been important, but with advancements in technology enabling broader and faster interconnectedness, the significance of a global education has amplified. Much of what one wants or needs to know is now located on the Internet. Because of this recent advancement, Adams and Carfagna (2006), state that the workers and citizens of the twenty-first century will be successful not because they own more information, but because they know to locate and know how to use information to find solutions. They further explained that a

global education means being able to connect the dots and gain a sense of the big picture. In a tightly interconnected world, students need to understand multiple perspectives and gain the ability to empathize with another person and their unique circumstance. By understanding varied viewpoints, students can then see themselves as part of a larger world and develop the ability to work alongside others around the world. (Adams & Carfagna, 2006; Friedman, 2006)

Project-Based Learning

Project-based learning has been associated with gifted education since the late 1970's (Renzulli, 1977). Gifted children have characteristics different from their regular education peers which guide them in the direction of research. They are able to synthesize and analyze information and have the ability to work long term and in depth on topics of high interest to them (VanTassel-Baska, 1998). However, project-based learning is beneficial not only to gifted students. In 1999, Ray Yau, a research associate at the Mid-Atlantic Equity Center, reported that poor and minority students were given an excess of drill and practice and very little opportunity to use technology for higher order thinking tasks (Yau, 1999 Fall/Winter). Another report documented similar findings stating that skills-based instruction, the type to which most low-income and children of color are subjected, tends to foster low-level uniformity and subvert academic potential (Kohn, 1999). In order to close the achievement gap, intervention classes by nature are made up mainly of students from low socioeconomic backgrounds as well as minority students. In contrast, the introduction of project based learning, such as that found in international collaboration, encourages low-income students, who are often labeled as at-risk, to become active learners willing to engage in cognitively challenging tasks (Pearl Chen & McGrath, 2004). The project based approach allows children to think creatively and critically,

two skills deemed highly important for the 21st century, as they continue to fine tune the basic skills of reading, writing and arithmetic.

Differentiated Instruction

Differentiated instruction remains essential in today's classrooms with diverse needs. Due to NCLB teachers must refine the art of differentiated instruction to ensure the success of all students, regardless of ability. A typical situation is one in which there may be some students who read several levels below grade level and other students who are labeled as gifted. The teacher must make sure that regardless of ability each child is putting their strengths to work to help them grasp the material presented. Carol Ann Tomlinson (2006) explains, "In a less complex – less human – world, teaching might simply be telling young people what's important to know. In such a setting, students would say, 'I see. Thanks.' And the world would go forward" (Tomlinson, 2006, p. 12). The fundamentals of teaching include truly getting to know how varied and complex each student is, and valuing their individuality to ensure that they are provided well-structured opportunities to successfully learn. A relationship must be established between the teacher and the student so that the teacher understands the students' varied learning needs, and the student feels safe in trying a new approach and making mistakes.

Differentiated Instruction does not mean that a new lesson must be created for each student in the classroom, simply changing how the information is presented or the means of assessment; is differentiation. Four ways that differentiation can occur include differentiating the content, process, product, and classroom environment (Theroux, 2004). All four areas do not need to be attended to simultaneously in order to differentiate instruction. Based on the teacher's readiness to differentiate instruction, any one of these areas could be looked at and added to the

classroom on an individual basis. As the teacher becomes comfortable in one area of differentiation, consecutive areas can be added to the teacher’s instructional repertoire.

The teacher must be attuned to the readiness of each student and leave behind the “take-it-or-leave-it” attitude toward teaching. If the student is not interested in the topic or how it is being presented, their motivation will not be conducive to learning. It is the goal of the teacher, through *differentiated instruction*, to ensure that ample opportunities are provided to accommodate individual student’s strengths so that more of them will become engaged and motivated.

21st Century Skills

<i>Digital-Age Literacy</i>	<i>Inventive Thinking</i>
<i>Effective communication</i>	<i>High Productivity</i>

Figure 1. enGauge 21st Century Skills cluster-themes (NCREL and Metiri, 2003).

The level of attention by the educational system on just teaching the “basics” has diverted attention away from other knowledge and skills that will be needed in a world that is more globally interconnected and interdependent. There is an increasing gap between the world views of the present generation of teachers and administrators and that of the next generation as they grow up with technology tools, which allow connection with people in far off parts of the world. Without intensive professional development, policy and decision making can further widen this generation gap. In a 2003 report issued by North Central Regional Educational Laboratory (NCREL, 2003) and the Metiri Group titled, “*enGauge 21st Century Skills: Literacy Skills in the Digital Age*” (7) a cluster of skills needed to work in the digital age is discussed. There are four clusters of skills represented by Figure 1 and described in more details in what follows.

Digital-Age Literacy

- Basic, Scientific, Economic, and Technological Literacy
- Visual and Information Literacy
- Multicultural Literacy and Global Awareness

Inventive Thinking

- Adaptability, Managing Complexity, and Self-Direction
- Curiosity, Creativity and Risk Taking
- Higher-Order Thinking and Sound Reasoning

Effective communication

- Teaming, Collaboration and Interpersonal Skills
- Personal, Social and Civic Responsibility
- Interactive Communication

High Productivity

- Prioritizing, Planning and Managing for Results
- Effective Use of Real-World Tools
- Ability to Produce Relevant, High-Quality Products

One area of focus states that technology should be used comprehensively in order to proficiently develop 21st century skills. It is no longer sufficient to be successful in core content knowledge, alone. This will not be adequate preparation for life in the 21st century. Second, the report suggests that schools need to offer more rigorous, relevant and engaging opportunities for students to learn—and to apply their knowledge and skills in meaningful ways. There is evidence that students learn more when they are engaged in meaningful, relevant, and intellectually stimulating work (Newmann, 2001).

A 2007 nationwide poll of registered voters, conducted by the Partnership for 21st Century Skills (2007), found that Americans are greatly concerned that the United States is not preparing young people with the skills that they will need to compete in the global economy. About 74% of those polled stated that the schools should put at least an equal emphasis on 21st century skills as they do the basic skills and 21% of the voters feel that schools should place a total emphasis on 21st century skills to adequately prepare young people for the future.

Globalization has amplified the need for intercultural communication and collaboration. The use of today's technologies helps to aide in these efforts. Gragert (2001) indicates that international collaborative problem solving is beneficial for students. Further, Gragert noted that students showed heightened motivation in class, improvement in reading and writing skills, and became sufficiently engaged to explore and expand upon new aspects of a given project. Cross-cultural deliberation among students in several nations is pivotal in allowing students to become learners and teachers. This in turn helps to break down stereotypical notions and begins to get to the heart of what it means to be educated (Adams & Carfagna, 2006).

Literature Review Conclusion

Project based learning, such as that found in international collaboration, (Pearl Chen & McGrath, 2004) allows children to think creatively and critically, two skills deemed highly important for the 21st century. Project based learning is also a way in which to differentiate instruction either in the content, process, product, or classroom environment (Theroux, 2004). Therefore; project based learning, differentiated instruction, global learning, and the implementation of 21st century skills are complimentary of each other.

CHAPTER 3: DESIGN OF THE STUDY

Context and Participants

The study was performed with a small group of students in an urban, public 6th – 8th grade middle school. The school has an enrollment of approximately 850 students. Of these 850 students, approximately 68% are economically disadvantaged and 17% are students with disabilities. When looking at all students in regards to AYP (Annually Yearly Progress), this school did not meet the requirements in math or reading during the 2006-2007 school year. The participants of this study comprised 11 females and 14 males whose ages ranged from 11 to 13 years old. The class population consisted of: 10 White/Other students, six Hispanic, four African American, three Multi Ethnic, and two Indian-American. Of the 25 students, two students were identified as Learning Disabled Special Education, and three were identified as gifted and talented, one of whom had been medically diagnosed as Autistic. On State Reading and Math Assessments which was administered during their 5th grade year, these students scored in the range of *Approaches Standards to Exemplary*. The results of the fall NWEA (Northwest Evaluation Association) reading assessment showed that this group of students achieved scores ranging from equivalent to a 3rd grade reading level to an 11th grade reading level. The grade point averages (GPA's) of the students ranged from 1.5 to 4.0. The rationale for selecting the participants was based solely on the fact that they were currently enrolled in the researcher's intervention and enrichment class. The purpose of this consortium time, school wide, was to provide interventions in the areas of mathematics and reading required by the school district. For those students who were meeting district expectations, such as those in this class, the time allowed for enrichment to their learning through means determined by each individual classroom teacher. The structure of the class was such that there was no set curriculum and therefore it was

possible to differentiate instruction and to study project-based learning, and increasing 21st century skills without the constraint of complying with curriculum standards.

Method

Consistent with my interest in the change in perspectives of the students before and after introduction of project-based learning and global learning activities that would connect the students to their global peers to help them gain an understanding of one another, the qualitative methodology of narrative inquiry was adopted. This was prompted by personal experience of change and my observation of change in perspectives of the students. In narrative inquiry the process of reflecting, structuring, and narrating, helps make disparate events meaningful (deMarrais & Lapan, 2004, p. 105).

The research was conducted over a seven month time-frame and the intense focus occurred during the participation of two 14-week iEARN (www.iearn.org) Places and Perspectives (middle-level) Learning Circle activities, and participation in Global Nomads Group (www.gng.org) video conferences on the topic of access to clean water over a three week period.

The data collection during this research posed no harm to the students involved. I facilitated learning in such a way that the only variable was the use of technology based global learning projects provided through iEARN and Global Nomads Group. Because the students were minors, active informed consent forms were obtained from the students' parents as well as student assent to willingly participate. Parents and students were informed that student anonymity and confidentiality was ensured by coding all student responses.

Data Collection

The data collected included observations of the students through the course of the research period. An observational journal was kept to record essential observations of individual students as well as observations made of the class as a whole. Individual students were interviewed by the researcher to gain insight into actions and/or comments made of them during observations. Additional data was collected through anonymous surveys regarding familiarity and interest in global learning, collaboration, technology use, as well as opinions regarding perception of school and learning. The data collected from the teacher's view was reflective in nature and was recorded in a journal through the course of the research.

The collected data, that of the students as well as the teacher, is analyzed based on three main themes: personal transformation, relationships, and global awareness. Analysis is given based on where each started at the beginning of the research period and any transformations they have undergone because of the iEARN and GNG activities.

CHAPTER 4: NARRATIVE DATA AND DATA ANALYSIS

Introduction

This narrative inquiry has two parallel strands. It begins with the researcher's story that describes the events that took place to shape my view of education. It includes events as a K-12 student, as well as a college student, and continues through experiences during my first four years of teaching, and concludes with how my view of teaching and education was reshaped due to my involvement with two global learning agencies. This inquiry continues with four specific student stories. Through the combined stories themes, of transformation, relationships, and global awareness begin to emerge.

Narratives

My Stories

From Regurgitating to Learning by Trial and Error

Thinking back to my K-12 education I was an average student who easily earned in the A to B range in all classes. Learning came easily to me and I wanted to perform well because it was expected of me. Reflecting back on the teaching and learning process, I would say I was an excellent listener and could regurgitate what was given to me when required. I enjoyed school, for the most part, though I always questioned the relevance of the curriculum. I never truly learned how to process and problem solve at a higher, independent level until I entered college.

I received my undergraduate degree in elementary education through a nontraditional site based program. The majority of the teaching and learning took place in an urban elementary school. During the two year program, I was not told what to do and had to learn through trial and error based on what was presented in methods classes. In simple terms, I was fortunate to have a

two year student teaching opportunity in contrast to the usual 18 weeks of student teaching. After approximately 15 years in the education system, this would be the first time that I would be exposed to *risk taking*, *problem solving* and *uncertainty* as a student.

Teaching Challenges

My first teaching assignment was at an urban middle school teaching 6th grade science and social studies. Because of my training, I was ready for the assignment and knew exactly how I wanted my class to function. I was placed on a small team of four teachers, being solely responsible for teaching science and social studies to approximately 100 students on our team. I received a list of the standards and the teachers' editions for the classes that I would be teaching and began to prepare. I was shocked to see that the science book was inquiry based and contained very little content. There was no way that I could resort to the "open your books to page 10 and read chapter 1" style of teaching. I had to do a massive amount of research to figure out how I was going to meet the standards that were required. Though this was a huge burden as a first year teacher, in retrospect it was a blessing in disguise. My first year teaching I was awarded runner up for the district's Distinguished Teacher Award in the secondary first year teacher category. The award was bestowed based on my classroom management skills and my ability to engage students at a higher level.

Despite school, as well as district restructuring, I continued to fill the same teaching assignment. Part of the school restructuring involved a movement away from the small team structure and more towards departmentalization. I was now one of approximately 10-13 teachers responsible for roughly 250-290 students depending upon the year's enrollment.

During this time I was on the receiving end of several new district initiatives including; the enforcement of a structured scope and sequence for the standards in all curriculum areas,

adoption of a new science textbook series, and the conception of District Common Assessments (DCA's). Rationales for these new initiatives included; helping to ease transition of our highly transient students, to ensure teachers were meeting district and state standards, as well as aiding in preparation of students for the high-stakes assessments.

While I believe that many of these changes were based on good intentions, I found that there were several detractions. The *scope and sequence* initiative encouraged teaching to the test, in an underlying way, as it referred to specific sections and chapters that needed to be covered within the 9 week grading period. The scope was very broad and did not allow for in-depth teaching, or re-teaching as needed. The sequence hindered the implementation of teachable moments and time relevance. The DCA's at their conception were in multiple choice format and textbook driven. As conversations among colleagues began to lose sight of what was important, and the stress of performance on this low stake assessment took over, I began to transition my teaching style to helping students "own facts". I resorted to teaching the way that I was taught, and my students in return became overly dependent on me. I had done exactly what John W. Gardner said, "I had given my students cut flowers when I should have been teaching them to grow their own plants".

Disorienting Dilemma of Teaching

At the commencement of my 5th year teaching; I was in danger of becoming an educational statistic. I had lost all desire to teach, began to doubt the educational system and questioned why I was still a teacher. No Child Left Behind (NCLB) and Annual Yearly Progress (AYP) were becoming common phrases in staff meetings, in-services, as well as inundating the media. Still in the same teaching assignment, my base school had now become a "School of Choice". Parents had the option of enrolling their child in our school instead of their

neighborhood school, which had not met the AYP requirements. Our school had not fared much better in meeting AYP, but we provided an option of transportation and perhaps a glimmer of hope to some parents and students. Our enrollment began to explode, and my personal class load nearly doubled to 200 students in only four years.

Reshaping My Teaching

My good friend convinced me to join the two year masters program that had already begun at the local university. With much doubt in my mind, I agreed because earning a masters degree would mean a significant raise in pay if I continued my teaching career. An ancillary benefit would arise with the possibility of opening doors beyond teaching if and when I left the profession.

Master's program. During the first semester of year one in the masters program, I went through the motions of the class and continued to dislike teaching. During the second semester my eyes were opened and a new light was shed on what teaching and learning should, and ultimately could be. One of the required readings for that semester was Coming of Age in a Globalized World: the Next Generation by J. Michael Adams and Angelo Carfagna (2006). While reading this book I became more than a passive reader, I began to connect with what the authors were presenting and could not ignore the facts. The authors painted a vivid picture of how changes in technology have contributed to making this a global era. The discussion of the purpose of education dating back to the ancient Greek's with Plato's Academy seeking truth and universal knowledge, and the Sophists focusing on practical skills, intrigued me as it is an on-going debate that could take on new meaning against the backdrop of modern classroom challenges.

Another class requirement was reading the book *Now, Discover Your Strengths* by Marcus Buckingham and Donald O. Clifton Ph.D. and taking the *Strengths Finder Profile*. Through this web-based assessment, I discovered that one of my top five strengths is *Restorative*. According to the *Strengths Finder Profile*, the fact that I encompass the restorative strength simply means that I thrive on solving problems. (Buckingham & Clifton, 2001) At this point of my career, I was beginning to become energized, not by teaching, but by the challenge of the complex problem of bringing the joy into learning and showing students how to own their learning, not simply just owning facts.

Global education. I now returned to the book that had started my quest to employ a new way of teaching. I spent many hours pouring over the chapter entitled, *A Global Education: Schooling World Citizens* knowing that an answer was there somewhere. I developed a personal philosophy about the meaning of being educated. The philosophy was tested after looking at the educational system through the eyes of a student, a teacher and as a parent, but I needed more than just a theory. In the subsection, *Rethinking What It Means to Be Educated* the authors stated that the workers and citizens of the twenty-first century will be successful not because they own more information, but because they locate and use information to find solutions (Adams & Carfagna, 2006, p. 158). They further explained that education means being able to connect the dots and gain a sense of the big picture.

The next step came in discovering that the big picture also required providing a global education. Not growing up as a child in a globalized world, and not receiving a global education myself, I first tried to gain a better understanding of what a global education encompasses. With many theories and ideals surrounding global education; I couldn't espouse them all at this point in my quest for a change. The theme that was repeated with the highest degree of frequency is

that students need to understand multiple perspectives and gain the ability to empathize with another person and their unique circumstance. By understanding varied viewpoints, students can then see themselves as part of a larger world and develop the ability to work alongside others around the world. (Adams & Carfagna, 2006)

Global Networks for Teachers

Unearthing the wonders of iEARN (International Education and Resource Network).

With the underlying ideals I was still in search of a packaged curriculum, since I was unsure how to create these experiences on my own. That is when I discovered the work of International Education and Resource Network (iEARN). iEARN is a non-profit network of teachers around the world that offers teacher sponsored projects which utilize the internet and other technologies to encourage global collaboration. This was the pre-existing infrastructure that I was looking for. iEARN also provides insight into the premise that students must be able to see the big picture while valuing multiple viewpoints in order to assume the role of global citizen.

I quickly joined the network and began navigating the massive iEARN site researching the many projects that were offered. I soon settled on three that I thought the students would enjoy and find satisfaction through accomplishment. The projects included; The Christmas Card Exchange, Architecture in your Community and Video Introductions of your Community. I presented the concept to the students, provided them with an informational hand out on iEARN, as well as a short description of what each of the projects would entail.

To differentiate the learning experience, students had the opportunity to select the content they were most interested in by signing up for their 1st, 2nd and 3rd choices. My prediction was that most students would want to be a part of the Christmas Card Exchange since it appeared to be the easiest and one to which they could connect. I was pleasantly surprised to see that my

prediction was not accurate. Much to my surprise and enjoyment, there was an even distribution of students who wanted each of the different projects as their first choice.

I announced their project groups and instructed them to go to different areas of the room to begin planning their projects. I soon realized that was not enough direction for students, who obviously did not have much collaborative work experience, an area of importance in 21st century learning. Some students sat in their groups silent, not sure what they were to do. Other students argued over what should be done and how, and of course, still others just wanted to catch up on the latest gossip. After these observations, I spent time with each group helping to get them off to a better start. I gave them suggestions on how they could break the projects into smaller pieces and assign students to each part. I also informed them that they would need to identify a leader who would help with the work, but would also make sure that all of the others in the group were meeting the expectations of the team.

The first day for the students to begin their work on the computers came with a halt. I soon remembered how little computer skills many 6th graders have as they enter middle school. Questions such as: “How do I turn it on? How do I log on? Where do we go to type? and How do we save?” consumed a large part of the period. The rest of the week turned into a miniature computer survival class.

Our first experience with Learning Circles. This was not the quick and easy fix I had hoped it would be. In the meantime, I continued to search the iEARN site for more ideas and to gain a better understanding of what was expected of us in each of the projects. This is when I happened upon iEARN Learning Circles. The Learning Circle approach sounded more like what I was looking for. Learning Circles are small electronic communities, which are made up of

teachers and students located around the world, that work together for a specified period of time to accomplish a common goal (Harasim, 1993).

We received confirmation that we were going to be part of the Places and Perspectives Learning Circle (Middle School Level) as well as a list of the other schools assigned to our group. We were thrilled to find out that our group was a wonderful mix of cultures. The group included schools from: Noida, Uttar Pradesh, India; Port Said, Egypt; Mississauga, Ontario, Canada; Seattle, Washington, USA; Korolev (near Moscow) Russia; Miass, Chelyabinsk, Russia; Langepas, Autonomous District of Khantia-Mansia, Russia, The Western Region, Sagamu Ogun State, Nigeria; and Santa Cruz, Trinidad (figure 2). As soon as we found out how much work was involved in the Learning Circle, we quickly sent an apology and a withdrawal from two of the three projects that we had started. We decided to continue the Christmas Card Exchange, since this was the group that had made the most progress at that time. The sponsors of the other two projects understood, wished us luck on our Learning Circle involvement, and invited us back when we had more time. This was a relief, as I was not sure how the sponsors would interpret our withdrawal.



Figure 2. Map of participants in the Fall 2007 iEARN Places and Perspectives Learning Circle.

Defining our culture via postal mail exchange. The first assignment established in the *Opening the circle* phase was to create a welcome pack containing items that would help to explain our culture. By participating in this phase, students were actively involved in the multicultural literacy subset of *enGauge 21st Century Skills*. The pack could be sent via postal mail or in digital form. The students chose to send a postal mail package feeling that it would give them something tangible to help tell their story. It was a difficult task to figure out what we could send in an 11 x 12 envelope that would not be cost prohibitive, but would be representative of what our school, state and national cultures. The students were very interested in seeing what money from the different countries looked like, but after researching postal regulations we soon discovered that mailing of currency was prohibited. The students continued their brainstorm of what could be sent. We then had to narrow it down to a few items, so students began to plead their case for why their chosen item should be sent. One student was adamant to send an American Flag, since that was a major symbol of the United States. While many students agreed, a few students objected and stated, “We can not send the American Flag because a lot of places

hate us.” The previous objection did lead to the discussion of why some students perceived that other countries hated us. I found the students’ comments so surprising that I wanted to find out from the other teachers in the group what they thought about the comment. The teacher in Trinidad shared the concern with her students. She relayed back that her students laughed a little and said that they don’t hate us, but that Americans think that they are the boss of everyone. She shared that her boys love to visit America, but in her words, “The kids still have the image of America carrying the Big Stick.” When it was all said and done, the students decided to proceed and send the flag along with a short description of the history of the flag and its meaning, never once opening a textbook, but merely relying on what information they could gather and synthesize from the Internet.

Misconceptions and similarities revealed. The next assignment in the *Opening the Circle* phase was a class survey. Each of the schools in the group had to answer the same questions in order to gain a better insight about each school. Through this one assignment, the students’ misconceptions began to show. Before we received the surveys; several students were still perplexed about how we were going to know what the other schools were saying. One student asked of me, “Do you speak all of those languages?” When I told him, “no” he asked, “Then how will we know what they are saying and how will they know what we are saying?” I explained that all of the schools involved could speak, read, and write English to some degree. Our Hispanic students explained to the other students that it is much like the fact that they can speak, read and write Spanish and English. Ultimately, my students found a way to identify our culture to those of our corresponding participants from around the world. Knowing that there were four or five different native languages spoken among the entire Learning Circle group, one student said, “How would we learn ALL of those languages?” Another student questioned,

“Why do they all learn English instead of another language, like Spanish?” This debate continued among the students, while I only observed the conversation and acknowledged that they were making valid points.

When we received the class survey from Egypt, I shared it with the class. When we reached the part of the survey where the students shared their favorites among different categories, my students were stunned. One student yelled out, “I can’t believe they watch *MTV’s Pimp My Ride!* I thought they all rode camels!” An African American student questioned, “Why do they watch *Oprah* and *Tyra Banks* when they don’t have black people there?” As a teacher I realized that we had done our students a disservice when teaching about Egypt. The students can talk to great length about what they learned about Ancient Egypt in elementary school such as mummies, pyramids, and King Tut, but still some students honestly believe that Egypt remains in its ancient state.

Continuing their global education we received the surveys from Russia. Students were quick to find similarities between our culture and theirs. A male student was thrilled to see that the students in Russia liked to read *Harry Potter*, “Cool! They like *Harry Potter* just like me!” The students were even able to make connections in the surveys outside of pop culture. They enjoyed seeing that one of the Russian towns largest industries revolved around space exploration. They could relate to this and compared it to the fact that one of our largest local industries was aviation.

During this time, the students enjoyed sharing about our Halloween traditions with our partners who had not experienced Halloween. The students abroad were full of questions regarding why we made jack-o-lanterns, dressed in disguise and participated in trick-or-treating. I soon realized that many of my students didn’t really know why or how the Halloween traditions

were conceived. Through the questioning, they felt as though it was their duty to teach the others in our group and quickly began researching.

The school in India frequently shared of their Diwali Holiday traditions happening during our circle involvement. The most interesting conversation that arose from their sharing was when they told of the signing of a contract to celebrate Diwali without the burning of crackers. They stated that the burning of crackers was contributing to air pollution and global warming. When I shared this idea with the class, a few students began to question why they would burn crackers and how burning crackers would pollute the air. With further prompting I realized that they were imagining setting fire to an edible cracker. I then asked them to define what a cracker would be. There were many logical explanations such as; a Ritz Cracker, a Saltine Cracker, a luminary type item, or maybe a special something that they make in India for Diwali. As we talked through some of their thoughts, a realization was made for one student as he yelled, “Crackers are FIRE crackers! Not crackers that we eat!” Once we all established that they were referring to firecrackers a new thread of conversation formed. They soon began to debate how burning firecrackers would add to pollution. A few students connected it to the United States and wondered why we never think about air pollution during 4th of July celebrations. To this point, still no textbook was opened, a scope and sequence was not referred to, and there were certainly no assessments – but I know the kids were learning and were addressing the 21st century skill of global awareness.

The Learning Circle group was eager to learn more about each other and we soon began to share pictures; which contributed to breaking down cultural misconceptions and many new class discussions. A discussion of race was brought up when I projected a photo of the class we were communicating with in Trinidad. The picture was projected on the wall and I had added a

conversation bubble from one of the students saying, “Explain how our classroom is different than yours.” The first thing that one white student yelled out was, “Where are all the white kids?” The other students began to question the same thing. Again, I did not attempt to answer their questions but only acknowledged their questions and prompted for deeper thinking. Some students began to speculate “where the white kids were.” I heard everything from, “They don’t have white people where they are from” to “It’s probably an all black school.” We decided to e-mail our questions to the students in Trinidad. I was somewhat reluctant and nervous to ask the question of race, but decided that was why we were involved in iEARN...to learn more about the world we live in. I was relieved when the teacher in Trinidad reported to me that her boys found the question of “where are all the white kids” funny. We found out that it is an all boys’ school and that most of the white kids live on the other side of the island. This response lead to just as much discussion as the initial question. A few of the students who are bused to our school from across town said, “But, we live on the other side of town and we have to ride a bus for an hour just to get here when there is a school closer to our house. Why don’t they do that?” Other students thought that it was “racist” to have an all white school and an all colored school. This one impromptu conversation was covering a multitude of history standards and the kids had no idea that they were learning.

Involvement in a new Learning Circle. At the conclusion of the first Learning Circle, we decided to join a new circle for the next session. This time our group was smaller and included: Novosibirsk, Russia; Gubkin Russia; Kortkeros, Komi Republic, Russia; Woodsfield, Ohio, USA; Taipei, Taiwan; Shchuchin, Grodno Region, Belarus; and Xalapa, Veracruz, Mexico. The second Learning Circle group was not as active as the first and there were not as many misconceptions to encounter. The students were no longer as impressed with the activities as the

“new” had worn off and they had “already done that”. The activities were the same only the schools participating had changed. Though it was interesting to see additional viewpoints, it was not enough to hold the attention of the group anymore. The involvement in the iEARN Learning Circles was valuable, but I was still looking for another global avenue.



Figure 3. Map of participants in the Spring 2008 iEARN Places and Perspectives Learning Circle.

In search of a new global learning adventure. It was time to go back to the drawing board. While reading a manuscript for a book on global learning and intercultural communication competencies, I connected personally to a reference of a case study that occurred at my high school Alma-mater. There it described connecting to Rwanda with the help of the Global Nomads Group (<http://www.gng.org/>) through video conferencing equipment. I quickly investigated the Global Nomads Group (GNG) site, merely window shopping since our school did not have the necessary equipment or funding for the conference fees.

At this point in my story, the Six-Degrees of Separation theory came into play and I began to see first hand that this truly is a small world. Through mutual contacts, I was put in touch with a district official who was also very interested in bringing global learning and 21st

century skills into the classrooms. The necessary equipment was already available in the district and was generously made available for my classroom use. Funding was then granted to try a conference sponsored by GNG entitled *Access to Water* in which students would discuss the crisis of accessibility to clean water, the effects of drinking contaminated water, as well as the responsibility of global citizens regarding this issue. This was to be the first of the two-part conference that would address the 21st century skills of global awareness, scientific literacy, interactive communication, as well as risk taking and basic literacy. The follow up conference, on a following day, would provide students the opportunity to ask questions of an expert in the area of providing access to clean water.

Connecting the class to their global peers. I quickly explained to the class that the week's lessons were in preparation for a video conference. Not used to this type of risk taking, a skill deemed important for success in the 21st century, students expressed their uncertainty of what a video conference would entail. Due to time constraints I explained the basics behind the topic and the purpose of the video conference. I did not explain the selection process of student participants at this time. We then moved directly into the lesson plans which were provided by GNG to ensure that all parties involved had the same information. As a class we used several different comprehension and note taking strategies to attack the complicated content.

The conference day arrived and I gathered the 12 participants on one side of the room while my co-teacher met with the remaining students. Two students previously selected were assigned out of school suspension and would not be participating, so my co-teacher selected two alternates. I explained to the selected few that they were chosen based on their participation and involvement in the lessons leading up to the conference. The selected groups delight was

showing through their obvious nerves. We reviewed conference etiquette, as well as what to expect and then I proceeded to explain the storyboard provided by GNG.

The students were instructed to arrive 30 minutes before the conference time, which they promptly did. While awaiting connection the students gathered their articles, notes and note taking supplies and proceeded to strategically place themselves in rows in which they felt most comfortable. We once again reiterated that they were being watched by all members of the conference and what messages body language could send. Before the dial in, we allowed the students to view themselves on screen seeing exactly how the other members of the conference would view them. They waved to themselves, laughed and made faces, but as soon as the call came in they went directly to strictly professional behavior.

During the conference the students were attentive, and polite. They responded to the moderators when requested in the exact style that we had previously rehearsed. At one point in the conference a student from another site asked a question that was off topic that my students could not answer. As they looked towards the adults in the room for guidance, it was the first time during the conference that I observed fear and uncertainty in their eyes. They were assured that it was acceptable to state that they did not know the answer, and with that acknowledgement, that is exactly how they answered. Later on in the conference, a school that is close in geographic proximity asked a question regarding location, before my students could answer; the group laughed and said that they already knew. Perplexity came over my group and with our microphone muted my students asked, "If they already knew the answer, then why did they ask the question? That was rude." Though the instance was rude, it fueled their fire.

With smiles on their faces the students were preparing to return to their classes talking about the events that transpired during the conference. The excitement among the students

continued throughout the day as they recollected. During lunch, students from the conference were expressing their frustration and quest for revenge towards the two schools in the conference stating “That was not right.” I was inundated with “Do we get to do that again?” and “That was fun today!” and from a few students who were not in the conference, “I will do better the next time we have a video conference, I promise.”

There was a day between the first conference and the second conference in which we had time to research and construct questions for the expert. I noticed a slight change in each groups’ behavior and participation during this time, which will be further examined in the student stories. The students in the conference group were intent upon continuing to prove themselves to the other groups involved. Several students in the non-conference group directed my attention to the fact that they were working much harder than they were previously. Not all students were affected by the talk of the conference, and continued to be disengaged.

Day two of the conference arrived and I informed the students that there would be different participants in this conference. Slightly disappointed that they were not going to meet up with the groups they felt revenge towards, and stunned to discover that they would be the youngest group in this conference of mainly high school students, they were ready for the new adventure and challenge.

During the conference we were given advanced notice of when the mediator was going to field questions from our group. Leading up to our turn the students were busy reviewing their notes and quietly discussing with peers near them the questions that they thought would be most appropriate. Appearing to be seasoned professionals at video conferencing, they appropriately phrased their questions and comments to the expert, always concluding with “Thank you.”

At the close of the conference I praised the students on their outstanding participation. They commented on how “cool it was to talk to an expert and the high school students” and that they “definitely wanted to do that again.” This one event successfully addressed all four quadrants of clustered skills mentioned in the 2003 report issued by North Central Regional Educational Laboratory (NCREL, 2003) and the Metiri Group titled, “*enGauge 21st Century Skills: Literacy Skills in the Digital Age*” (7). The four quadrants addressed included *Digital-Age Literacy, Inventive Thinking, Effective Communication and High Productivity*.

Teacher’s Lens: Narratives about my Students

Jamie’s Story: A Journey to Active Engagement

Background. Jamie is a white, female, middle school student who earned the rating of *meets standards* in both reading and mathematics on her 5th grade state assessments. She earns in the A to B range in her classes and does moderate work without much help from her peers or teachers. Through simple observations of body language and posture; she falls into the “slightly shy and somewhat unsure of herself” category. Like many middle school students she is still trying to find her niche. I am privileged to have Jamie twice a day, first thing in the morning for a consortium class and later in the afternoon for science. While monitoring Jamie during independent work time in both classes, I frequently ask her, “How are you doing?” or “Do you have any questions?” and I always receive the same answer in the same quiet tone with her head tilted slightly down and her eyes faintly darting from the ground to somewhere past my forehead, “No” followed by a forced half smile as she goes back to work. After speaking with Jamie’s other core teachers I have found out that this behavior is consistent throughout the day as she sits quietly for each 80 minute block. While discussing Jamie’s performance in classes the conclusion arises that she appears to prefer to remain introverted while focusing on her work.

During whole class or small group work, she does not volunteer to read out loud, does not contribute much to discussions and rarely offers answers to questions posed to the group.

For approximately 18 weeks, my consortium class was actively involved in iEARN Learning Circles. Jamie would once again receive her project and return to her desk and begin to work on the computer quietly to complete the project. When she would finish; she would return to me seemingly pleased with herself and simply state, “I’m finished” followed by the somewhat unsure, forced, half smile. I would review her work and suggest areas in which she might revise and edit to produce a higher quality product. She would quietly nod, say “Ok” and shuffle back to her computer to make the suggested changes. When completed, she would once again quietly return to inform me that she was finished. I then, would offer her the option of completing another project, which she always shyly answered, “Sure.” Most of Jamie’s responses were not lengthy, seemed somewhat forced and unsure – almost as if she was thinking, ‘I guess I have to since you are the teacher and I can’t tell you no.’

Opportunity almost overlooked. After interacting in this predictable pattern I presented the idea of preparing for the Access to Clean Water video conference with the Global Nomads Group (GNG). The class was not sure what a video conference was, so I quickly explained and moved right into the lessons provided by GNG. During the lessons, Jamie did just enough to satisfy the requirement, but as usual, did not offer up much more. Out of 25 students in the class my co-teacher and I selected 12 students, 6 girls and 6 boys, to participate in the video conference. The students were chosen based mainly on their involvement in the week’s lessons – reflecting back and choosing the students who voiced their opinions and shared verbally throughout the week. This of course, meant that Jamie would not be one of the six girls chosen. The day of the video conference; a few of the students who were selected to participate were

absent, so while I worked with the video conference group on etiquette and expectations, my co-teacher reassessed the non-conference group and decided to talk to Jamie. She explained to Jamie that she would have to talk as part of the conference and Jamie perked up, smiled a full smile and quietly said, “I can do that Mrs. Jones, I promise.”

Jamie proves herself. The students began to arrive 30 minutes before the conference to prepare. Jamie bound into the classroom, shoulders back, head held up high, eyes focused straight on, with a smile on her face, she deliberately placed herself in the front row directly in front of the screen. She then, meticulously laid her articles, notebook paper, index card containing her questions and her pencil out in front of her. She ensured that her materials were aligned and equidistant. She actually checked and rechecked the alignment of her supplies a few times. When she felt as though they were appropriately placed; she folded her hands in front of her on the edge of the table, focused straight on at the screen, head held high waiting for the Global Nomads Group to dial in. As she continued to wait she would glance at the small picture-in-a-picture frame which contained the video shot of our class (placed there so that the students would always be reminded of what others were seeing) and would realign her supplies ever so slightly, scoot back in her chair forcing a more confident posture, refold her hands in front of her and pleasantly await the call in.

The time finally arrived when all conference members were connected and the conference was well underway. The first question was then posed to my class and I waited eagerly to see who was going to be the first to speak during this new venture. To my shock and awe, Jamie sat up a little straighter and with a huge smile quietly raised her hand to about shoulder height and looked me directly in the eyes and with her facial expressions “asked” me if I would call on her to speak. I somewhat reluctantly nodded for her to speak, at this point still not

sure what she would say or do. She then very clearly stated her name and the school she was from, followed by her question and a thank you signaling she had completed her question. At the close of her thank you she glanced back my direction with a smile – which I responded to with an equally enthusiastic smile and two thumbs up. She then quickly turned her attention back to the conference making sure she was sitting up tall and proud; she smiled and listened intently to the response. When the moderator acknowledged that it was a good question, Jamie beamed even bigger and brighter. As day one of the two day conference continued, Jamie consistently raised her hand to speak and for the entire hour seemed to be completely in tune with the exchanges taking place among all parties involved.

Jamie actively engaged requests more. Later that day when I went outside to retrieve my class from recess; there Jamie was with a big smile. I asked her what she thought about the day's video conference. She proudly said with a huge smile looking me straight in the eyes, "That was a lot of fun! Will we get to do that again?" I informed her that we were going to have part two of the conference in two days followed by questioning if she would like to be a part of day two as well. She clapped and said, "Oh, Yes! That was a lot of fun and I want to do it again!" She reinforced her accomplishment by reminding my co-teacher, "I told you I would talk and I did! Didn't I?" We both then reassured her with high praise attributed to her participation and performance that morning.

Day two of the conference was much of the same. Jamie came in even more confident than day one, quickly found her perfect position in the front, went through her routine of placing her materials, checking her posture and preparing herself for another great conference. She once again listened intently to the conference and raised her hand to speak frequently. This time, the mediators would address her by her name, remembering her from day one. This direct

recognition by an outsider made Jamie sit up even taller and prouder. She left day two just as excited as she did day one asking, “When will we get to do that again?”

Samantha’s Story: A Journey from Disgust to Desire

Background. Samantha is a white, female middle school student who earns in the C and D range in her core classes. She earned the rating of *exceeds standards* on her 5th grade state reading assessment, and *meets standards* on her 5th grade math assessment. She does not put forth much effort in class and appears to not care about doing her best. She falls into the “I am here because I have to be here and I will do just enough to get by” category. Samantha is the know-it-all middle school girl who is inconvenienced by everything that is said to her, about her or around her. I have Samantha twice a day, first thing in the morning for consortium and immediately after consortium for science. While monitoring her in both classes I observe the same thing. Samantha becomes very frustrated with most requests. When I ask her if she needs anything or how she is doing, she always responds with a combination huge sigh, overdramatic roll of the eyes and head throw like she is completely imposed on by my question. If she responds verbally, it is a complaint such as, “Why do we have to do this?” or “This is so stupid.” This behavior is true in her other core classes throughout the day as well. I was fortunate to actually witness the exact same behavior when Samantha was speaking with her math teacher in the hallway before lunch. The exchange was dreadfully familiar – Samantha was completely disgusted and utterly put out by the request of the math teacher. The exchange escalated between the two and ended with Samantha stomping off, throwing her hands out to her side and yelling her disapproval. It is Samantha’s way or no way and do not try to call her out on it or it will only intensify.

Disgusted with learning. During the 18 weeks of working on iEARN Learning Circle projects Samantha would try to make herself unnoticeable so she could avoid a project assignment. Even when the students were allowed to choose the project they were most interested in; Samantha would wait until all of the other students chose theirs before she made her way up to see me. She would then sigh and ask if there was anything left. When I showed her the options of what was left she responded with the typical display of Samantha displeasure. She would reluctantly choose a project and stomp back to her computer muttering her disgust all the way. She would work just enough so I wouldn't question why she wasn't working. As the days went by, I would remind her of the approaching deadlines and encourage her to continue by giving her suggestions on where to go next with the project. This too, was always received with sighs and verbal protest as if I had just asked her to run 10 miles in her bare feet carrying 10 gallons of water in each hand. She would eventually turn something in, but just enough to say it was done. When I would give suggestions on how to revise or edit to improve the product, she would just shake her head, sneer and say "I already did it. I'm done, can't you see that?" To which I would just shrug disapprovingly and say ok – I knew that it was not a battle worth fighting with Samantha.

The day that I announced we would be working on something new and explained the Global Nomads Group video conference, Samantha was not impressed. We began the lessons and Samantha announced her disapproval of the fact that we were reading and had to work. When they were given the opportunity to read an article with a small group she made it clear to them through her nonverbal cues that she did not want to work with them. She made sure that she sat as far back from the group as she could, crossed her arms, rolled her eyes, turned her body and face away from them and sighed when they tried to include her in the conversations.

During whole group discussions she showed the same displeasure and wanted nothing to do with what we were talking about. Because of these actions, and those in the past, Samantha was not chosen to participate in day one of the conference.

Establishing a desire for learning. The day after the conference those who participated shared what it was like and the rest of the class time was spent having the entire class preparing for part two of the conference on the following day. Samantha seemed a little more interested in the lessons, but didn't go out of her way to participate, but also was not quite as vocal about her discontent. She later asked my co-teacher why she didn't get to be a part of the video conference. My co-teacher explained that the students were chosen based on their participation in class. She then continued to explain to Samantha what we observe from her. My co-teacher even reenacted a typical Samantha moment for her so that she could see what it looked like to others. Of course, Samantha responded with her sighs and eye rolls then stomped away.

The morning of the second conference we watched a short video about the desalination process and talked more about how this might aide in the issue of scarcity of clean water. It was a process that might have been slightly more technical to the minds of 6th graders, but they knew that they needed to bring something new to the conference that day. Samantha intently listened, took notes, asked questions and offered her comments during class. I found it a little odd, but did not think much of it at the time. Between the end of class and the beginning of the conference my co-teacher was in the hall during passing period. Samantha went out of her way to approach Mrs. Jones and she politely said, "Mrs. Jones I really enjoyed today's lesson on desalination. I found it so interesting because I didn't know that they could do that. What do you think would happen if one of the pipes broke though?" Of course Mrs. Jones was stunned when the girl who never had anything nice or remotely insightful to say, suddenly acts as though she is a college scholar.

Unfortunately, Samantha had tried to prove herself too late and she did not participate in the conference later that same hour.

Donald's Story: Going Beyond Successful

Background. Donald is a white, male, middle school student who earns in the A to B range in his core classes. He earned the rating of *meets standards* on his 5th grade reading assessment, and earned the rating of *exceeds standards* in the area of mathematics. Donald is engaged in his academic as well as his social life. Through observations of his body language he seems to enjoy being at school. He is more difficult to read through observations alone. What makes him much more difficult to read is the fact that he displays very little facial expressions and his pattern of speech exhibits very little intonation regardless of his mood during conversations; both with his peers and with adults. Donald falls into the “I am at school to do my best because that is what is expected of me, but I am hard to excite” category. Unlike some of the other students in this class, I only have Donald for consortium class for 40 minutes each day and do not have him as a student in science. While monitoring Donald during consortium class I will ask him “How are you doing?” or “Do you need anything from me?” To this he will always look at me with a blank look and answer in monotone, “I don’t think so, but how does this look?” He will then show me what he had accomplished to that point and wait for my approval or feedback. He will participate verbally at minimum and when he does he will look to his male peers for approval. This is the pattern in his other core classes as well.

During the 18 weeks of iEARN Learning Circle work Donald would eagerly work to complete his part – always with a blank look and monotone voice. He would frequently ask for my approval and feedback. When he received my responses he would agree and return back to his work to make the suggested improvements. This pattern would continue until I would finally

tell him that it looked good. As long as I gave him a suggestion he would go back to work, but as soon as he was given “permission” to be finished he would turn his work in and await the next task. For 18 weeks he worked in this way never bringing more or less to the class.

Unsure of his success. When the video conference was presented he eagerly took on the lessons and participated at his predictable level of engagement. Because of his past and current participation he was chosen as one of the six boys to participate in the video conference that day. We went through video conferencing etiquette and continued to prepare the students for what to expect during the conference. Donald arrived at the designated time and although there were chairs available in each row; he chose to position himself at the end of the back row. Knowing that he usually does not have reservation about sharing in class, I asked him why he chose to sit in the back row. He told me that he was a little nervous about the conference and that he would feel better if he could sit in the back. I reassured him that it was his choice where to sit and that it was perfectly fine. I asked him if he thought he would share even though he was nervous. He responded that he wasn’t sure but that he thought he still would. The conference began and he indeed shared his questions and comments. Watching his expression and listening to his intonation, he had a little more of both, but not a large difference. As the conference ended, I praised his participation and he continued to his next class. Later that day I stopped Donald in the hall during passing period and I asked him what he thought of the video conference earlier that morning. He responded in his flat tone and lackluster expression, “I thought it was a lot of fun.” I asked him if he would like to participate in day two. Again, as if he were reciting a grocery list he said, “Yes, I would I think that would be fun.”

Going beyond success. The next day Donald, who only does what he needs to during class and never brings more, eagerly arrived to class and anxiously awaited a moment to

approach my co-teacher. During attendance he quietly got up from his seat and handed her a photograph that he had printed from the internet at home. With an ever so slight smile and a proud undertone he explained to her, “That’s a picture I printed at home of Jay-Z, you know the guy that was in our videos about clean water?” He continued to stand near her for her response. The fact that he went home and continued to think about the week’s lessons shocked her and caused a delay in response. She thanked him for the picture, still not sure what to do with it, but just happy he had put forth extra effort. As Donald returned to his seat he received some slight ribbing from his male peers about why he would do that. Donald just shrugged it off and said, “I did it because it is cool.”

Knowing that Donald was proud of the extra time he invested in the gesture, we quickly placed it on the white board with a magnet for the remainder of the class time. When the room was empty and as we began to set up for the conference, we hung the large poster papers with the notes on desalination in eyesight for the students to utilize during the conference. In the space at the bottom of one of the pages we taped the picture he brought in that morning. When he arrived for the conference he once again placed himself in the same location as day one. I observed him as he surveyed the room reviewing the notes that we had displayed. When his eyes fell upon the paper with his picture of Jay-Z at the bottom, a smile crept across his face and he nudged the boy sitting next to him and gloated, “That’s the picture that I gave to Mrs. Jones this morning of Jay-Z.” As the conference proceeded he actively participated with slightly more expression on his face and in his voice than day one. When the conference concluded and before he walked out the door, under the assumption that I teach the same way in my science class he said, “That was a lot of fun, I wish I could be in your science class too!”

John's Story: Some Things Never Change

Background. John is a male, Native American/American, middle school student who earns grades in the B to C range in his core classes. John earned the rating of *exceeds standards* on his 5th grade reading and math state assessments. John does not seem enthusiastic to be at school on most days. He shuffles into class because he has to, not because he wants to. He is not highly motivated and must be coerced to start, much less complete assignments. I have John for consortium class only and do not see him for any other class. While monitoring John in class I know I can not expect much of a response. When I ask how he is doing or if he needs anything I am lucky if I get a blank stare and a shrug.

While working on iEARN for 18 weeks John would work with a partner to complete a project. The partner did the majority of the work and John merely contributed a nod or a slight suggestion. When I gave him an assignment to locate the countries we were communicating with on a map, he agreed and began to work. My co-teacher Mrs. Jones asked him what he was doing and he didn't have much to say, just "I don't know." She then worked with him one-on-one to complete the project and the entire time she tried to pull some opinions from him unsuccessfully only receiving an "I guess so". When we surveyed the class on what activities they would like to do more and/or less of, all John could say was, "When are we going to stop doing this iEARN stuff?" I asked him what iEARN stuff was and what exactly he didn't like. John could not answer the question, but could only continue to state that he did not like it. I asked him what else he would like to do or learn about in class, to which he responded, "I just want to do nothing or sleep in class."

Not impressed. The lessons for the Global Nomads Group conference began and there was more of the same from John. He did not seem very engaged in the new topic or the new

tasks during the week. Based on John' lack of interest and participation in class, he was not chosen to participate in the conference – this did not seem to bother him much. As a matter-of-fact, nothing seemed to bother or faze John much. He was not impressed by what those chosen to participate had shared after the conferences and he continued on his lackadaisical way.

Reflective Data Analysis

Personal Transformations

Teacher's Transformation

After completing my undergraduate work, “I was ready for the assignment and knew exactly how I wanted my class to function.” But somewhere between the conceptualizing of education and a few years of teaching, something changed. The onset of additional accountability requirements and a stronger emphasis on testing “transitioned my teaching style to helping students ‘own facts.’” As the teacher I found it difficult to unearth relevance in some of the expected outcomes. Since I could not find relevance, I could not successfully convince my students of the importance beyond simply acquiring facts for an assessment. Since I was not able to impress on them the relevance, they did not own the learning and had become disinterested in my teaching. As a result, my students' interest in learning waned and I became saddened, frustrated, and disappointed with my profession – after five years, I wanted to quit. “I had lost all desire to teach, began to doubt the educational system and questioned why I was still a teacher.” This was my disorienting dilemma, not being able to resolve the conflict between this perception and ideals to which I had aspired, when I first started teaching.

After implementing activities rich with 21st century skills, such as collaboration, interactive communication, effective use of real-world tools and curiosity, creativity and risk taking, along with global awareness, I soon began to see relevance and so did the students. As

the students became more interested in their learning, I became more interested in teaching. “Again, I did not attempt to answer their questions, but only acknowledged their questions and prompted for deeper thinking.” I stopped looking at education as simply depositing information, I stopped letting curriculum standards tie me down, and I soon realized that I enjoyed teaching again because I had transformed my role from instructor to guide. According to Mezirow’s (1991) adult learning theory, I resolved my disorienting dilemma.

Change in Students’ Attitudes About Learning

During the time of my personal transformation, I observed some significant changes in several of my students. Jamie started out as a hard worker, but was quiet and reserved about her work and participation in class. “During whole class or small group work, she does not volunteer to read out loud, does not contribute much to discussions and rarely offers answers to questions posed to the group.” The global interactions served as a catalyst to her heightened class participation. “To my shock and awe, Jamie sat up a little straighter and with a huge smile quietly raised her hand...She then very clearly stated her name...followed by her question.” The video conference gave her a new audience, one in which she was eager to verbally share with. Since then, Jamie wrote a paragraph about why she should be chosen to participate in future conferences. In that paragraph she states “I had fun doing the last video conference and I like talking to people from different countries.” Samantha usually a disconnected, disinterested student and “if she responds verbally, it is a complaint,” went from “trying to make herself unnoticeable so she could avoid a project assignment” to engaged in trying to be chosen to participate in upcoming global conferences. “Samantha intently listened, took notes, asked question and offered her comments during class.” Of course the global themed projects did not affect everyone. John started out and stayed uninterested and unengaged during the activities.

Teacher-Students Relationships

Teacher's Revolution of Relationship

Reflecting back to the teacher-student relationships before, during and after the research time period, many changes occurred. In the beginning I was the *narrating subject* and my students were patient, listening objects. In retrospect, I viewed education as the act of the teacher depositing information into the empty receptacles called students (Freire, 1993). "I resorted to teaching the way that I was taught, and my students in return became overly dependent on me." This relationship aided in steering me away from education, and to dislike the results from my students. Through the global activities I was moved to a different position of relationship with my students, one of equal power. We were all experiencing new adventures, and for the first time I could comfortably admit that I did not own all of the answers. "I was somewhat reluctant and nervous to ask the question of race, but decided that was why we were involved in iEARN...to learn more about the world we live in." I became a student with them, simply guiding them through a process of discovery. They in return had the chance to become the teacher to their classroom peers, their global peers, and many times to me.

Student's Growing Relationships

Throughout their schooling students' two main audiences include classroom teachers and the other students in their class. Their own view of their role as a student is shaped by these two audiences. This view can be changed considerably when the audiences is altered. When the students had the opportunity to interact with high-school students, their peers in other locations, and with other adults, such as an expert in the field of water conservation their views underwent such a change. They stated how "cool it was to talk to an expert and the high-school students"

and added that they “definitely wanted to do that again.” Again stepping into the teacher role, the students rose to the challenge of building on what was shared during the learning. Questions such as “am I doing this right?” changed to “did you know this?” and “look what I found” and “I think this will be good information for us to use”. Donald stated, “That’s a picture I printed at home of Jay-Z, you know the guy that was in our videos about clean water?” He felt as though he was educating Mrs. Jones about pop culture. Students, who did not participate in the video conference, began to see their roles change as well. Many of the students who were apprehensive about participating in the conferences, because they are very shy, actually excelled in the iEARN projects. A similar change was observed during the research time period. They changed from questioning the acceptability of their project, to sharing their project with me. One student e-mailed her thoughts to a local historian regarding the history of our streets as part of a project requested by Novosibirsk, Russia. Only when she received a response did she share with me what she had discovered.

Global Awareness

Teacher’s Change in Global Awareness

When the research period began I was aware that we were a smaller part of a larger world, but I was not globally proficient. “Not growing up as a child in a globalized world, and not receiving a global education myself, I first tried to gain a better understanding of what a global education encompasses.” I continued to grow in global mindedness through required readings, global collaboration with colleagues, and by learning with my students. “I found the students’ comments (regarding not send the American Flag) so surprising that I wanted to find out from the other teachers in the group what they thought about the comment.”

Students' Change in Global Awareness

I observed the most noticeable and significant transformation was in the students' global awareness. When we began planning to speak to people in other countries, they questioned, "How will we know what they are saying and how will they know what we are saying?" They came to the project with many misconceptions regarding their cultural peers. "We had done our students a disservice when teaching about Egypt." The image of Ancient Egypt was fresh in their minds. They could not picture modern day Egypt. While reviewing a list of the students' favorites they were surprised to find out how much they had in common, "I can't believe they watch *MTV's Pimp My Ride!* I thought they all rode camels!" As they were exposed to new cultures, new ideas and realized that people world-wide are not dissimilar to us, they began to connect, "They like *Harry Potter* just like me!" They started to connect the dots of the global world by making additional associations between the same global issues in India and in the United States. "They soon began to debate how burning firecrackers would add to pollution." Many of the students were unaware of the water crisis world-wide, and much less aware of growing shortages here in the United States. The GNG conference allowed them to see others' perspectives.

Addressing 21st Century Learning

After reflecting upon how the projects fit into the 21st century skills framework, I was amazed that through the integration of both iEARN and GNG I was able to provide my students with the opportunity to enhance their 21st century skills in approximately one semester. Using the enGauge 21st Century Skills framework (enGauge 21st Century Learning Skills: Literacy in the Digital Age, 2003) as a guide, figure 4 shows how each of the four quadrants were addressed through the projects provided by the two global agencies. For example, "in the Opening the

Circle phase was a class survey. Each of the schools in the group had to answer the same questions in order to gain a better insight about each school.” This project addressed *Digital-Age Literacy* in multiple areas. The focus was on *Technological Literacy* when students researched the Internet regarding questions they did not know about their city, and again when the survey was published using PowerPoint. As we received surveys from our global partners, *Multicultural Literacy* emerged when they began to compare and contrast our cultures. *Basic Literacy* was woven throughout as they expressed their culture in written form to share with others, and as they verbally discussed the surveys received.

<p style="text-align: center;">Digital-Age Literacy</p> <p><i>Basic Literacy:</i> Written communication on iEARN projects; Verbal communication through GNG conferencing</p> <p><i>Scientific Literacy:</i> Participation in Access to Clean Water Conference</p> <p><i>Technological Literacy:</i> Internet for research; Power Point for presentations; Video conferencing equipment for communication</p> <p><i>Multicultural Literacy:</i> Class surveys & Welcome Packs in iEARN Learning Circles;</p> <p><i>Global Awareness:</i> iEARN projects; Access to Clean Water video conference</p>	<p style="text-align: center;">Inventive Thinking</p> <p><i>Adaptability/Managing Complexity:</i> Working on multiple projects at one time for iEARN Learning Circle partners</p> <p><i>Creativity:</i> Creating of presentations through chosen media for iEARN projects</p> <p><i>Risk Taking:</i> Participation in Access to Clean Water video conference (GNG)</p>
<p style="text-align: center;">Effective Communication</p> <p><i>Teaming and Collaboration:</i> Student teaming with classroom peers on projects (iEARN); Student collaboration with global peers on projects (iEARN)</p> <p><i>Interactive Communication:</i> Communication through video conferencing equipment (GNG)</p>	<p style="text-align: center;">High Productivity</p> <p><i>Prioritizing, Planning, and Managing for Results:</i> Students worked towards given deadlines (iEARN)</p> <p><i>Effective Use of Real-World Tools:</i> Use of Internet, production software, and video conferencing equipment</p> <p><i>Ability to Produce Relevant, High-Quality Products:</i> Creation of products to submit to Learning Circle partners (iEARN); Creation of final product from products submitted by Learning Circle partners (iEARN)</p>

Figure 4. 21st Century Skills cluster according to NCREL and Metiri (2003).

CHAPTER 5: CONCLUSIONS AND IMPLICATIONS

Discussion of Findings

My previous conception that teaching comprised the filling of an empty receptacle was shattered during this research. Through the integration of projects sponsored by iEARN and GNG into learning activities, I observed a change in student engagement. Their ownership of learning changed them from the solitary learner to a co-learner and at times the teacher. At the same time their global awareness increased. I now see the profession of teaching as being more like that of a tour guide. Teachers can point out the beauty all around and highlight the most perplexing and interesting sites. Once we have opened the eyes of our young global tourists, we can step back as guides and allow them to grow as independent learners. The classroom I aspire to facilitate is one of wonderment, enjoyment, and discovery. Carl Sagan said it best, “When you make the finding yourself - even if you're the last person on Earth to see the light - you'll never forget it.” I want to cultivate a fascination with history and science, pique their curiosity. The best compliment is made when students are so engrossed in the experience that they leave asking if we will do it again tomorrow. At that moment the desire to learn has been sparked and the relevance has been created. They are on the journey to be independent learners, and take their learning to new heights. I will once again guide them to resources to further capture their imagination, desire, and aide in making connections which will assist in increasing relevance.

Research shows that students learn more when they are engaged in meaningful, relevant, and intellectually stimulating work (Newmann, Bryk, & Nagaoka, 2001). Through this thesis I have gained a better understanding of how learning takes place through relevant and stimulating

work, as well as witnessing the benefits of integrating 21st century skills and global learning into the curriculum.

One needs to keep in mind that students learn more when a personal connection is made. While all learning is personal, the frequency and relevance of such moments increase when technology enables us to employ outside experts; visualize and analyze data; link to real-world contexts; and take advantage of opportunities for feedback, reflection, and analysis (Bransford, Brown, & (Eds.). 1999). Through the Global Nomads Group conference the unreachable was made attainable to urban students. As they listened to their global peers tell of their hardships related to access to clean water they were deeply affected on a personal level. Utilizing available technology, students achieved a personal connection with an expert aiding in a feeling of value, and the realization that they could make a difference in the world.

Implications for Further Research

The duration of this research was approximately one semester, and was conducted in a nonspecific curriculum content classroom, void of curricular standards, and without mandated assessments. Though a multitude of curriculum standards could be connected to the activities, the standards did not drive the lessons. Teachable moments and student interest were instrumental in guiding the class.

This research provides examples of how to integrate 21st century skills and global education into the middle level classroom. The findings here could be replicated in a small team setting where core content teacher collaboration could lead to cross curricular teaching.

To continue examination of the results of 21st century skills and global education in the middle level classroom, a similar study needs to be conducted in a content specific classroom with structured curriculum, standards, and assessments. This particular research did not measure student academic growth in basics such as reading, writing and arithmetic, but did capture rekindled interest in learning.

During the 2008-2009 school year, the same research site will offer the opportunity to further research student achievement through 21st century learning and global education. A small team of approximately 60 students will participate in a global learning academy taught by two regular education teachers, as well as one Special Education teacher. All content areas; reading, writing, math, social studies, and science will have a strong focus on 21st century skills and global learning, as well as meeting state and district mandated content standards. This research group will allow for further study on student achievement through quantitative data collection of formative and summative assessments throughout the school year. Additional qualitative data will be collected through surveys, interviews, journals, portfolios, and researcher observations.

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